

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.

# Submersible Pumps

## Drainage/Sump Series



Refer to pump manual 1808-636-00 for General Operating and Safety Instructions.

### DESCRIPTION

These stainless steel Submersible Drainage / Sump Pumps are intended for use in residential, commercial, and industrial settings. Examples include: Basements, boats, tanks, and other general drainage applications involving clean liquids. Submersible design means low noise and no priming issues.

Each unit is completely assembled and features a self-cleaning semi-open impeller and a Viton mechanical shaft seal with carbon and ceramic wear faces. They also feature a secondary shaft seal and oil chamber.

Pumps have a 3450 RPM electric motor fitted with a finished 3-prong grounding type power cord. Motors are rated continuous duty and have automatic restart thermal overload protection. Handle liquids from 40° to 104° F (4° to 40° C). For use with clean, clear water and other non-flammable, non-abrasive liquids compatible with pump component materials.

### SPECIFICATIONS

Model	Discharge Outlet	HP	Power Supply @ 60 Hz	Max. Amps	Cord Length	Basic Construction	Impeller Material	Seals	Weight (lbs.)
5980-95	2" NPT	1/2	115 VAC, 1 Phase	7.5	20 ft.	Stainless Steel	Cast Iron	Carbon Ceramic	26
5981-95	2" NPT	1	115 VAC, 1 Phase	13	20 ft.	Stainless Steel	Cast Iron	Carbon Ceramic	46
5983-95	3" NPT	1	115 VAC, 1 Phase	13	20 ft.	Stainless Steel	Cast Iron	Carbon Ceramic	53
598A-95	2" NPT	1/2	115 VAC, 1 Phase	7.5	20 ft.	Stainless Steel	Cast Iron	Carbon Ceramic	24

**Note:** Data is subject to change without notice, see label on driver for actual specifications.

(SS) 304 Stainless Steel

(NPT) Standard NPT (female) Pipe Thread

(\*) With Stainless steel and cast iron components.

### MAINTENANCE

#### ▲ WARNING

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

#### POWER CORD REPLACEMENT

Periodically inspect power cord and replace whenever abrasion, cracking, softening, or other signs of deterioration are found.

Refer to Figures 1 and 2.

- Place unit on workbench in upright position. Clean dirt and rust from around wire cover (Ref. No. 4).
- Remove two fasteners (Ref. No. 2) which hold cord retainer (Ref. No. 1).
- Remove four fasteners (Ref. No. 8) which hold wire cover in place.
- Carefully pry cover from unit with screwdriver.

**IMPORTANT:** Be careful to keep rust and other debris from falling into motor housing during cover removal.

- Take note of proper wire configuration, and connect new power cord (Ref. No. 1) in identical fashion. If unsure about above information or wiring diagrams, consult an electrician familiar with motor wiring.
- Clean sealing flanges if necessary and reassemble pump in reverse order.

### IMPELLER INSPECTION / REPLACEMENT

If pump develops poor performance characteristics, impeller may be worn or clogged.

#### IMPELLER INSPECTION

Refer to Figure 2.

- Place unit on workbench in horizontal position and clean rust and buildup from around pump-to-motor flange.
- Remove three fasteners (Ref. No. 42) to free screen (Ref. No. 41).
- Remove three fasteners (Ref. No. 40) and use screwdriver to pry base (Ref. No. 39) from pump assembly.
- Inspect impeller (Ref. No. 37). If clog is found, remove debris and reassemble in reverse order. If damage to impeller is found, such as pitting, deep grooves, or breakage, proceed to next section.

#### IMPELLER REPLACEMENT

- Remove impeller fastener (Ref. No. 38) by unscrewing in counterclockwise direction.

**NOTE:** To prevent motor shaft from turning, wedge a screwdriver between impeller vane and impeller fastener (see Figure 1).

- Unthread the impeller from the motor shaft/rotor (Ref. No. 24).
- Install replacement impeller and reassemble in reverse order.

