

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. AMT reserves the right to discontinue any model or change specifications at any time without incurring any obligation.

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Periodic maintenance and inspection is required on all pumps to ensure proper operation. Unit must be clear of debris and sediment. Inspect for leaks and loose bolts. Failure to do so voids warranty.

# Self-Priming Chemical Pumps



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

## DESCRIPTION

These are non-self-priming (gravity feed) units designed to handle liquid transfer, heating and cooling application, where no suction lift is required. All models feature semi-open clog-resistant impellers and continuous duty, 3450 RPM, 56J frame motors. Discharge port can be rotated in 90 degree increments to accommodate specific applications. Casing working pressure to 75 psi (517 kPa). These are manual units, no controls are supplied. For use with non-flammable, non-abrasive liquids compatible with pump component materials.

Handles fluids from 40° to 180° F (4° to 82° C). For use with non-flammable, non-abrasive liquids compatible with pump component materials. Cast iron construction with EPDM/EPR seals and o-rings.

### ▲ WARNING

**All units are for use with non-flammable, non-abrasive liquids compatible with pump component materials.**

**IMPORTANT: Not for use with petroleum based liquids.**

## MAINTENANCE

### ▲ WARNING

**Make certain that this unit is disconnected from power source before attempting to service or remove any component!**

## MECHANICAL SEAL REPLACEMENT

Refer to Seal Replacement Figures 1 & 2.

**IMPORTANT:** Always replace the seal assembly (Ref. No. 10) to ensure proper mating of components! Also, impeller o-ring seal (Ref. No. S11) (where applicable) should be replaced if worn or damaged any time impeller nut (Ref. No. 12) has been removed.

1. Unthread fasteners (Ref. No. S4) and remove pump casing (Ref. No. S2), casing seal (Ref. No. S12), and flapper valve (Ref. No. S13) from adapter (Ref. No. 7).
2. Remove impeller fastener, impeller seal (where applicable), and impeller (Ref. No. 13).
3. Shims (Ref. No. 14), seal spacer (Ref. No. 15) and seal head can now be pulled from shaft.

**IMPORTANT:** Care should be taken to be sure that the same number of shim washers (Ref. No. 14) are replaced behind impeller as were removed. These shim washers are located directly behind impeller.

**NOTE:** Some motors (Ref. No. 1) use an open end 7/16" wrench across flats on rear of motor shaft (remove bearing cap for access) to prevent shaft from turning. Other motor shafts have a screwdriver slot instead of flats.

4. Unscrew fasteners (Ref. No. 8). Remove adapter (Ref. No. 7) from motor mounting face.
5. Push seal seat from back of seal plate (Ref. No. 9) recess with a screwdriver.
6. Clean adapter recess before inserting a new seal seat.

### ▲ CAUTION

**The precision lapped faces on mechanical seal are easily damaged. Handle your replacement seal carefully.**

7. Carefully wipe polished surface of new seal seat with a clean cloth.
8. Wet rubber portion of seal seat with a light coating of soapy water.
9. Press new seal seat squarely into recess in adapter. If seal seat does not press squarely into cavity, it can be adjusted in place by pushing on it with a piece of pipe. Always use a piece of cardboard between pipe and seal seat to avoid scratching polished surface.
10. After seal seat is in place, ensure that it is clean and has not been marred.

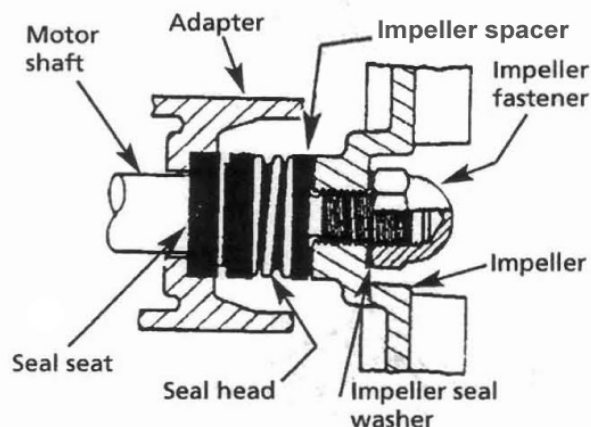


Figure 1 - Mechanical Seal Replacement

# Self-Priming Chemical Pumps

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11. Using a clean cloth, wipe shaft/shaft sleeve and make certain that it is perfectly clean.
12. Secure seal plate (where applicable) and adapter on motor mounting face. Carefully guide motor shaft through seal seat.
13. Wet inside rubber portion of new seal head with a light coating of soapy water. Slide head onto shaft/shaft sleeve. Seal head and seal seat will meet. Reinstall any shims which have been removed. (See Shim Adjustment).
14. Install impeller and reassemble pump.
15. A short "run-in" period may be necessary to provide completely leak-free seal operation.

