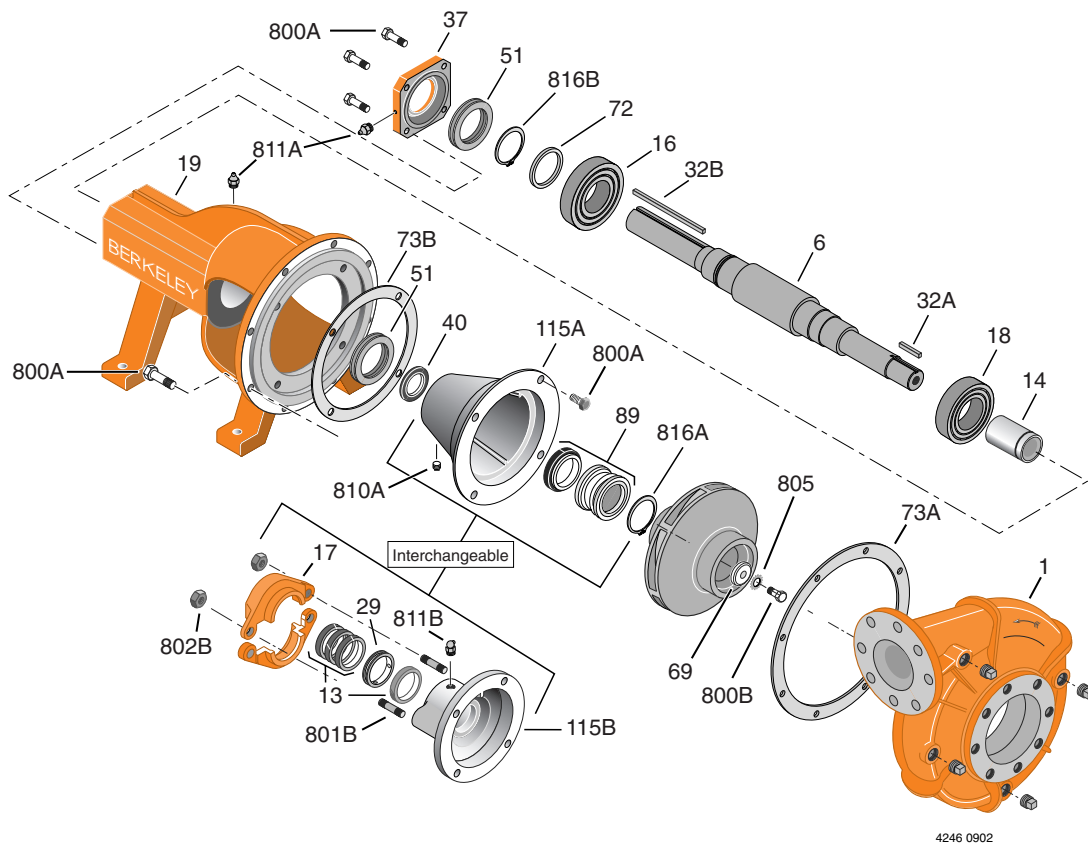




TYPE "B" SINGLE STAGE CENTRIFUGAL PUMP Bearing Frame Mount

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B3ZRM(S)



B3ZR Common Parts Groups Repair Parts List

Item No.	Part Description	Part Number
6	Shaft	M12338
14	1-3/8 ID x 1-3/4 OD Shaft Sleeve	M12422
16	Single Row Ball Bearing	S13395
18	Ball Bearing	S13397
19	Bracket	M12332
32A	Shaft Key, 1/4" Sq. x 2-1/4" Lg. - Impeller	S23677
32B	Shaft Key, 3/8" Sq. x 2-1/4" Lg.	S23941
37	Bearing Cap	M12335
40	Water Slinger	S10964
51	Grease Seal (2 Req.)	M12337
69	Lock Washer	S06319
72	Thrust Ring	S06519
73A	Volute Gasket	S05126
73B	Balance Ring Gasket	S09943
800A	3/8-16 x 1" Lg. Hex Hd Capscrew (16 Req.)	S26826
800B	1/2-13 X 1" Lg Hex Hd. Capscrew	S23619
805	Lock Washer	S23038
811A	Grease Fitting (2 Req.)	S23700
816B	External Retaining Ring	S23016

Packing Components

Item No.	Part Description	Part Number
13	Packing Ring Set	S13435
17	Split Packing Gland Set	B82470
29	Lantern Ring	S19200
115B	Packing Housing	M12334
801B	3/8-16NC x 2-1/2" Lg Stud (2 Req.)	S04438
802B	3/8-16 Hex Nut (2 Req.)	S23343
811B	1/8 MPT x 90° Grease Fitting	S23702

Seal Components

Item No.	Part Description	Part Number
89	1-3/4" Mechanical Shaft Seal	S32015
115A	Mechanical Seal Housing	M12333
810A	1/8" NPT Sq. Hd. Pipe Plug	S23714
816A	External Retaining Ring	S16767

Refer to following page for model specific repair parts listing.



