

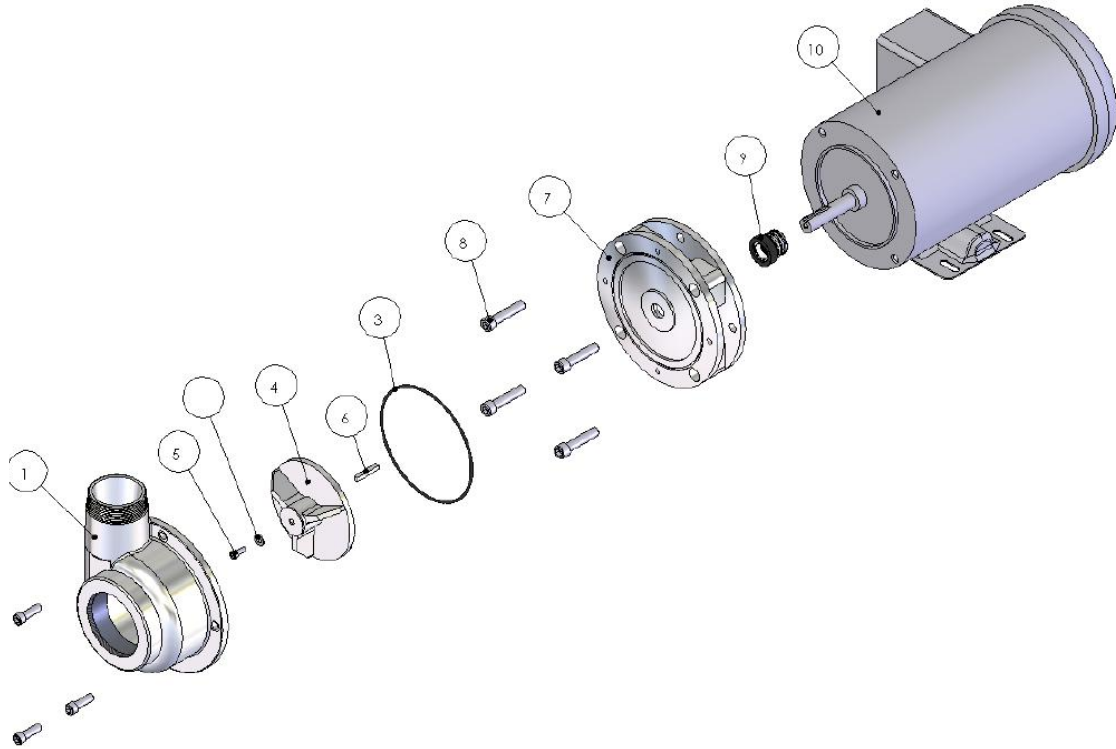
SLURRY AND RETURN PUMPS

A. Inspection of volute, spacer ring, mechanical seal, o-ring and impeller.

1. Volute - Check for thin spots in the walls, the wear pattern will normally occur at the bottom of the volute but could develop in any area.
2. Spacer Ring - The spacer ring connects the motor to the pump volute. It is also where the mechanical seal seats to prevent leakage around the motor shaft. There is also a groove for the o-ring to seat in to keep it in the proper location and prevent leakage between the two halves. These two places will see the most wear. Inspect for the ability to have a proper seal fit.
3. Mechanical Seal - The mechanical seal is located between the motor and spacer ring. When this starts to wear you will get water passing through at the motor shaft. This must not be let go or it may cause water to damage the motor.
4. O-Ring - The o-ring seats inside the groove of the spacer ring. Inspect for nicks, cracks, or breaks if damaged must be replaced to prevent leaks.
5. Impeller - Inspect the vanes on the impeller for any wear. If it starts to wear, the pumping capabilities will decrease.



B. Motor Replacement/Inspection

1. Turn main disconnect off to electrical panel.
2. Remove conduit and wire leads from motor
3. Remove the four bolts that hold the motor assembly to the volute
4. Remove the impeller, spacer ring and mechanical seal
5. Inspect motor shaft for damage, if damaged mechanical seal will not work
6. When installing new motor, always install a new mechanical seal to assure no leaks



KW DIRECT DRIVE PUMP EXPLODED VIEW

As of 12-1-07 all close-coupled or SPC-75S and SPC-75UDT machines will be using an MP pump instead of the KW pump. The MP pump promotes more efficient pumping while reducing energy draw. Below are procedures for removing the suction head if renewal to the impeller or the mechanical seal is necessary.

	WARNING!	
TURN THE MAIN POWER OFF AND LOCKOUT BEFORE DOING ANY MAINTENANCE OR CLEANING.		

