

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.

High Head Centrifugal Pedestal Pumps

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

Description

These pumps are for continuous duty, high pressure applications that do not require self-priming. Discharge port rotates 360° in 90° increments. Pumps incorporate a mechanical shaft seal and o-ring casing seal. All units for use with nonflammable, non-abrasive liquids compatible with pump component materials.

316 STAINLESS STEEL UNITS

Pump construction is cast 316 stainless steel with shaft seal of stainless steel, carbon, ceramic, and Viton elastomers. Handle liquids from 40° to 200° F (4° to 93° C).

BRONZE UNITS

Pump construction is cast bronze with cast 316 stainless steel impeller. Includes shaft seal of stainless steel, carbon, ceramic, and Viton elastomers. Handle liquids from 40° to 200° F (4° to 93° C).

CAST IRON UNITS

Pumps are cast iron with cast 316 stainless steel impeller. Shaft seal is stainless steel, carbon, ceramic, and Buna N elastomers. Handle liquids from 40° to 180° F (4° to 82°C).

Maintenance

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

MECHANICAL SEAL REPLACEMENT

Refer to Figures 2 and 3.

IMPORTANT: Always replace both seal seat and seal head (Ref. No. 6) to insure proper mating of components! Also, impeller seal (Ref. No. 9) should be replaced anytime impeller fastener (Ref. No. 10) has been removed.

1. Remove fasteners (Ref. No. 3) connecting casing (Ref. No. 11) to adapter (Ref. No. 4).
2. Remove casing and casing seal (Ref. No. 5).

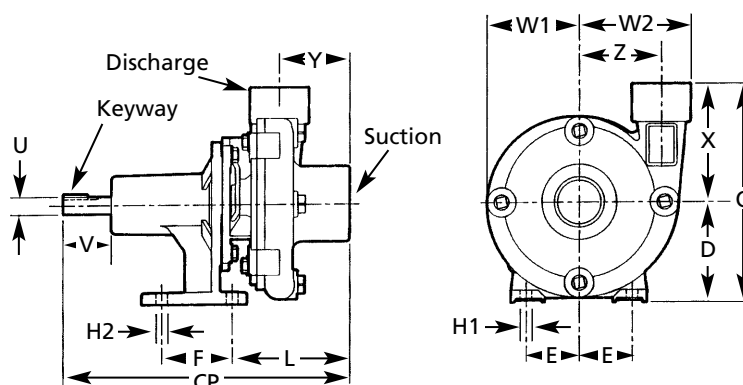


Figure 1 - Dimensions

Dimensions (Inches)

Model	Suc.*	Dis.*	CP	D	E	F	H1	H2	L	O	U	V	W1	W2	X	Y	Z	Keyway
4897	1 1/4"	1"	11.55	4.25	2.25	3.00	0.50	0.50	4.37	9.04	3/4"	1.97	3.54	4.41	4.79	2.15	3.35	3/16" x 1"
4906	1 1/2"	1 1/4"	12.17	4.25	2.25	3.00	0.50	0.50	4.98	9.19	3/4"	1.97	3.93	4.76	4.94	3.00	3.49	3/16" x 1"

NOTE: Dimensions have a tolerance of $\pm 1/8"$.

(*) Standard NPT (female) pipe thread.

High Head Centrifugal Pedestal Pumps

Specifications

DRIVER			PUMP CONSTRUCTION					Ship Wt.
Model	HP	Shaft	Port Size	Casing	Imp.	Adapt.	Seals ‡	
Cast Iron Units								
4897-95	Pedestal (Sized for 1 HP)	SS	1¼" x 1"	CI	SS	CI	Buna N	34 lbs.
4906-95	Pedestal (Sized for 3 HP)	SS	1½ x 1¼	CI	SS	CI	Buna N	36
Bronze Units								
4897-97	Pedestal (Sized for 1 HP)	SS	1¼ x 1	BR	SS	BR	Viton	38
4906-97	Pedestal (Sized for 3 HP)	SS	1½ x 1¼	BR	SS	BR	Viton	40
Stainless Steel Units								
4897-98	Pedestal (Sized for 1 HP)	SS	1¼ x 1	SS	SS	SS	Viton	34
4906-98	Pedestal (Sized for 3 HP)	SS	1½ x 1¼	SS	SS	SS	Viton	36

(CI) Cast Iron; (BR) Bronze; (SS) Stainless Steel

() Shaft Seal also contains stainless steel, ceramic, and carbon components.