## SHIM ADJUSTMENT

**NOTE:** A proper running clearance is less than 0.010" (face of impeller to mating face of volute).

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 those removed during disassembly.
3. Reassemble the pump as described in steps 16 and 17 (above).

**IMPORTANT:** Be sure that volute is snugly in place and check shaft to make sure it is turning freely (use 7/16" wrench or screwdriver to turn shaft). If it turns freely, check to ensure that the seal plate adapter and volute are fitted metal-to-metal where they meet on outside. If they are not metal-to-metal, tighten fasteners (Ref. No. V3) 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 (0.010") shim and repeat reassembly.

4. When proper clearance is obtained, reassemble.

## Self-Priming Chemical Pumps

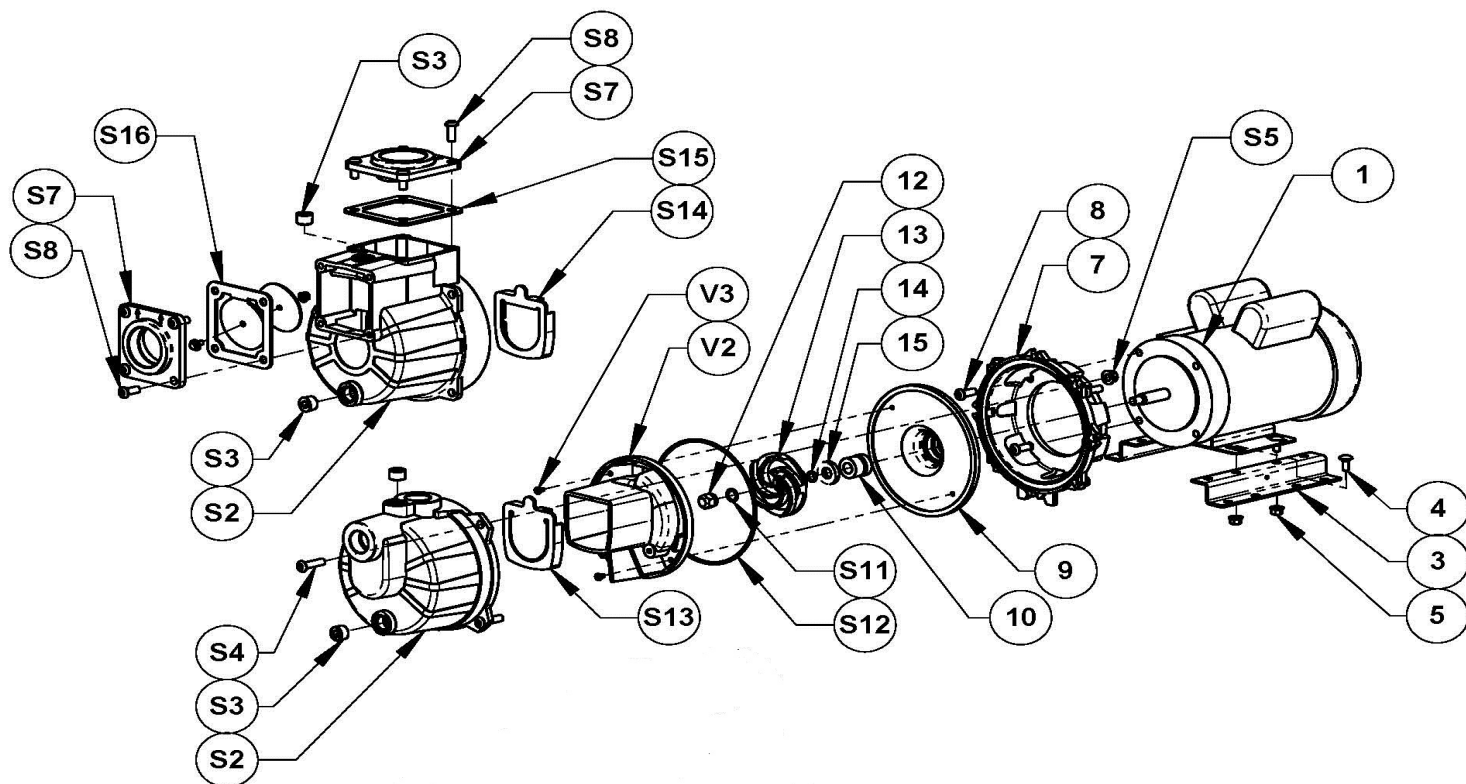
***For Repair Parts contact dealer where pump was purchased.***

