SEAL REPLACEMENT INSTRUCTIONS FOR FRAME MOUNTED AND HYDRAULIC FMCWS PRO5 MODELS

PUMP REPAIR KIT

This repair kit includes the dual shaft seal, O-rings, and barrier fluid needed to replace the pump shaft seal.

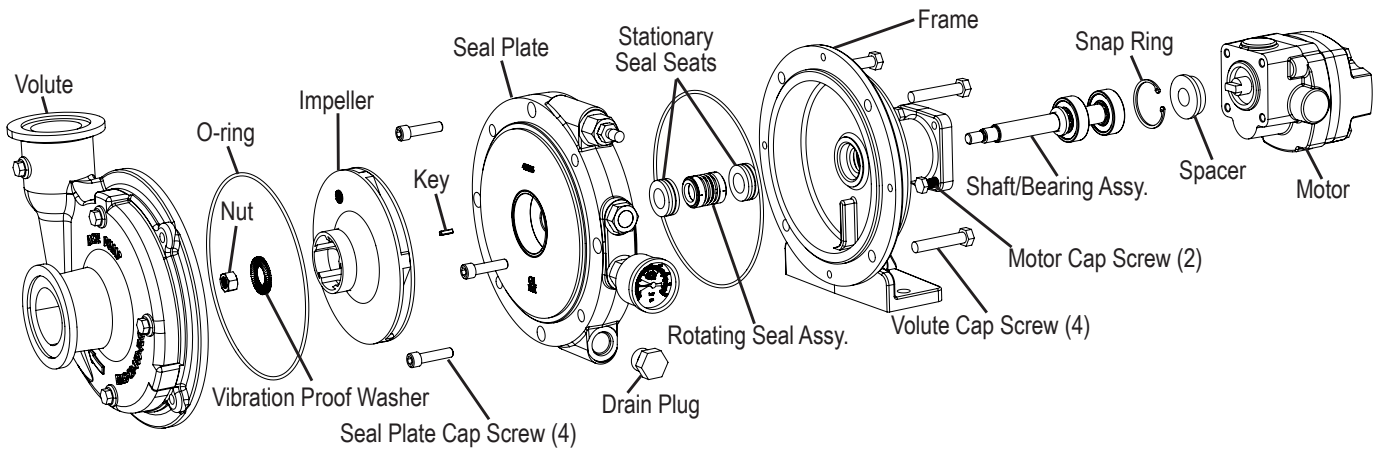
OASIS™ WetSeal Technology

Pump Series	Severe Duty Seal BAC-7-WS
PRO5 Wet Seal Series: FMCWS-125, FMCWS-155F, FMCWS-225F, FMCWS-255F	RK-FMCWS-PRO5

REPAIR KIT INSTALLATION

DISASSEMBLY:

1. Mark orientation of volute, seal plate, frame, and motor to assist in reassembly.
2. **300 Series Motor:** Remove (2) hex head motor screws with 5/16" hex wrench.
   200 Series Motor: Remove (2) 5/16" socket head cap screws with 1/4" hex wrench.
3. Remove hydraulic motor. Tap with a non-marring hammer if necessary.
4. Remove support spacer from back of bearing bore. **Note:** Observe spacer orientation.
5. Remove snap ring from behind rear pump bearing.
6. Remove cap from air fill valve and press stem to release reservoir pressure. **Note:** Place shop towel over valve to avoid oil spray.
7. Remove hex drain plug with 7/8" wrench and drain barrier fluid into a clean pan.
   Note: Recycle or dispose of used fluid the same as motor oil.
8. Remove (4) volute hex head cap screws and spacers with a 9/16" wrench.
9. Remove volute and O-ring.
10. Remove stainless impeller nut with 9/16" socket; set aside nut and locking washer.
    Note: Turn counterclockwise to remove. Insert a flat file into an impeller vane to hold stationary.
11. Remove impeller and key from shaft.
12. Remove (4) socket head seal plate cap screws with 5/16" hex wrench.
13. Remove seal plate slowly and place shop towel over shaft end for protection from spring. Remove O-ring.
    Danger: Compression of seal spring may cause part of seal to fly off without warning.
14. Slide rotating seal assembly ((2) seal faces and (1) spring) off shaft and discard.
15. Install impeller nut on shaft end to protect threads.
16. Press or tap (non-marring hammer) shaft/bearing assembly from impeller end until clear of stationary seal face in mounting frame.