Performance

Model No.	Pump Speed RPM	Electric HP*	Motor RPM	Sheave Diameter			GPM of Water at Total Head in Feet								Max Head**
				Motor In. Δ	Pump In. Δ	No. of Grooves	10'	20'	40'	60'	80'	100'	120'		
4897	3450	1½	3450	3	3	2	58	56	48	40	29	15	–	112 ft.	
			1725	6	3	2									
4906	5		3450	3	3	2	118	114	104	92	77	59	38	148	
			1725	6	3	2									
4897	2800	¾	3450	2½	3	1	47	43	32	18	–	–	–	75	
			1725	4	2½	1									
4906	2		3450	2½	3	2	92	85	71	54	30	–	–	95	
			1725	4	2½	2									
4897	2300	1/2	3450	3	4½	1	37	31	14	–	–	–	–	50	
			1725	4	3	1									
4906	1		3450	3	4½	1	73	64	44	12	–	–	–	64	
			1725	4	3	1									
4897	1725	1/2	3450	2½	5	1	24	14	–	–	–	–	–	29	
			1725	3	3	1									
4906	1		3450	2½	5	1	51	38	–	–	–	–	–	39	
			1725	3	3	1									

(*) Minimum HP Required.

(**) Shut-off; to convert to psi divide by 2.31.

(Δ) Use A or 4L Section V belts, and pulleys rated for appropriate HP.

Models 4897 and 4906

Maintenance (Continued)

CAUTION *Care should be taken not to pinch or "shave" casing seal between adapter and casing.*

3. Use a box and/or socket wrench to remove impeller fastener. Remove impeller seal and impeller (Ref. No. 8).

NOTE: Pump shaft (Ref. No. 15) must be held in place to remove impeller. Impeller and impeller fastener unscrew CCW when looking at front of pump.

IMPORTANT: Care should be taken to insure that the same number and thickness of shim washers (Ref. No. 7) are replaced behind impeller as was removed. Shim washers are located directly behind impeller and become loose as impeller is removed.

4. Seal head can now be pulled from shaft.
5. Remove fasteners (Ref. No. 13) and separate adapter from pedestal (Ref. No. 1). Then, pry seal seat from adapter.

CAUTION *The precision faces on mechanical seal are easily damaged. Handle your replacement seal carefully. Do not touch polished seal faces.*

IMPORTANT: Be sure that shaft shoulder does not damage polished face.

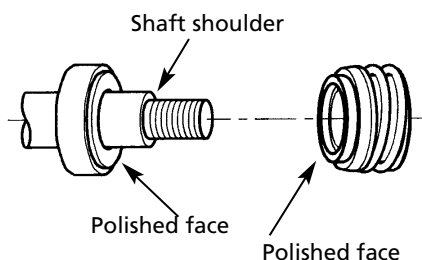


Figure 2

6. Thoroughly clean all surface of seal seat cavity in adapter.

7. Using a clean cloth, wipe shaft and make certain that it is perfectly clean.
8. Wet rubber portion of new seal seat with a light coating of soapy water. While wearing clean gloves or using a clean light rag, press seal seat squarely into adapter recess, use cardboard washer (usually supplied with new seal), place over polished surface and use a piece of pipe or dowel rod to press in firmly, but gently. Avoid scratching polished face.
9. Dispose of cardboard washer. Check again to see that polished surface is free of dirt and all other foreign particles and that it has not been scratched or damaged. Reattach adapter to pedestal.
10. Wet the inside rubber portion of new seal head with a light coating of soapy water. Slide head onto pump shaft with sealing surface facing seal seat (See Figure 2). This completes seal installation.

NOTE: A short "run-in" period may be necessary to provide completely leak-free seal operation.

11. Replace any shim washers which may have been removed in disassembly.
12. Screw impeller back in place, tightening it until it is against shaft shoulder. Install impeller seal and impeller fastener.
13. Remount casing seal and casing on adapter.

IMPORTANT: Always inspect casing seal whenever unit is disassembled. Replace when cracked or worn.

IMPORTANT: After pump is completely assembled it is necessary to rotate pump shaft by hand to check for striking of impeller. If striking or rubbing occurs, adjust impeller shims as required (see "Shim Adjustment").

BEARING HOUSING SERVICE

1. Remove pump assembly from pedestal housing as described under "Mechanical Seal Replacement".
2. Remove shaft and bearing assembly (Ref. No. 14 & 15) by first removing snap ring (Ref. No. 18) and shims (Ref. No. 17). Push shaft assembly out of pedestal by rapping on threaded end of shaft with a soft mallet, or block of wood and a hammer. Slinger washer (Ref. No. 2) will come loose at this time.
3. Replace shaft and bearing assembly by sliding assembly into pedestal, threaded end first. Push assembly completely in by gently tapping on keyway end of shaft with a soft mallet. Replace shims, snap ring, and slinger washer.
5. Reassemble pump as described under "Mechanical Seal Replacement".

SHIM ADJUSTMENT

When installing replacement parts it may be necessary to adjust the number of shims (Ref. No. 7).

1. With casing (Ref. No. 11) removed rotate pump shaft (Ref. No. 15) by hand to check for interference.
2. If shaft will not rotate, or impeller (Ref. No. 8) rubs adapter (Ref. No. 4), unscrew impeller and add one 0.020" shim.
3. Repeat procedure until impeller rotates freely.

