

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 insure proper operation. Unit must be clear of debris and sediment. Inspect for leaks and loose bolts. Failure to do so voids warranty.

1½ -Inch Self-Priming Centrifugal Pedestal Pumps

Refer to pump manual 1808-635-00 for General Operating and Safety Instructions.

DESCRIPTION

These self-priming centrifugal pumps are used for continuous transfer pumping of chemicals from tanks and sumps, and in chemical process and batch lines, waste water treatment and agricultural pumping applications. Pumps self-prime (after filling pump casing) to 6 feet suction lift and will handle liquids with entrapped gases. Maximum viscosity is 100 SSU. Casing working pressure to 75 psi (517 kPa). For use with nonflammable, non-abrasive liquids compatible with pump component materials.

316 STAINLESS STEEL UNITS

Stainless steel pumps will handle many acids, alkalis, caustics, solvents, brines and other fluids compatible with Type 316 stainless steel body and impeller, and Teflon mechanical seal (comprised of ceramic seat, carbon head and 316 stainless steel spring). Handle liquids from 40° to 250° F (4° to 121° C).

BRONZE UNITS

Bronze units handle many acids and organic material compatible with bronze body, 316 stainless steel impeller, and Viton mechanical seal (comprised of ceramic seat, carbon head and stainless steel spring). Handle liquids from 40° to 200° F (4° to 93° C). All units are for use with non-flammable, non-abrasive liquids compatible with pump component materials.

SPECIFICATIONS

Weight	
3899-97.....	34 lbs.
3899-99.....	30 lbs.
HP Required.....	.2 @3450 RPM
Max. Specific Gravity.....	1.1

PERFORMANCE

GPM of Water At Total Head in Feet

10'	20'	30'	40'	50'	60'	Shutoff*
123	113	99	82	61	26	63 ft.

(*) To convert to psi, multiply by specific gravity and divide by 2.31

MAINTENANCE

⚠ WARNING

Make certain that the unit is disconnected and locked out from the power source before attempting to service or remove any components. If power disconnect is out-of-sight, lock it in open position and tag to prevent application of power.

Dimensions (Inches)

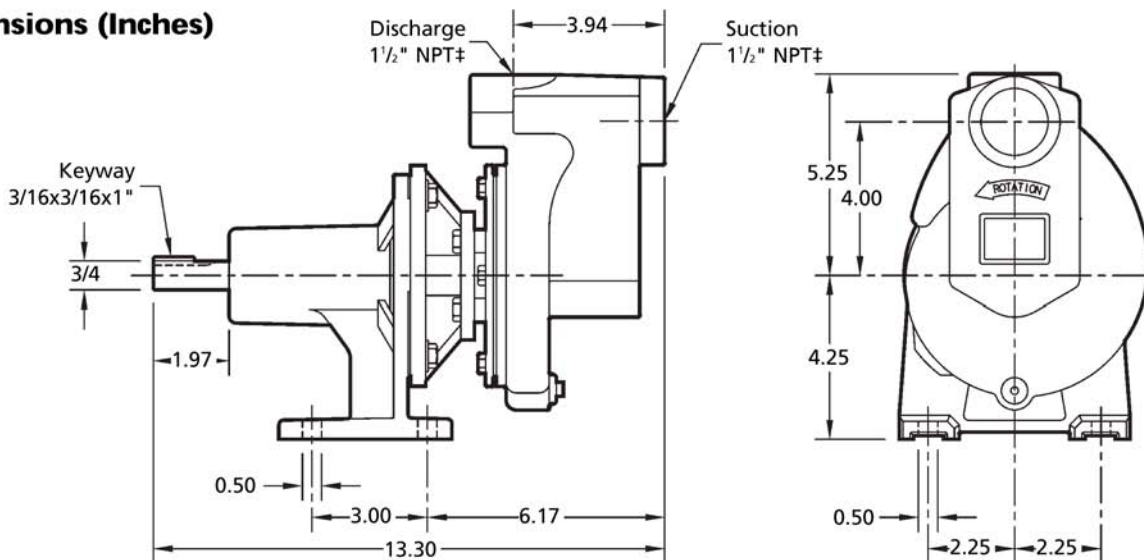


Figure 1 - Dimensions

1½ -Inch Self-Priming Centrifugal Pedestal Pumps

MECHANICAL SEAL REPLACEMENT

Refer to Figures 2, 3 and 4.