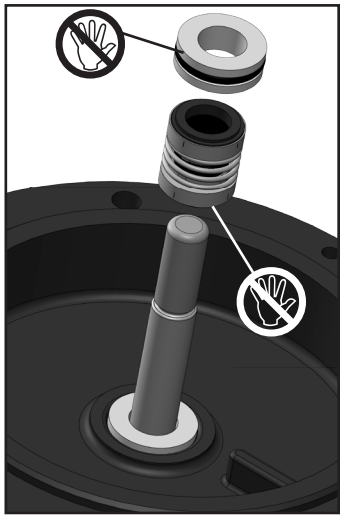
ASSEMBLY:

1. Clean and inspect seal bores on mounting frame and seal plate. Bore damage or gouges may prevent proper sealing.
2. Install stationary seal seats:
   Important: Avoid touching seal faces by covering with a soft, clean cloth.
   Lubrication: Lightly coat O-ring with supplied lubricant to aid installation.
   A. Push a seal seat by hand into mounting frame seal bore with grooved side towards bore.
   B. Push a seal seat into seal plate seal bore by hand with grooved side towards bore.
3. Press or tap shaft/bearing assembly into mounting frame from rear motor flange.
   Note: Use a non-marring hammer and soft wood block to prevent shaft damage.
4. Install rear snap ring into mounting frame bearing bore.
5. Stand mounting frame/shaft assembly on motor mount flange with shaft pointing up.



Step 2

6. Install rotating seal faces:
   Important: Avoid touching seal faces.
   Lubrication: Lightly coat assembly bellows and shaft with supplied lubricant to aid installation.
   A. Push first rotating seal assembly over shaft by hand until black polished face seats against stationary face in mounting frame.
   B. Place spring on shaft above first rotating seal assembly.
   C. Push second rotating seal assembly over shaft by hand until metal seal cup seats against spring. Polished black seal face should be up towards impeller.
7. Install seal plate O-ring over boss on mounting frame. Stretch O-ring over boss – do not roll.
8. Install seal plate and tighten (4) socket head cap screws to 20 ft-lb (27 N-m).
9. Insert key in keyway and apply anti-seize compound to impeller seat area and key.
10. Install impeller on shaft and apply nut lock to threaded shaft end.
11. Install locking washer and nut tighten to 20 ft-lb (27 N-m).
12. Install volute seal O-ring over boss on seal plate. Stretch O-ring over boss – do not roll.
13. Install volute
14. Apply nut lock to (4) volute cap screws, install, and tighten to 20 ft-lb (27 N-m). Allow nut lock to cure for a minimum of 10 minutes before filling pump.



Step 6

15. Apply high speed coupling grease to internal tang of pump shaft.
16. Place support spacer behind back snap ring, larger diameter should face bearing.
17. Install motor aligning shaft tang with pump shaft.
18. Install motor socket head cap screws with washers and tighten to 20 ft-lb (27 N-m).
19. Place pump on a level surface.
20. Remove air fill on top of seal reservoir.
21. Add supplied barrier fluid until level is at top edge of site window.
    Caution: Do not overfill.
22. Replace air fill plug.
23. Add air until gauge reads 25 to 30 psi. An air supply or tank regulated to 30 psi is best.
    Caution: Do not overpressurize. Relieve excess air pressure if necessary.
24. Replace air valve cap.