TYPE "B" SINGLE STAGE CENTRIFUGAL PUMP Bearing Frame Mount

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B3ZRM(S)

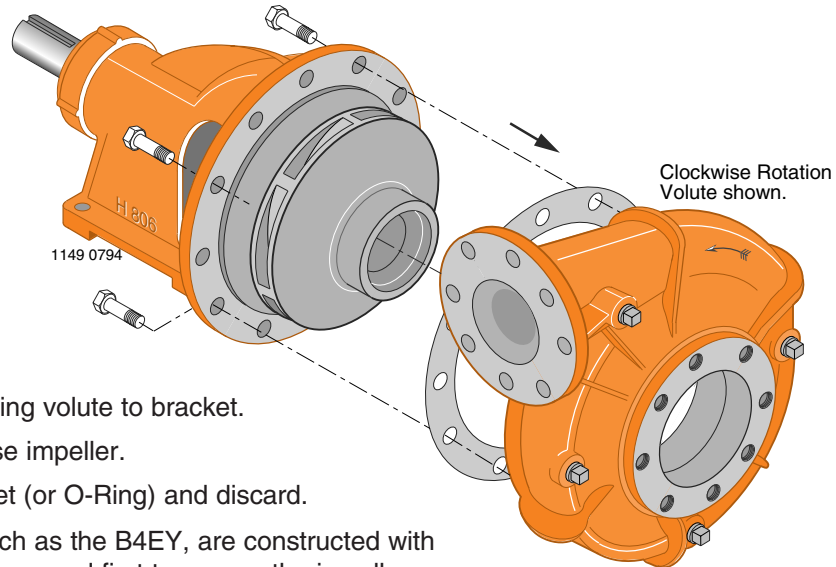
B3ZRM(S) Series

Pump Series	Catalog Number	Rotation	Style	Volute	Pipe Plugs	Impeller	Impeller Material	Replacement Shaft		
B3ZRM Packing Construction	B80302	CW	4" NPT Suction 3" NPT Discharge	H00689	4-S23715 1-S23717	M02911	Cast Iron	B81663		
	B80307	CW		H00698		H05479	Bronze	B81663		
	B80303	CCW				M12462	Cast Iron	B81663		
	B80301	CW	Suction Flange 4x9" B74303 Discharge Flange 3x7-1/2" B60129	H00689	4-S23715 1-S23717	M02911	Cast Iron	B81663		
	B80306	CW				H05479	Bronze	B81663		
	B80304	CW		4" NPT Victaulic 3" NPT Victaulic		H04040	3-S23715	M02911	Cast Iron	B81663
	B80305	CCW				H04041		M12462	Cast Iron	B81663
	B80308	CW	H04040		H05479	Bronze		B81663		
B3ZRMS Mechanical Seal	B80310	CW	4" NPT Suction 3" NPT Discharge	H00689	4-S23715 1-S23717	M02911	Cast Iron	B81663		
	B80315	CW		H00698		H05479	Bronze	B81663		
	B80311	CCW				M12462	Cast Iron	B81663		
	B80309	CW	Suction Flange 4x9" B74303 Discharge Flange 3x7-1/2" B60129	H00689	4-S23715 1-S23717	M02911	Cast Iron	B81663		
	B80314	CW				H05479	Bronze	B81663		
	B80312	CW		4" NPT Victaulic 3" NPT Victaulic		H04040	3-S23715	M02911	Cast Iron	B81663
	B80313	CCW				H04041		M12462	Cast Iron	B81663
	B80316	CW	H04040		H05479	Bronze		B81663		

