

Please read and save this Repair Parts Manual. Read this manual and the General Operating Instructions carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. The Safety Instructions are contained in the General Operating Instructions. Failure to comply with the safety instructions accompanying this product could result in personal injury and/or property damage! Retain instructions for future reference.

1-Inch Self Priming Utility Pump

Refer to form 1808-634-00 for General Operating and Safety Instructions.

Description

This self-priming centrifugal pump is designed to handle many water transfer services such as storm draining, light irrigation, emergency water supply, swimming pool and spa tub draining, etc. Pump can self-prime to 6 feet suction lift (with casing full of water), handling clear to sediment laden liquids containing solids up to 1/8" in diameter. Handles liquids from 40° F to 180° F (4° to 82° C). Pump is supplied with two 1" NPT x 3/4" garden hose adapters. For use with nonflammable, non-abrasive liquids compatible with pump component materials.

Performance Chart

GPM of Water at Total Head in Feet						Max. Hd.* Ft.	PSI
10'	20'	30'	40'	50'			
38	32	24	15	6	57'	25	

(*) Shut-off.

Specifications

- Suction inlet 1" NPT
- Discharge outlet 1" NPT
- Power supply 115V, 60 Hz
- Motor 1/2 HP, 3450 RPM
NEMA 56J Fame, 1.0 S.F.
- Basic construction Cast aluminum
- Seal Carbon, ceramic,
S.S. w/Buna-N seals

Maintenance

⚠ WARNING Make certain that the unit is disconnected from the power source before attempting to service or remove any component!

MECHANICAL SEAL REPLACEMENT

Refer to Figures 2 and 3.

IMPORTANT: Always replace both the seal seat and the seal head to insure proper mating of mechanical seal components!

1. Unthread cap screws (Ref. No. 12) and remove pump casing (Ref. No. 10) and o-ring (Ref. No. 5) from adapter (Ref. No. 3).

2. Unscrew impeller (Ref. No. 9) from the motor shaft.

NOTE: Some motors use an open end 7/16" wrench across the flats on the rear of the motor shaft (remove bearing cap for access) to prevent shaft from turning. Other motor shafts have a screwdriver slot instead of the flats.

3. Unthread cap screws (Ref. No. 4) and remove the adapter from the motor mounting face. The seal head (Ref. No. 7) and the impeller shims (Ref. No. 8) will come loose at this time.
4. Push seal seat (Ref. No. 6) from the adapter recess with a screwdriver.
5. Clean the adapter recess before inserting a new seal seat.
6. Carefully wipe the ceramic surface of the new seal seat with a clean cloth.
7. Wet the rubber portion of the seal seat with a light coating of soapy water.
8. Press the new seal seat squarely into

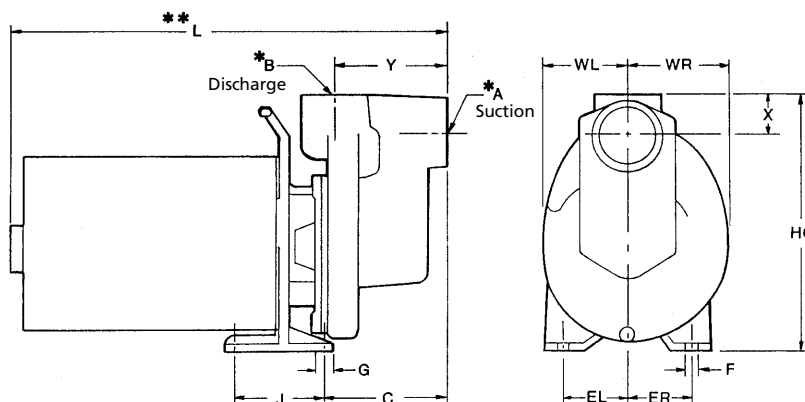


Figure 1 - Dimensions

Dimensions (Inches)

*A	*B	C	EL	ER	F	G	HO	J	L**	WL	WR	X	Y
1	1	4 ⁷ / ₁₆	2 ¹ / ₄	2 ¹ / ₄	7/16	3/4	8 ³ / ₄	3	16	2 ⁷ / ₈	3 ¹ / ₂	1 ¹ / ₄	3 ¹⁵ / ₁₆

All dimensions have a tolerance of ± 1/8".