**MP PUMP
REMOVAL AND INSTALLATION OF MECHANICAL SEAL or MOTOR**

MECHANICAL SEAL:

1. Turn off power and lock out machine
2. Remove (4) 5/16-18 hex nuts from Impeller housing
3. Remove housing from pump-pak assembly

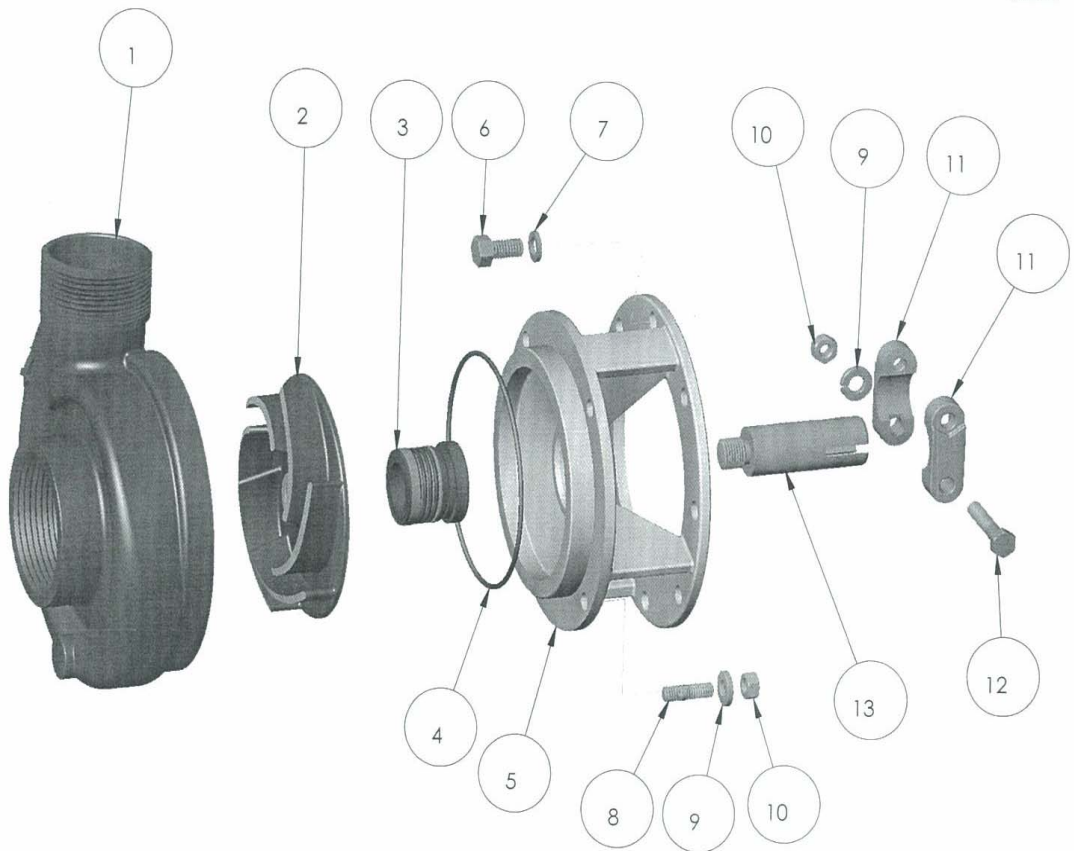
4. The impeller will now be visible, take care to **NOT** place anything in impeller vanes. This will cause damage to the vane and will not be covered under warranty.
5. Loosen 2 bolts holding drive sleeve to motor shaft.
6. Remove impeller with drive sleeve as an assembly, mechanical seal should come off with drive sleeve.
7. Replace mechanical seal. Install with raised carbon face towards motor. Take care to install straight onto sleeve. Install ceramic disc into adapter seat bore with polished side up. Take extreme caution to not damage polished side as this will cause immediate leaks. Ensure seal is seated to bottom of adapter seat bore. If needed use a wooden dowel and gently tap into place to ensure tight seat into bore.
8. Replace impeller assembly back onto motor shaft. Use a light coating of anti-seize on motor shaft to ensure smooth seating.
9. Push down onto impeller head using a gloved hand to reach a gap of .030 between the bottom of impeller to top of adapter.
10. Tighten sleeve clamp while maintaining .030 clearance
11. Check rotation of impeller to ensure proper seating and gap clearance
12. If rotation and clearance are ok, then replace housing to adapter
13. Install (4) 5/16-18 nuts and lock-washers onto studs and tighten to 15-ft.lbs.
14. Verify that impeller does **NOT** hit or scrape housing.

MOTOR REPLACEMENT:

1. Turn off power and lock out machine.
2. Remove (4) 5-16-18 hex head nuts from impeller housing
3. Remove housing from pump-pak assembly
4. Loosen 2 bolts holding drive sleeve to motor shaft
5. Remove impeller with drive sleeve as an assembly, **taking care not to damage mechanical seal or pumping vanes**
6. Remove (4) 3/8 – 16 x 3/4 hex head screws from adapter plate to motor.
7. Remove adapter unit from motor.

8. Replace motor as required properly wiring unit. Ensure that wiring is for correct voltage.
9. Replace pump-pak as described in MECHANICAL SEAL REMOVAL SECTION #’s 8-14

34637



ITEM NO.	PART NO.	DESCRIPTION	QTY.	ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	34520	HOUSING- S.S.	1	8	30321	STUD S.S. 5/16-18 X 1.13	4
2	34631	IMPELLER- 4.60" DIA. S.S.	1	9	21238	LOCKWASHER S.S. 5/16	6
*	3	22273 SEAL ASSY. 1" T-2100	1	10	21284	HEX NUT- 5/16-18	6
*	4	34555 O RING VITON	1	11	21954	CLAMP S.S. 7/8 SL	2
	5	34521 ADAPTER - S.S.	1	12	21264	HEX HEAD SCREW 5/16-18 X 1 3/4	2
	6	21701 HEX HD. SCREW - 3/8-16 X 3/4	4	13	30670	DRIVE SLEEVE S.S. 7/8	1
	7	21266 LOCKWASHER S.S. 3/8	4				

*- RECOMMENDED REPLACEMENT PARTS