MAINTENANCE

Impeller Replacement

Threaded Shaft – Frame Mount

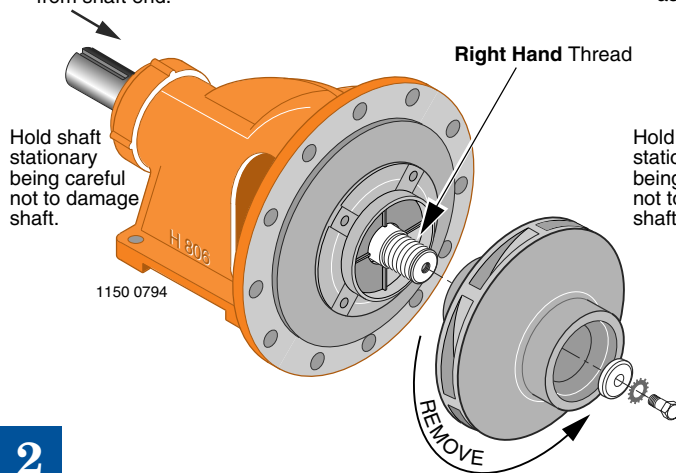


1

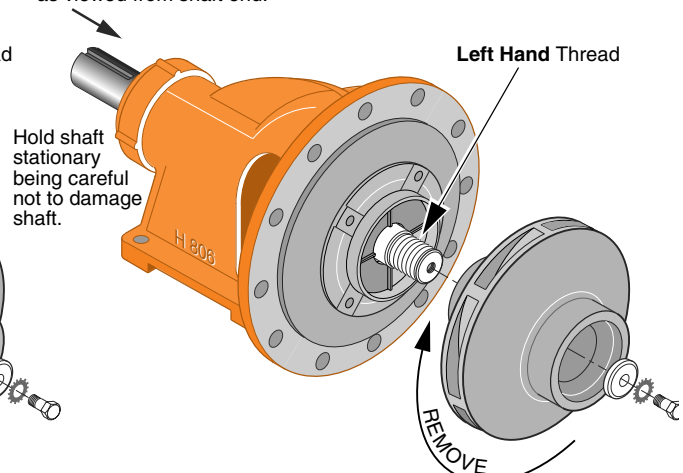
- Unfasten hardware holding volute to bracket.
- Remove volute to expose impeller.
- Peel off old volute gasket (or O-Ring) and discard.

NOTE: Certain models such as the B4EY, are constructed with a suction flange which is removed first to access the impeller.

Clockwise rotation as viewed from shaft end.



Counter-Clockwise rotation as viewed from shaft end.



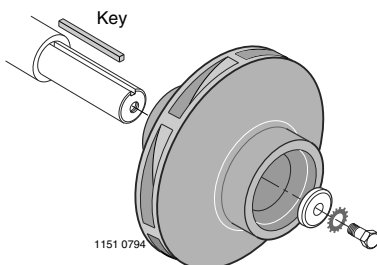
2

- Hold impeller stationary and remove impeller screw and associated hardware.
- Hold shaft stationary and remove impeller by turn-

ing in the direction shown for either clockwise or counter-clockwise pump rotation.

NOTE: Do not use impeller vanes for leverage.