(*) Standard NPT (female) pipe thread.

(**) This dimension may vary due to the motor mfg. specification.

1-Inch Self-Priming Utility Pump

Maintenance (Continued)

the cavity in the adapter. If the seal seat does not press squarely into the cavity, it can be adjusted in place by pushing on it with a piece of pipe. Always use a piece of cardboard between the pipe and the seal seat to avoid scratching the seal seat (this is a lapped surface and must be handled very carefully).

9. After the seal seat is in place, ensure that it is clean and has not been marred.
10. Using a clean cloth, wipe the shaft and make certain that it is perfectly clean.

NOTE: If removed, slide flinger washer (Ref. No. 2) onto the shaft until it is located approximately 1/8" from the face of the motor bearing hub.

11. Secure the adapter on the motor mounting face. Reuse any shims or spacers which may have been removed. Carefully guide motor shaft through the seal seat.
12. Apply a light coating of soapy water to the inside rubber portion of seal

head and slide onto the shaft (with the sealing face first) so that the rubber portion is just up over the shaft shoulder.

CAUTION Do not touch or wipe the face of the carbon (black) part of the seal head.

13. Replace any shim washers which may have been removed in disassembly.
14. Screw the impeller back in place, tightening until it is against the shaft shoulder.
15. Remount o-ring and casing on the adapter.

IMPORTANT: Always inspect casing O-ring gasket (Ref. No. 5) whenever the unit is disassembled. Replace when cracked or worn.

SHIM ADJUSTMENT

When installing a replacement impeller (Ref. No. 9) or motor (Ref. No. 1), it may be necessary to vary the number of shims (Ref. No. 8) to insure proper running clearance between impeller and casing (Ref. No. 10).

Proceed as follows:

NOTE: A proper running clearance is less than 0.010.

1. For impeller replacement, add one 0.010" shim in addition to those removed originally.
2. For motor replacement, add two 0.010" shims in addition to shims removed during assembly.
3. Reassemble pump using MECHANICAL SEAL REPLACEMENT for reference.

IMPORTANT: Insure that casing is in place and check shaft to make sure it is turning freely (use screwdriver slot or two flats at rear of motor to turn shaft). If it turns freely, check to insure that casing cover and casing are fitted "metal to metal" where they meet on outside. If they are not "metal to metal" tighten hex nuts (Ref. No. 12) and recheck shaft for free turning. Tighten carefully turning shaft while tightening so that motor bearings are not damaged in the event that too many shims were installed. If shaft seizes before fasteners are completely tight, disassemble pump and remove one shim and repeat reassembly.

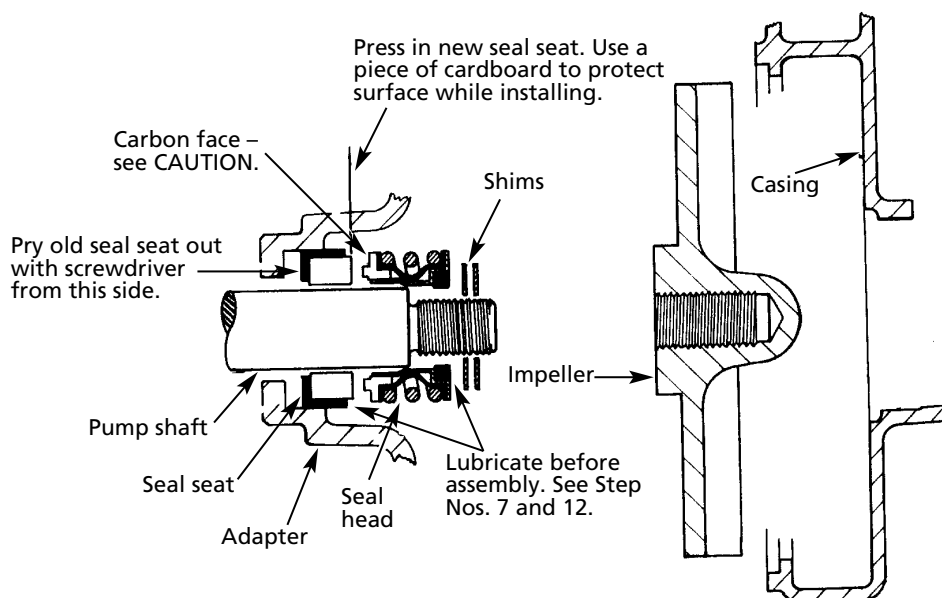


Figure 2 - Mechanical Seal Replacement

For Repair Parts, contact dealer where pump was purchased.