IMPORTANT: Always replace both seal seat (Ref. No. 8) and seal head (Ref. No. 9) to insure proper mating of components! It is recommended that impeller seal (Ref. No. 4) also be replaced when replacing shaft seal.

1. Unthread fasteners (Ref. No. 13) and remove casing (Ref. No. 2) and casing seal (Ref. No. 10).
2. Unscrew impeller fastener (Ref. No. 3) from shaft (fastener unscrews CCW looking at shaft).
3. Unscrew impeller (Ref. No. 5) from shaft. Remove impeller seal. Also, remove shims (Ref. No. 6) DO NOT LOSE SHIMS.
4. Pry seal seat from recess of impeller. Use caution so as not to damage or remove seal seat pin (Ref. No. 7) on Teflon seal equipped units.
5. Remove the adapter and casing cover (Ref. Nos. 12 and 11) by unthreading fasteners (Ref. Nos. 21 and 23).
6. Press seal head from rear of casing cover.
7. Clean casing cover and impeller seal recesses and shaft. Make certain all surfaces are perfectly clean before installing new seal parts.

CAUTION

Handle seal parts with extreme caution and keep them clean. Do not touch polished seal faces with your hands. Do not apply lubricants on seal faces. This could cause a leak or premature seal failure.

8. Apply a light coat of sealing compound to new seal head (See Figure 2) and press it into casing cover recess using proper size tube or installation tool (See Figure 2). DO NOT press on carbon face or top of metal cup of the seal head. Install using flange only.
9. Slide adapter and casing cover assembly onto mounting face. Attach with fasteners.
10. Press new seal seat squarely into impeller recess. Align slot in seal seat with seal seat pin on Teflon equipped units. Avoid scratching polished surface.

NOTE: Use a soft, clean piece of cloth on seal seat face when installing to prevent marring.

11. Replace any shim washers which may have been removed in disassembly (see SHIM ADJUSTMENT). Screw the impeller back in place, tightening until it is firmly seated.
12. Install impeller seal and install and tighten impeller lock nut.
13. Reinstall seal on casing cover rabbet. Remount casing with fasteners.

NOTE: Always flush pump thoroughly before use so as not to contaminate liquid being pumped.

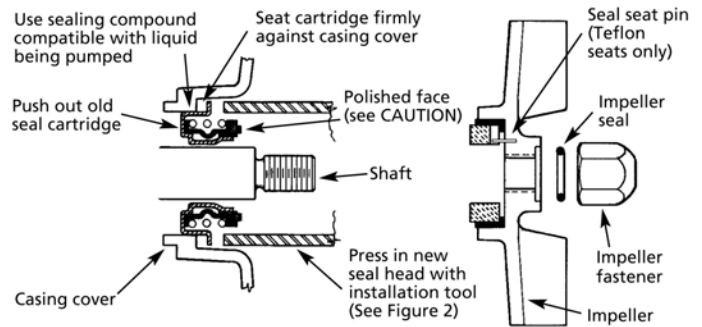


Figure 3 - Mechanical Seal Replacement

CAUTION

If impeller is replaced, seal assembly should also be replaced as seal is usually damaged in disassembly. Also replace impeller washer.

SHIM ADJUSTMENT

When installing a replacement impeller (Ref. No. 5), casing (Ref. No. 2), casing cover (Ref. No. 11), adapter (Ref. No. 12), pedestal (Ref. No. 24), stub shaft (Ref. No. 18) or shaft (Ref. No. 26), it may be necessary to adjust number of shims (Ref. No. 6) to ensure proper running clearance between impeller and casing. Proceed as follows:

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

1. Add two (0.010") shims in addition to those removed originally.
2. Reassemble pump as described in Steps 11, 12, and 13.