# Submersible Pumps

## MECHANICAL SEAL REPLACEMENT

Motor internals are protected from contact with liquid being pumped by a mechanical shaft seal and oil cavity. When seal wears out, potential motor life will be compromised. Therefore, periodic seal replacement is recommended. Time interval between replacements will depend on abrasiveness of liquid being pumped, temperature, total accumulated runtime, etc.

**IMPORTANT:** Always replace the mechanical seal (Ref. No. 30) at same time to insure proper mating of components.

Refer to Figure 2.

1. Disassemble pump by following directions in both "Power Cord Replacement" and "Impeller Inspection / Replacement" sections.
2. With unit on it's side and wire cover, pump assembly and impeller removed from shaft/rotor.
3. Clean rust and buildup from unit.
4. Drain oil from seal cavity by removing drain plug (Ref. No. 29). Then tip components overtop of a catch pan until oil is drained.
5. Remove four fasteners which attach casing (Ref. No. 29) to motor case and pry two components apart with screwdriver.
6. Press on end of motor shaft to separate from motor case. Then carefully guide upper end bell (Ref. No. 14) along with shaft/rotor and bearing assembly out of motor case. Shaft seal head will now be free.

**IMPORTANT:** Shaft seal head (with spring) may have unique ends, and two seal seats may be different from one another also. Be sure to note size and color of each before disassembly so that new parts are installed in proper orientation.

7. Remove upper seal seat (Ref. No. 30) from motor case by using a screwdriver or dowel to press on seal from rear. Do the same for lower seal seat in casing.
8. Clean seal seat cavities before inserting new seals.
9. Carefully wipe polished surface of new seal seats with a clean cloth.
10. Wet outside of rubber portion of seal seats with a light coating of soapy water.
11. Press each new seal seat squarely into cavity in both motor case and casing. If seal seat does not press squarely into cavity, it can be adjusted into place by pushing on it carefully with a piece of pipe or dowel. Always use a piece of cardboard between pipe and seal seat to avoid scratching seal seat. (This is a lapped surface and must be handled very carefully.)
12. After each seal seat is in place, insure that it is clean and has not been marred.
13. Using a clean cloth, wipe shaft and make certain that it is perfectly clean.
14. Carefully guide motor shaft through seal seat and use a press to seat bearing back into motor case.
15. Apply a light coating of soapy water to inside rubber portion of seal head and slide onto shaft (be sure to start correct end first).
16. Place casing back onto motor housing being careful to guide shaft and avoid damage to seal seat. Secure with fasteners.
17. Press lip seal back in place.
18. Refill cavity with oil through fill hole and reassemble in reverse order.

## FLOAT SWITCH

When using a float switch please ensure the tether or clamp is 4" to 6" away from the end of the float.