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

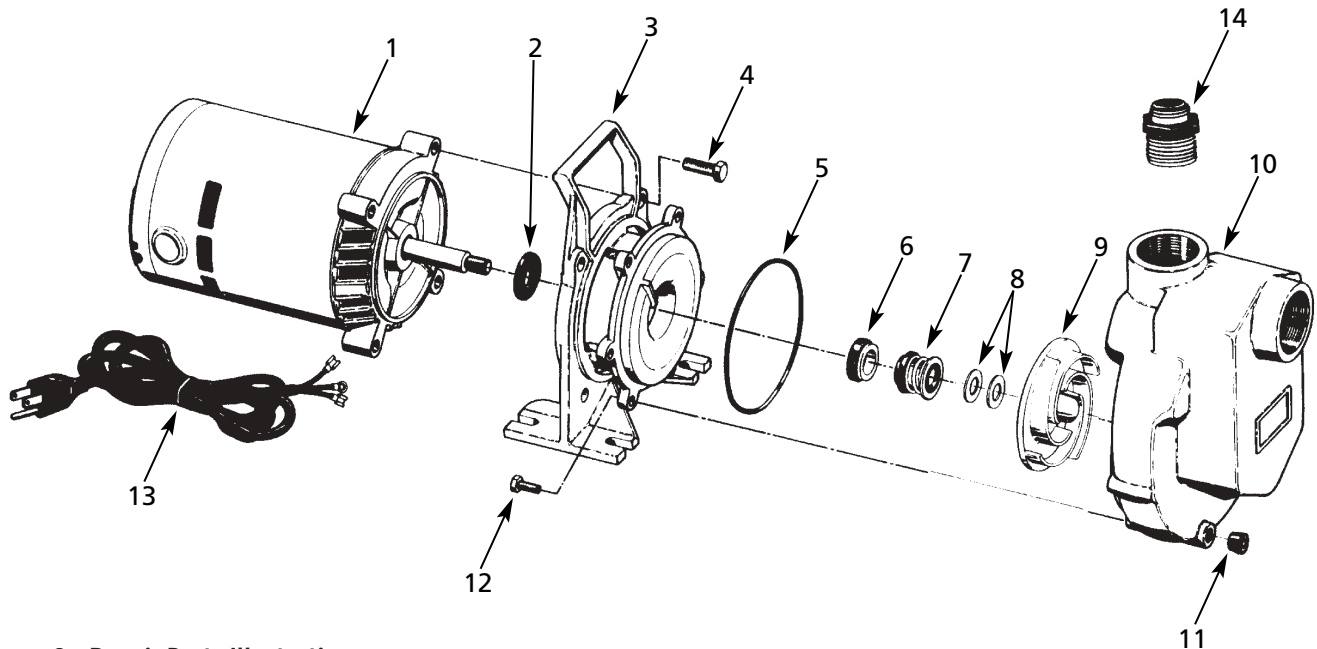


Figure 3 - Repair Parts Illustration

Repair Parts List

Reference Number	Description	Part Number
1	Motor	1626-074-00
2	Slinger washer	1534-000-00
3	Adapter	2218-004-01
4	Hex head cap screw (4 req.)	*
5	O-ring gasket, #245 Buna-N	2104-004-00
	O-ring gasket, #245 Viton (optional)	2105-023-00
6&7	† Buna-N seal assembly	1640-161-90
	† Viton seal assembly (optional)	1640-161-91
8	Impeller shims, .010", .020", .030" (1 ea.)	1657-000-90
9	Impeller	2104-024-09
10	Casing	2218-005-01
11	Drain plug	*
12	Hex head cap screw (6 req.)	*
13	Cord set	1639-077-00
14	1" NPT x 3/4" Garden hose adapter (2 req.)	1696-073-00

(*) Standard hardware item, available locally.

(†) Seal assembly available as set only; includes seal seat and head.