IMPORTANT: Ensure that casing is snugly in place and check shaft to make sure it is turning freely. If it turns freely, check to ensure that adapter casing cover and casing are fitted "metal to metal" where they meet on outside. If they are not "metal to metal", tighten fasteners (Ref. No. 13) and recheck shaft for free turning. Tighten carefully, turning shaft while tightening so that 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.

BEARING HOUSING SERVICE

1. Remove pump head assembly (See "Mechanical Seal Replacement")
2. Remove shaft bearings (Ref. No. 25) and shaft (Ref. No. 26) as an assembly by first removing retaining ring (Ref. No. 29) and wave washer (Ref. No. 28).
3. Push shaft/bearing assembly out of the bearing housing (Ref. No. 24) by rapping on pump end of shaft with soft mallet, or block of wood and a hammer.
4. Shaft bearings can now be removed from shaft.
5. If shaft bearings have been removed from shaft and bearing housing, replace by sliding bearing or shaft to shoulder.
6. Replace shaft bearing assembly by sliding assembly into housing, pump end first. Push shaft bearing assembly completely in by gently tapping on keyway end of shaft with soft mallet.
7. Replace wave washer and snap ring.
8. Reassemble pump to pedestal (See "Mechanical Seal Replacement").

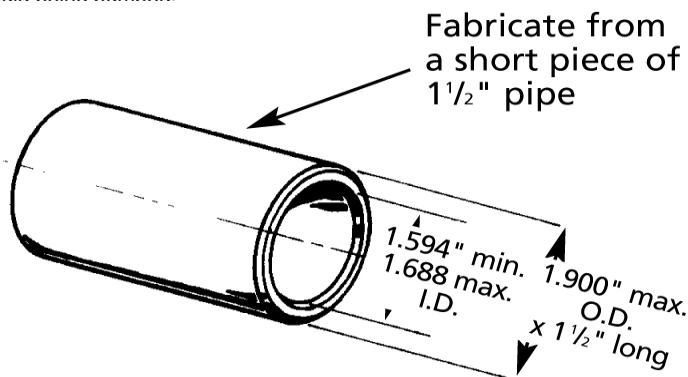


Figure 2 - Seal Installation Tool

1½ -Inch Self-Priming Centrifugal Pedestal 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

