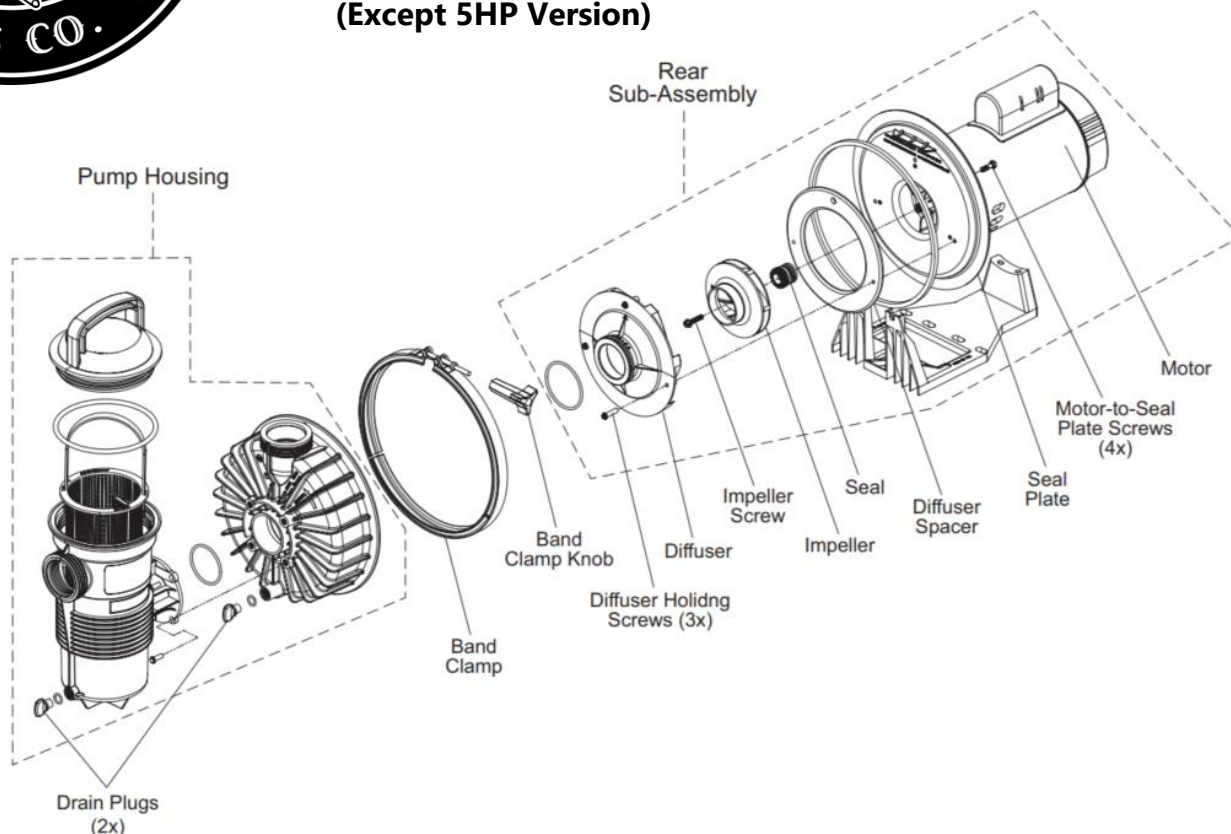




REBUILD KIT

COMPATIBLE WITH

PENTAIR® Challenger™ Pumps (Except 5HP Version)



SHAFT SEAL CHANGE INSTRUCTIONS:



⚠ WARNING

IMPORTANT SAFETY INSTRUCTIONS PLEASE READ AND FOLLOW ALL INSTRUCTIONS When servicing electrical equipment, basic safety precautions should always be observed including the following. Failure to follow instructions may result in injury. **A. WARNING** – To reduce risk of injury, do not permit children to use this product. **B. Disconnect all electrical power service to pump before beginning shaft seal replacement.** **C. Exercise extreme care in handling both the rotating and the stationary sections of the two-part replacement seal. Foreign matter or improper handling will easily scratch the graphite and ceramic sealing surfaces.**