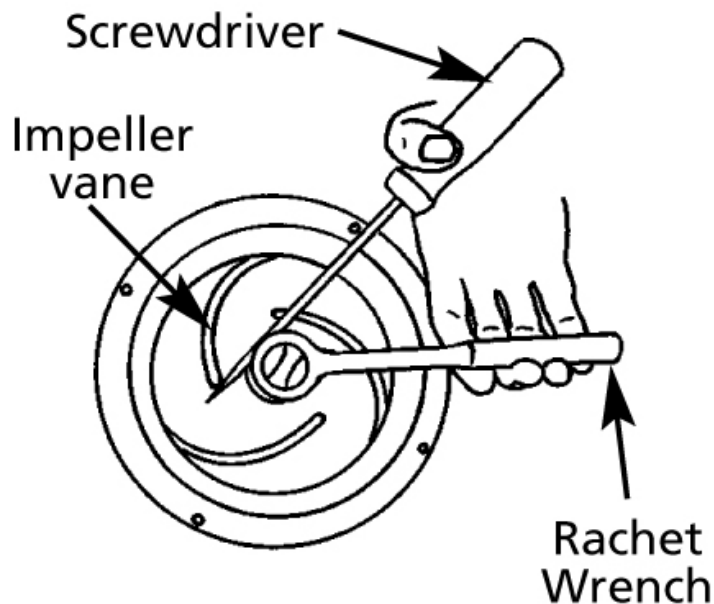


Figure 1 - Impeller Removal

# Submersible 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

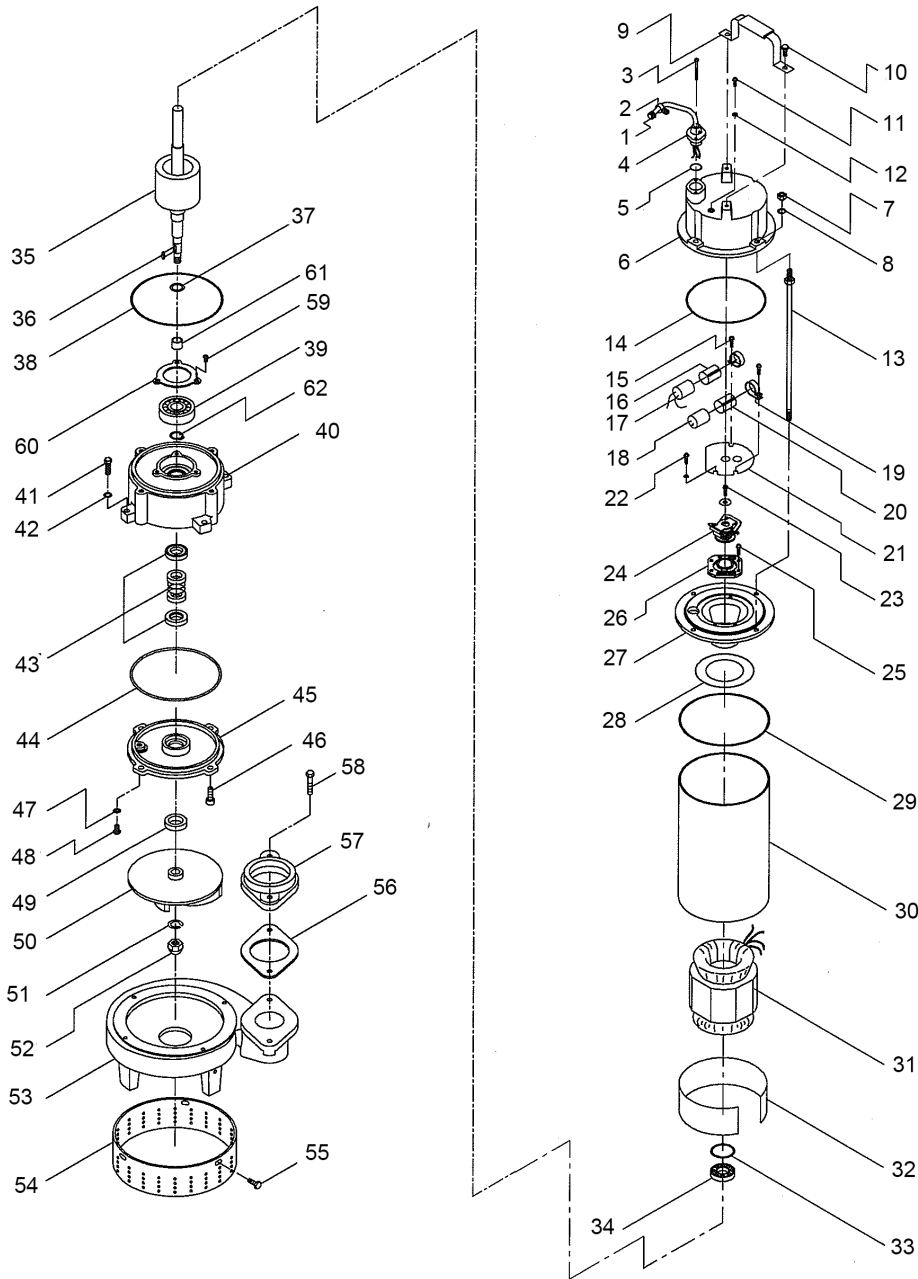


Figure 3 - Repair Parts Illustrations - 5981-95 & 5983-95

**Repair Parts List**

Ref No.	Description	Part Number for Models		Qty
		5981-95	5983-95	
1	Cable Protection	Incl. w/Ref. 4	Incl. w/Ref. 4	1
2	Retainer	Incl. w/Ref. 4	Incl. w/Ref. 4	1
3	Fastener	Incl. w/Ref. 4	Incl. w/Ref. 4	1
4	Power Cord Kit	5981-350-90	5983-350-90	1
	(includes Ref. Nos. 1, 2, 3, 4 and 5)			1
5	O-ring	Incl. w/Ref. 4	Incl. w/Ref. 4	1
6	Wire Cover	Replace Pump	Replace Pump	1
7	Fastener	*	*	4
8	Seal	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
9	Handle Kit	5981-101-90	5981-101-90	1
10	Fastener	*	*	2
11	Fastener	*	*	1
12	Seal	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
13	Fastener	*	*	4
14	Seal	Incl. w/Ref. KIT	Incl. w/Ref. KIT	4
15	Retainer	N/A	N/A	1
16	Insulation Paper	N/A	N/A	1
17	Capacitor	N/A	N/A	1
18	Capacitor	N/A	N/A	1
19	Retainer	N/A	N/A	1
20	Insulation Paper	N/A	N/A	1
21	Capacitor Base	Replace Pump	Replace Pump	1
22	Fastener	*	*	1
23	Fastener	*	*	1
24	Switch	Replace Pump	Replace Pump	1
25	Fastener	*	*	4
26	Fixed Point	N/A	N/A	1
27	Upper Bracket	Replace Pump	Replace Pump	1
28	Insulation Paper	N/A	N/A	1
29	O-Ring	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
30	Motor Casing	Replace Pump	Replace Pump	1
31	Stator	Replace Pump	Replace Pump	1
32	Spacer	Replace Pump	Replace Pump	1
33	Waved Washer	N/A	N/A	1
34	Bearing	Replace Pump	Replace Pump	4
35	Shaft & Rotor	Replace Pump	Replace Pump	1