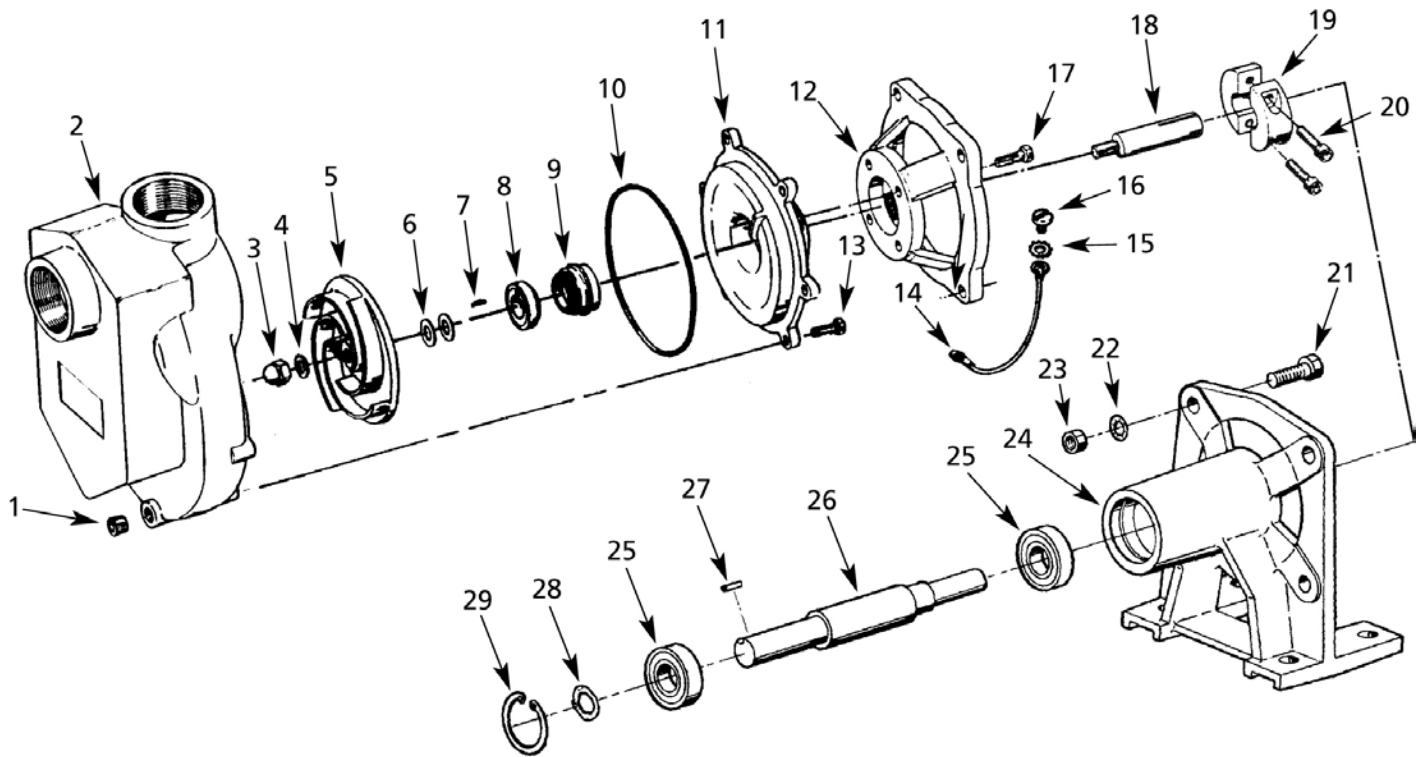


Figure 4 - Repair Parts Illustrations

Repair Parts List

Ref No.	Description	Part Number for Models		Qty
		3899-97 Bronze	3899-98 Stainless Steel	
1	Pipe Plug	*	*	1
2	Casing	2105-016-01	2105-001-01	1
3	Impeller Fastener	1784-001-00	1784-001-00	1
4	Impeller Seal	2105-037-00	2105-031-00	1
5	Impeller	2105-009-01	2105-009-01	1
6	Shim Set	1806-044-90	1806-044-90	1
7	Pin	N/A	1652-006-00	1
8 & 9	Shaft Seal Assembly	1641-162-90	1641-162-91	1
10	Casing Seal	2105-023-00	2105-004-00	1
11	Casing Cover	2105-017-01	2105-003-01	1
12	Adapter	3890-032-08	3890-032-08	1
13	Fastener	*	*	6
14	Ground Wire	2105-042-00	2105-042-00	1
15	Washer	*	*	1
16	Fastener	*	*	1
17	Fastener	*	*	4
18	Stub Shaft	2105-011-00	2105-011-00	1
19	Clamp Set	2105-012-00	2105-012-00	1
20	Fastener	*	*	2
21	Fastener	*	*	4
22	Fastener	*	*	4
23	Nut	*	*	4
24	Pedestal	3890-090-09	3890-090-09	1
25	Bearing	1695-031-00	1695-031-00	2
26	Shaft	1696-067-00	1696-067-00	1
27	Key	1517-000-00	1517-000-00	1
28	Shim Set	1696-008-90	1696-008-90	1
29	Wave Washer	1806-023-00	1806-023-00	1
29	Retaining Ring	1695-034-00	1695-034-00	1

(†) Sold as a set only.

(*) Standard hardware item, available locally.