**Please provide following information:**

-Model Number

**-Serial Number (if any)**

Part description and number as shown in parts list



### Figure 2 - Repair Parts Illustrations

## Repair Parts List

		Part Number for Models						
Ref.		1SP05C-1P	1SP07C-1P	12SP10C-1P	15SP15C-1P	2SP20C-1P	2SP30C-1P	
No.	Description	1SP05C-3P	1SP07C-3P	12SP10C-3P	15SP15C-3P	2SP20C-3P	2SP30C-3P	Qty
1	Motor-1 Phase TEFC	1626-301-00	1626-302-00	1626-303-00	1626-304-00	1626-305-00	1626-306-00	1
	Motor-3 Phase TEFC	1626-307-00	1626-308-00	1627-309-00	1627-310-00	1627-311-00	1627-312-00	1
3	56 Frame Base Kit	1506-101-90	1506-101-90	1506-101-90	1506-101-90	1506-101-90	1506-101-90	1
	(includes Ref. Nos. 3, 4, and 5)							
4 & 5	Fasteners	Incl. w/Ref. 3	Incl. w/Ref. 3	Incl. w/Ref. 3	Incl. w/Ref. 3	Incl. w/Ref. 3	Incl. w/Ref. 3	4
7	Adapter Kit	1A11-030-95	1A11-030-95	1A11-030-95	1A11-030-95	1A11-030-95	1A11-030-95	1
	(includes Ref. Nos. 7 and 8)							
8	Fasteners	Incl. w/Ref. 7	Incl. w/Ref. 7	Incl. w/Ref. 7	Incl. w/Ref. 7	Incl. w/Ref. 7	Incl. w/Ref. 7	4
9	Seal Plate Kit	1A11-020-95	1A11-020-95	1A11-020-95	1A11-020-95	1A11-020-95	1A11-020-95	1
10	EPDM/EPR Seal Assembly	1641-161-91	1641-161-91	1641-161-91	1641-161-91	1641-161-91	1641-161-91	1
12	Impeller Lock Nut	Incl. w/Ref. 13	Incl. w/Ref. 13	Incl. w/Ref. 13	Incl. w/Ref. 13	Incl. w/Ref. 13	Incl. w/Ref. 13	1
13	Impeller Kit	1A11-010-95	1A15-010-95	1A19-010-95	1A29-010-95	1A39-010-95	1A3D-010-95	1
	(includes Ref. Nos. 12, 13 and 14)							
14	Impeller Shim	Incl. w/Ref. 13	Incl. w/Ref. 13	Incl. w/Ref. 13	Incl. w/Ref. 13	Incl. w/Ref. 13	Incl. w/Ref. 13	1
15	Seal Spacer	1A11-019-00	1A11-019-00	1A11-019-00	1A11-019-00	1A11-019-00	1A11-019-00	1
S2	Casing Kit	1A11-001-95	1A11-001-95	1A21-001-95	1A31-001-95	1A31-001-95	1A31-001-95	1
	(includes Ref. Nos. S2, S3, S4 and S5)							
S3	Pipe Plug	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	2
S4	Fasteners	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	4
S5	Fasteners	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	Incl. w/Ref. S2	4
S7	Flange NPT Kit	N/A	N/A	N/A	1A31-050-95	1A41-050-95	1A41-050-95	1
	(2 Flanges & Required Fasteners in each Kit)							
	(includes Ref. Nos. S7 and S8)							
S8	Fasteners	Incl. w/Ref. S7	Incl. w/Ref. S7	Incl. w/Ref. S7	Incl. w/Ref. S7	Incl. w/Ref. S7	Incl. w/Ref. S7	8
S11	O-ring EPDM #113	Incl. w/Ref. S13	Incl. w/Ref. S13	Incl. w/Ref. S13	Incl. w/Ref. S14	Incl. w/Ref. S14	Incl. w/Ref. S14	1
S12	O-ring EPDM #263	Incl. w/Ref. S13	Incl. w/Ref. S13	Incl. w/Ref. S13	Incl. w/Ref. S14	Incl. w/Ref. S14	Incl. w/Ref. S14	1
S13	Flapper & O-ring EPDM Kit	1A11-305-90	1A11-305-90	1A11-305-90	N/A	N/A	N/A	1
	(includes Ref. Nos. S11, S12 and S13)							
S14	O-ring & Gasket EPDM Kit	N/A	N/A	N/A	1A31-306-90	1A31-306-90	1A31-306-90	1
	(includes Ref. Nos. S11, S12 and S13)							
S15	Discharge Flange Gasket EPDM Kit	N/A	N/A	N/A	1A31-305-90	1A31-305-90	1A31-305-90	1
S16	Flapper EPDM Kit	N/A	N/A	N/A	2GXE-070-90	2GXE-070-90	2GXE-070-90	1
V2	Volute Kit, Includes Ref V3	1A11-150-95	1A11-150-95	1A11-150-95	1A29-150-95	1A29-150-95	1A3D-150-95	1
	(includes Ref. Nos. V2 and V3)							
V3	Fasteners	Incl. w/Ref. V2	Incl. w/Ref. V2	Incl. w/Ref. V2	Incl. w/Ref. V2	Incl. w/Ref. V2	Incl. w/Ref. V2	2

**NOTE: Fasteners are Standard Hardware available locally.**