Tools required: • Adjustable wrench. • 1/4 inch flat-blade screwdriver. • 9/16 inch open end wrench. • Rubber Mallet **To remove and repair the motor sub-assembly perform the following procedures:** 1. Turn off the pump

circuit breaker at the main panel. Close suction and discharge valves to relieve system pressure. 2. Drain the pump by removing the drain plugs. The drain plugs can be removed by hand. No tools are needed. 3. Loosen the band clamp by turning the band clamp knob counter-clockwise. The band clamp holds the rear subassembly to the housing (strainer pot/volute). 4. Remove the rear sub-assembly from the housing (strainer pot/volute) and place the band clamp to the side. Note: If the band clamp does not separate from the pump housing and seal plate when loose, lightly tap the top of the band clamp with a rubber mallet. This will free the clamp from the housing. 5. Place the rear sub-assembly upright and on a flat surface. Use a 1/4 inch flat blade screwdriver to remove the three (3) holding screws located on the diffuser. 6. Remove the diffuser and diffuser spacer from the rear sub-assembly. 7. Use the 1/4 inch flat blade screwdriver to remove the impeller screw located in the center of the pump's impeller. Note: The impeller screw is a left-handed thread and loosens in a clockwise direction. 8. Use the 1/4 inch flat blade screwdriver to hold the motor shaft in place. The motor shaft is accessible through the back of the motor. Note: If the torque is too high to hold the screwdriver by hand then an adjustable wrench may be used to hold the screwdriver shaft in place. Use locking pliers instead if your screwdriver has a round shaft. 9. Unscrew the impeller from the motor shaft by twisting the impeller counter-clockwise. 10. Remove the rotating portion of the spring seal by hand. Note: When placing the rotating seal to the side, ALWAYS place flat side down. The portion of the rotating spring seal that contacts the white ceramic seal must be kept as free from contaminants (dust, dirt, debris, etc.) as possible. 11. Use the 9/16 inch wrench to remove the four (4) bolts that hold the motor to the seal plate.

The Shaft Seal The mechanical seal can be changed without disconnecting piping by removing the band clamp and pulling the motor with pump bracket diffuser and impeller assembly away from front pump housing body. The Shaft Seal consists primarily of two parts, a rotating spring seal and a ceramic seal. See Figure 3. The Challenger® Centrifugal Pump requires little or no service other than reasonable care, however, a Shaft Seal may occasionally become damaged and must be replaced. The polished and lapped faces of the seal could be easily damaged if not handled with care.

To replace the pump seal: 12. Follow steps 1-11 in the "Pump Disassembly" section. 13. Place the seal plate face down on a flat surface and tap out the old ceramic seal. 14. Press the new ceramic seal into the seal plate with your thumbs and wipe off the white ceramic with a clean cloth. 15. Using a 9/16 inch wrench, remount the seal plate to the motor via the four (4) bolts that hold the motor to the seal plate. 16. Grease the motor shaft thread and continue with steps 2-10 from the "Pump Reassembly" section to reassemble the pump.

Pump Reassembly 1. Use the 9/16 inch wrench to remount the seal plate to the motor via the four (4) bolts that hold the motor to the seal plate. 2. Reseat the spring seal on the white ceramic seal. Ensure that the carbon face of the spring seal contacts the ceramic face of the stationary seat. 3. Grease the motor shaft thread and screw the impeller onto the motor shaft. Note: Use the 1/4 inch flat blade screwdriver to hold the motor shaft in place when screwing down the impeller. The motor shaft is accessible through the back of the motor. 4. Using a 1/4 inch flat blade screwdriver, screw in the impeller lock screw. Note: The impeller screw is a left-handed thread and tightens in a counter-clockwise direction. 5. Remount the diffuser spacer and diffuser using a 1/4 inch flat blade screwdriver and the three (3) diffuser screws. 6. Reseat the pump housing (strainer pot/volute) onto the rear sub-assembly. 7. Place the band clamp around the pump housing and rear sub-assembly. Tighten with the band clamp knob. Note: The band clamp knob should be parallel to the floor of the equipment pad when the clamp is installed properly. 8. Reinstall the drain plugs. Hand tighten only! 9. Fill the pump strainer pot with water. 10. Refer Installation & Operation manual for priming and startup procedure.

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