36	Key	Replace Pump	Replace Pump	1

**Repair Parts List - CONTINUED**

Ref No.	Description	Part Number for Models		Qty
		5981-95	5983-95	
37	O-Ring	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
38	O-Ring	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
39	Bearing	Replace Pump	Replace Pump	1
40	Motor Lower Cover	Replace Pump	Replace Pump	1
41	Fastener	*	*	4
42	Seal	Incl. w/Ref. KIT	Incl. w/Ref. KIT	4
43	Mechanical Seal	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
44	O-Ring	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
45	Seal Plate (includes Ref. Nos. 45 and 46)	5981-021-90	5981-021-90	1
46	Fastener	Incl. w/Ref. 45	Incl. w/Ref. 45	4
47	Seal	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
48	Fastener	*	*	1
49	Protector	N/A	N/A	1
50	Impeller (includes Ref. Nos. 50 and 52)	5981-010-90	5983-011-90	1
51	Impeller Seal	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
52	Impeller Nut	Incl. w/Ref. 50	Incl. w/Ref. 50	1
53	Pump Casing	5981-002-90	5983-002-90	1
54	Strainer (includes Ref. Nos. 54 and 55)	N/A	5983-050-90	1
55	Fastener	N/A	Incl. w/Ref. 54	4
56	Gasket	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
57	NPT Flange (includes Ref. Nos. 57 and 58)	5981-170-90	5983-170-90	1
58	Screw	Incl. w/Ref. 57	Incl. w/Ref. 57	1
59	Fastener	*	*	3
60	Plate	Replace Pump	Replace Pump	1
61	Sleeve	N/A	N/A	1
62	Seal	Incl. w/Ref. KIT	Incl. w/Ref. KIT	1
KIT	Seal Kit (includes Ref. Nos. 8, 12, 14, 29, 36, 38, 42, 43, 44, 47, 51, 56 and 62)	5891-301-90	5983-301-90	1
(-)	Not Available			
(*)	Standard hardware item, available locally.			