Keyed Shaft

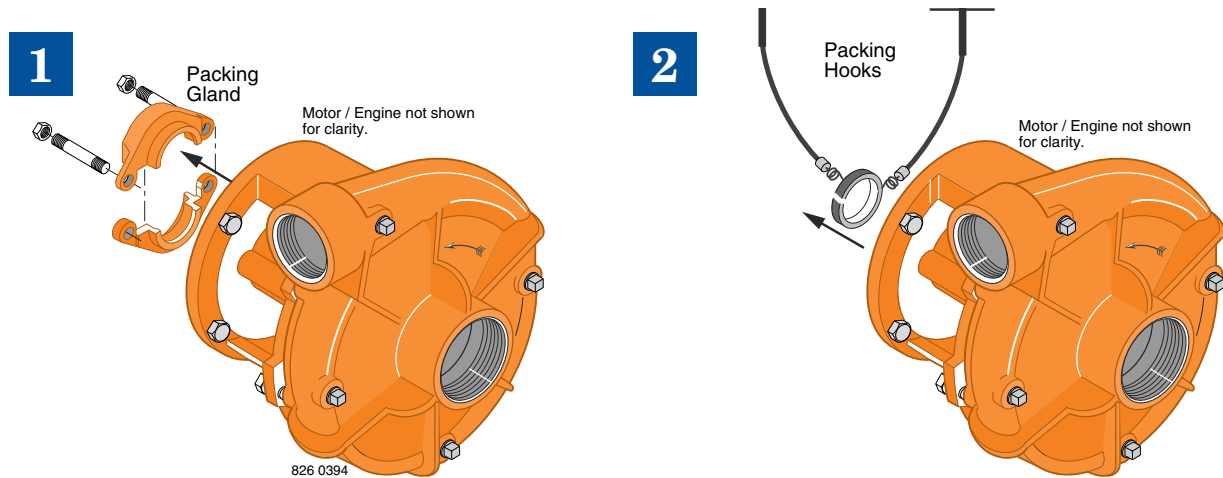


- If motor drive with keyed shaft, refer to mechanical seal disassembly drawing.
- For bearing frame pumps with keyed shaft, consult with factory for approved method of impeller removal.

MAINTENANCE

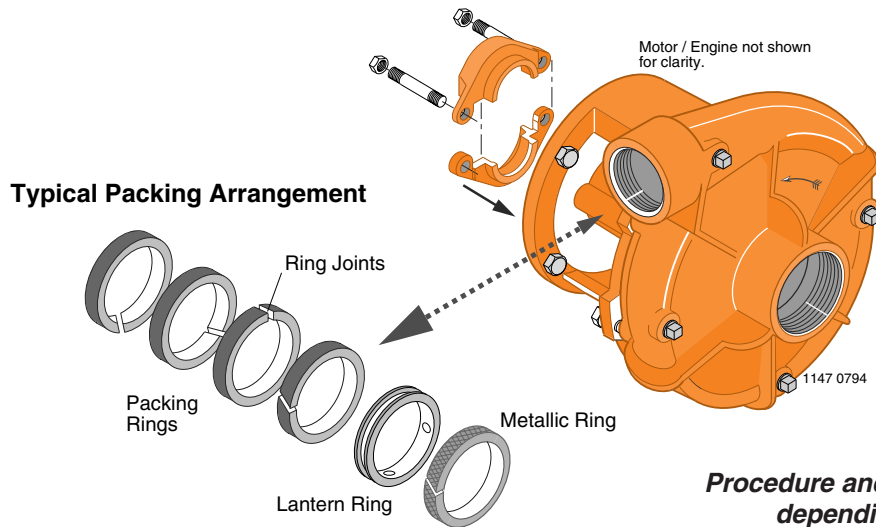
Packing Ring Replacement

Removal



- Unfasten hardware holding Packing Gland in place and slide back on shaft to expose packing rings. A split Packing Gland with threaded studs is shown.
- Remove packing rings from stuffing box using two commercially available Packing Hooks as shown.
- Slide Lantern Ring (if used) back to expose any remaining rings, including metallic. Remove them in the same manner.

Installing New Rings



- Clean shaft sleeve and Packing Gland.
- Inspect shaft sleeve for wear, replace if needed.
- Install new packing rings in stuffing box by placing over shaft sleeve and pushing them in as far as they will go.
- Rotate ring joint 90 degrees when installing each ring as shown.
- Slide packing gland into position, then gently and evenly tighten nuts to force rings into place and seat (do not overtighten). Loosen nuts again to hand tight.
- Start primed pump and allow packing to leak liberally.
- Evenly tighten gland nuts one complete turn at a time until leakage is reduced to 40 to 60 drops per minute.

Procedure and parts will vary slightly depending on pump style.