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

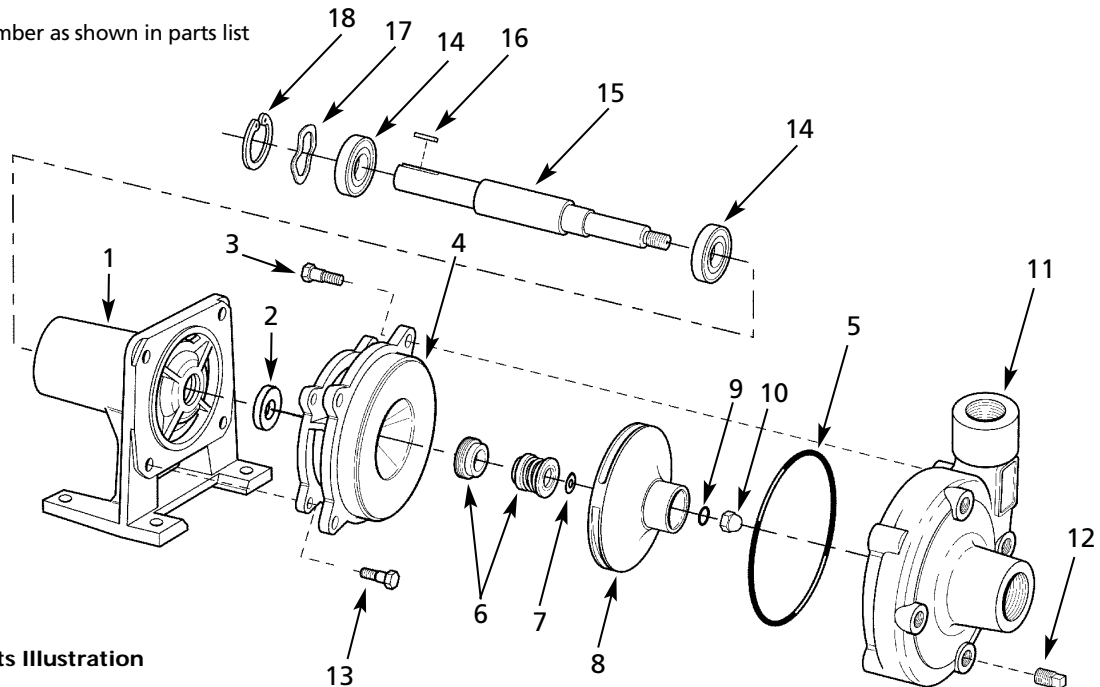


Figure 3 — Repair Parts Illustration

Repair Part List

Ref. No.	Description	Cast iron Units	Bronze Units	SS Units	Qty.
1	Pedestal/Bearing housing	3890-090-09	3890-090-09	3890-090-09	1
2	5/8" Slinger washer	1534-000-00	1534-000-00	1534-000-00	1
3	3/8"-16 UNC x 1" Hex head cap screw	*	1755-001-00	1755-001-00	4
4	Adapter	(4897) 4890-030-09 (4906) 4900-030-09	4890-032-09 4900-032-09	4890-031-09 4900-031-09	1
5	O-ring, Viton(standard) (4897)	2221-010-00	2221-010-00	2221-010-00	1
	O-ring, Buna-N (optional) (4897)	2221-009-00	2221-009-00	2221-009-00	
	O-ring, Viton (standard) (4906)	2119-013-00	2119-013-00	2119-013-00	
	O-ring, Buna-N (optional) (4906)	2219-007-00	2119-007-00	2119-007-00	
6	† Seal assembly, Viton (standard)	1640-161-97	1640-161-97	1640-161-97	1
	† Seal assembly, Buna-N (optional)	1640-161-96	1640-161-96	1640-161-96	
7	Impeller shim package	1806-044-90	1806-044-90	1806-044-90	1
8	Impeller	(4897) 4890-011-01 (4906) 4900-011-01	4890-011-01 4900-011-01	4890-011-01 4900-011-01	1
9	O-ring, Viton (standard)	2105-037-00	2105-037-00	2105-037-00	1
	O-ring, Buna-N (optional)	2105-036-00	2105-036-00	2105-036-00	
10	7/16"-20 UNF SS acorn nut	1784-001-00	1784-001-00	1784-001-00	1
11	Casing	(4897) 4890-001-09 (4906) 4900-001-09	4890-003-09 4900-003-09	4890-002-09 4900-002-09	1
12	3/8" NPT Pipe plug	*	*	1768-008-00	1
13	3/8"-16 UNC x 3/4" Hex head cap screw	*	1754-001-00	1754-001-00	4
14	Ball bearing	1695-031-00	1695-031-00	1695-031-00	2
15	Shaft	1696-066-00	1696-066-00	1696-066-00	1
16	Shaft key	1517-000-00	1517-000-00	1517-000-00	1
17	Wave washer	1806-023-00	1806-023-00	1806-023-00	1
18	Snap ring	1695-034-00	1695-034-00	1695-034-00	1
Δ	Bearing shim package	1696-008-90	1696-008-90	1696-008-90	1

(SS) Stainless Steel.

(Δ) Not shown.

(†) Sold as set only.

(*) Standard hardware item, available locally.