

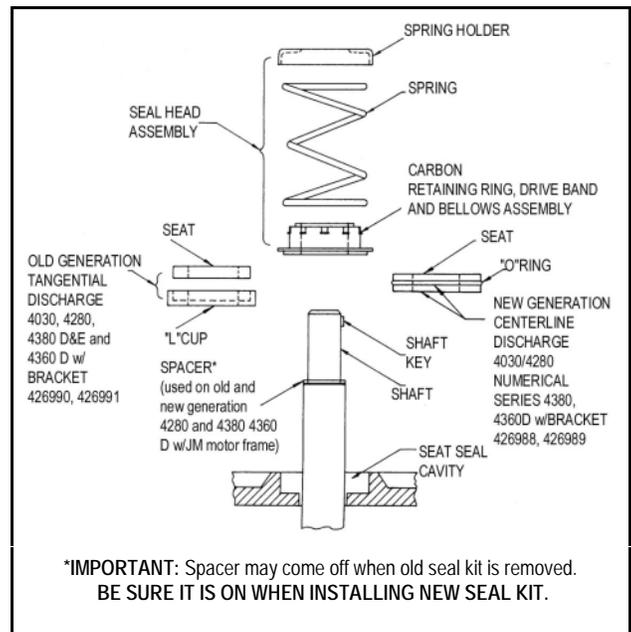
SERVICE WORK INSTRUCTIONS SERIES 4030, 4280, 4360D & 4380 MECHANICAL SEAL KITS

Refer to appropriate Service Work Instructions (SWI) file for breakdown instructions for the pump being serviced. Mechanical seal replacement instructions are included in the pump SWI. The following instructions are included for convenience.

Caution: Always disconnect power supply from motor before beginning service work.

Seal Kit Installation Instructions

1. Remove Impeller and Mechanical Seal from pump or motor shaft. The mechanical seal spring usually comes free with the impeller. The mechanical seal rotating element must be pried loose with pry bars or screwdrivers. Once loosened, the seal may be pulled free of the shaft.
2. When removing impeller and seal from a motor shaft, take care to retrieve the spacer from between the impeller and shaft sleeve. Store for later use.
3. Remove Seal Seat from Adapter. The mechanical seal seat, "O" ring or "L" cup mounted, will be Ceramic or Ni-Resist material, and must be pried loose from the recess in the adapter. If the seat cannot be removed in this manner, separate the adapter from the bearing housing or motor. A screwdriver may then be used to push the seat out of the adapter from the rear.
4. Clean the shaft sleeve surface, ensuring all the former seal elastomeric residue has been removed. Inspect for damage and replace if necessary. (See separate instructions, File No. 6042.25, for removal of the motor shaft sleeve). Inspect the water slinger and replace if damaged.
5. *Ceramic is a suitable replacement for Ni-Resist and is the seal seat of choice. Ceramic is more delicate than Ni-Resist, however, and should be treated accordingly.*
6. Install a new seal seat in the adapter cavity, being sure the lapped (polished) side of the insert is facing up. Ensure that the cavity has been thoroughly cleaned. Lubricate the outside of the seat elastomer ("O" ring, or "L" cup) with a small amount liquid soap, silicon or glycerin lubricant and press down, straight and even, into the cavity. Do not press the seat in with bare fingers, use a clean cloth or the cardboard disc typically supplied with the seal. Contamination of the polished and lapped seat face could cause leakage.



CAUTION

Do not use oil, Vaseline or other petroleum based product for seal elastomer lubrication. Otherwise elastomer swelling may occur causing seal failure.

7. If the adapter was removed, replace now, taking care that the seal seat is carefully guided over the shaft.
8. Lubricate the inside of the seal rotating assembly (The 'rubber' bellows) with a small amount of liquid soap, silicon or glycerin lubricant and slide onto the shaft sleeve with a twisting motion, carbon face first, until the carbon face is pressed firmly against the seal seat.
9. Remove the spring retainer from the seal spring and place the seal spring over the seal rotating assembly. Re-install the shaft sleeve spacer and impeller key on the shaft and place the seal spring retainer onto the impeller hub register. Slide the impeller into place on the shaft. Take care and ensure that the seal spring is kept in place on the seal rotating assembly and fits well into the retainer on the impeller hub. Secure impeller and finish reassembling pump.

Seal Kit Part Number (See Note 1)	Seal Size	Used on:	Pump Construction	4030 Frame Size	4280/4380 Motor Frame Size	Seal Construction							
						Type	Elastomer	Trim	Seat Style (See Note 3)	Seat Material			
816707-001	0.75	6 Series, 1000D	BF/AB				Buna	Brass	L-Cup	Ceramic			
975000-991 (See Note 2)	1.25	4030/4280 Centerline Discharge, 4380 Numerical and 4360D w/Bracket 426988 or 426989	BF/AB/AI	S	56C, 143-215JM	21	EPDM	St. Stl.	O-Ring	Ceramic			
2						Viton	Ni-Resist						
2						Buna	Tungsten						
21						EPDM	Ceramic						
975000-993 (See Note 2)	1.625		4030/4280 Tangential Discharge, 4380 D & E and 4360D w/Bracket 426990 or 426991	BF/AB/AI	M	254-326JM, 213-326JP	21			EPDM	St. Stl.	L-Cup	Ceramic
21							Viton			Ni-Resist			
2							Buna			Tungsten			
21							EPDM			Ceramic			
825458-001 (See Note 2)	1.25	4030/4280 Tangential Discharge, 4380 D & E and 4360D w/Bracket 426990 or 426991		BF/AB/AI	S	56C, 143-215JM	21	Buna	St. Stl.	L-Cup			Ceramic
825458-003				BF/AI/AB			21	Viton					Tungsten
810150-133				BF/AB			2	Buna					
811339-000 (See Note 2)	1.625			4030/4280 Tangential Discharge, 4380 D & E and 4360D w/Bracket 426990 or 426991	BF/AB	M	254-326JM, 213-326JP	2	Buna				Brass
811866-000 (See Note 2)			AI		2			Buna	Steel				
819299-000			BF/AB		2			Viton	Brass				
810150-139			BF/AI/AB		2			Buna	St. Stl.		Tungsten		

Notes:

1. Seal Kit consists of rotating seal head, spring holder, stationary seal seat with O-ring or L-cup. Pump casing gasket and other minor hardware components possibly required to reassemble the pump are not included. Consult Service Parts Bulletins for more detail.
2. Standard seal used for the pump construction indicated. Other seals listed are optional.
3. O-ring and L-cup style seats are NOT interchangeable between tangential and centerline discharge pumps.

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