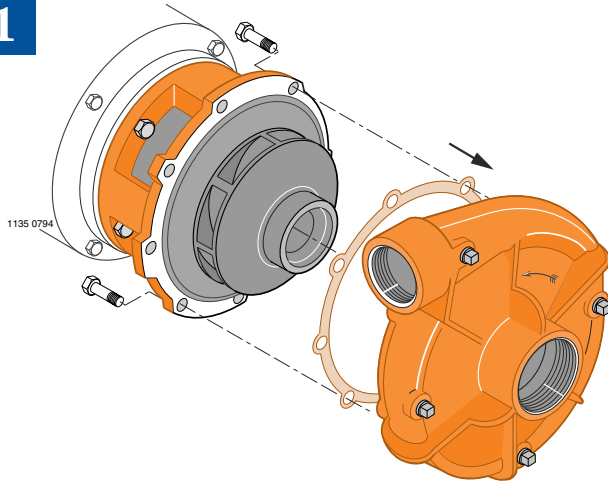
MAINTENANCE

Mechanical Seal Replacement

Disassembly - Motor Drive

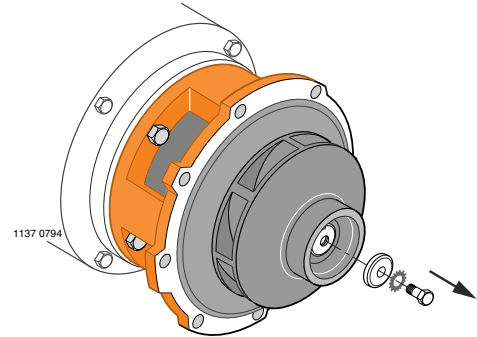


1



- Unfasten hardware holding volute to bracket.
NOTE: For model B4EY, consult factory for special instructions.
- Remove volute case to expose impeller.

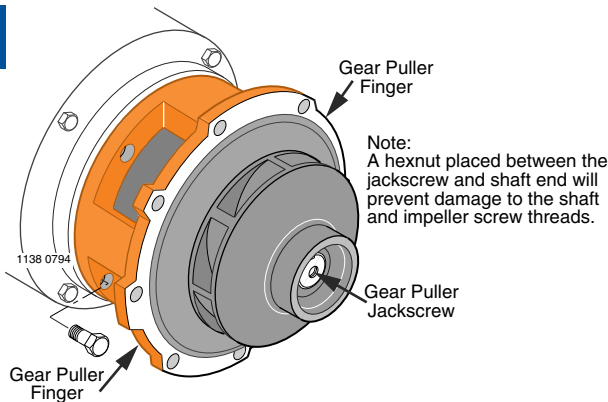
2



- Peel off old gasket or O-Ring and discard.
- Hold impeller stationary and remove impeller screw and associated hardware.

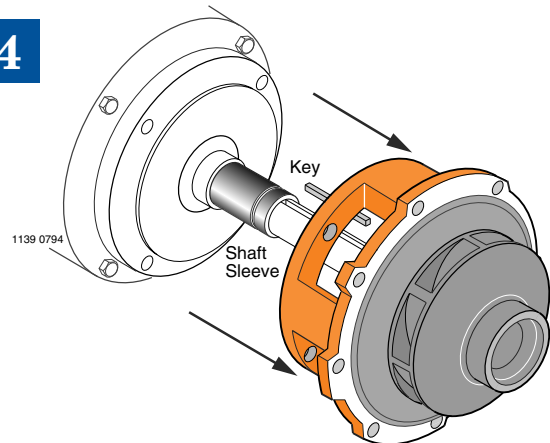
Procedure and parts will vary slightly depending on pump style.

3



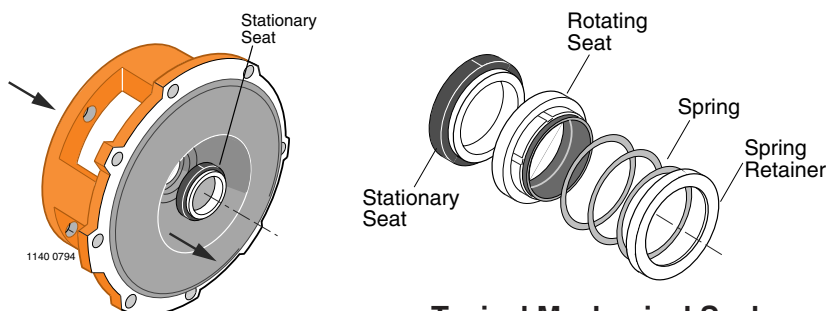
- Remove capscrews holding bracket to motor.
- Install a standard gear puller to shaft end and motor bracket placing puller fingers in the area shown.
- Rotate gear puller jackscrew until impeller clears

4



- shaft. Mechanical shaft seal will come off with motor bracket.
- If a seal retaining ring is part of the assembly, it will need to be replaced.

5



- Push stationary seat out of seal cavity from the back of bracket.
- Clean seal cavity in bracket thoroughly.

Typical Mechanical Seal

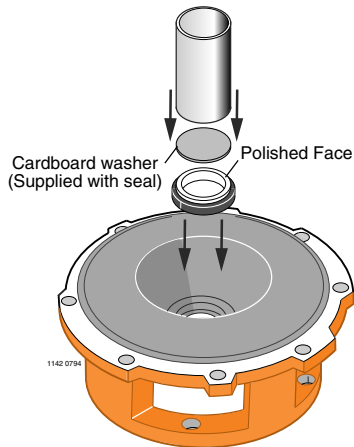
MAINTENANCE

Mechanical Seal Replacement

Reassembly – Motor Drive

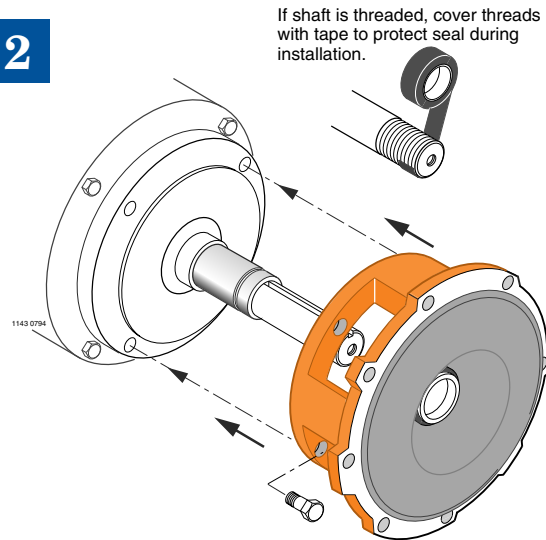


1



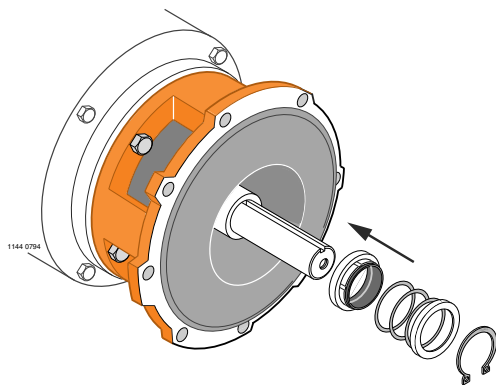
- Place bracket on a smooth, flat surface, pump side up.
- Apply a small amount of mineral oil to O-Ring on stationary seat and press into seal cavity. Cover ceramic face with cardboard washer and press

2



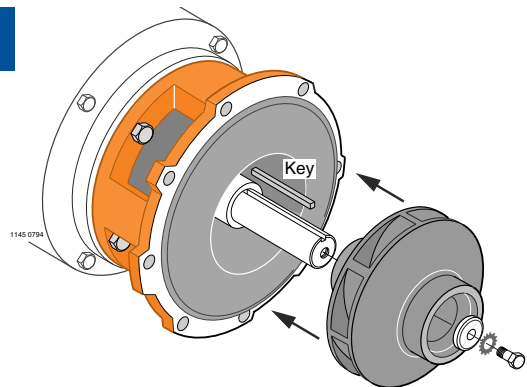
- straight in using a piece of pipe or tubing.
- Reinstall bracket on motor using extreme care not to scratch or chip ceramic face of seal with shaft.

3



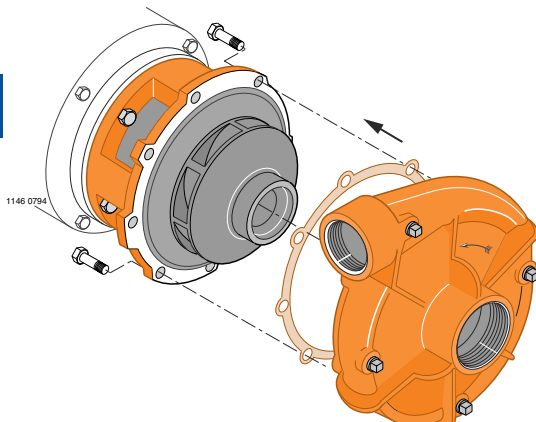
- Apply a small amount of mineral oil to inside diameter of rubber ring in rotating seat and outside of shaft sleeve. Slide rotating seat onto shaft, polished face first, until it is tight against ceramic face.
- Compress seal spring, and install retaining ring (if used) in shaft sleeve groove.

4



- Place impeller key in motor shaft keyway. Slide impeller on to shaft as far as possible.
- Apply non-permanent thread adhesive to impeller capscrew and shaft threads.
- Install impeller washer, shakeproof lockwasher, and capscrew.

5



- Install new gasket or O-Ring and volute case onto bracket.
- Install new O-Ring gasket and volute case on to bracket.
- Apply anti-seizing compound to capscrews and tighten securely.

Procedure and parts will vary slightly depending on pump style.