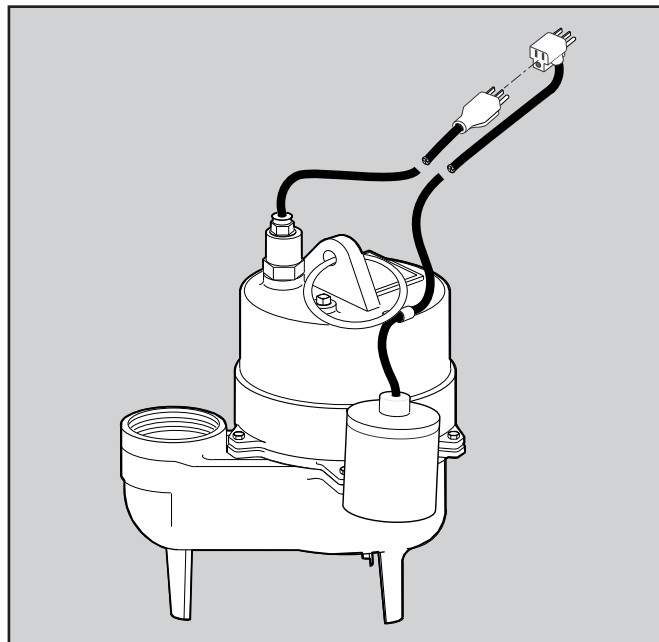




OWNER'S MANUAL
**PITMASTER Submersible Solids
Handling Pump**

293 Wright St., Delavan, WI 53115
Phone: 1-800-468-7867
1-800-546-7867
Fax: 1-800-390-5351

ACE IN THE HOLE[®]
SERIES



MOD. 3963

Installation/Operation/Parts

*For further operating, installation,
or maintenance assistance:*

Call 1-800-468-7867

English Pages 2-6

READ AND FOLLOW SAFETY INSTRUCTIONS!

! This is the safety alert symbol. When you see this symbol on your pump or in this manual, look for one of the following signal words and be alert to the potential for personal injury:

DANGER warns about hazards that **will** cause serious personal injury, death or major property damage if ignored.

WARNING warns about hazards that **can** cause serious personal injury, death or major property damage if ignored.

CAUTION warns about hazards that **will** or **can** cause minor personal injury or property damage if ignored.

The label **NOTICE** indicates special instructions which are important but not related to hazards.

Carefully read and follow all safety instructions in this manual and on pump.

Keep safety labels in good condition. Replace missing or damaged safety labels.

1. Read this manual carefully. Failure to follow these instructions could cause serious bodily injury and/or property damage.

- 2. Check your local codes before installing. You must comply with their rules.
- 3. Vent sewage or septic tank according to local codes.
- 4. Do not install pump in any location classified as hazardous by National Electrical Code, ANSI/NFPA 70-1990.

WARNING Hazardous voltage. Can shock, burn or cause death. During operation, the pump is in water. To avoid fatal shocks, proceed as follows if pump needs servicing:

- 5A. Disconnect power to outlet box before unplugging pump.
- 5B. Take extreme care when changing fuses. Do not stand in water or put your finger in fuse socket.
- 5C. Do not modify cord and plug. When using cord and plug, plug into a grounded outlet only. When wiring to a system control, connect pump ground lead to system ground.
- 6. Do not run pump dry. Dry running can overheat pump, (causing burns to anyone handling it) and will void warranty.
- 7. Pump normally runs hot. To avoid burns when servicing pump, allow it to cool for 20 minutes after shut-down before handling it.
- 8. In normal service, motor should not need oiling. Motor has been filled at the factory with a special oil.

ATTACH ORIGINAL RECEIPT HERE FOR WARRANTY CONSIDERATION.

Simer Lifetime Warranty

SIMER warrants that the products specified in this warranty are free from defects in material or workmanship.

If within the duration of product use by the product owner, any Sewage Pump (Model 3963), or Submersible Sump Pump (Models 3995 and 3997), shall prove to be defective, it shall be repaired or replaced at SIMER's option, subject to the terms and conditions set forth below.

General Terms and Conditions

Owner must pay all labor and shipping charges necessary to replace product covered by this warranty. This warranty shall not apply to acts of God, nor shall it apply to products which, in the sole judgement of SIMER, have been subject to negligence, abuse, accident, misapplication, tampering, alteration; nor due to improper installation, operation, maintenance or storage; nor to excess of recommended maximums as set forth in the owner's manual.

Requests for service under this warranty shall be made by

returning the product to the Retail outlet or to SIMER as soon as possible after the discovery of any alleged defect. SIMER will subsequently take corrective action as promptly as reasonably possible.

This warranty sets forth SIMER's sole obligation and purchaser's exclusive remedy for defective products.

SIMER SHALL NOT BE RESPONSIBLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR CONTINGENT DAMAGES WHATSOEVER. THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES, IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitation on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. Although this warranty identified specific remedies you may also have other rights and remedies.

SIMER • 293 Wright St. • Delavan, WI U.S.A. 53115
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 EMail: info@simerpumps.com • Web: http://www.simerpumps.com

SPECIFICATIONS

Model	H.P.	Voltage	Individual Branch Circuit Required (Amps)	Dual Element Time Delay Fuse Amps
3963	1/2	115	20	20

PERFORMANCE

	GPH (LITERS) AT DISCHARGE FT. OF HEAD				
	5 (1.5m)	10 (3m)	15 (4.6m)	20 (6.1m)	25 (7.6m)
3963	7320(27,709)	5400(20,441)	2700(10,221)	–	–

INSTALLATION

(See Figure 1 for Typical Installation instructions.)

CAUTION Pump must be level when operating. If motor is tilted, internal start/run switch may overheat and damage motor.

WARNING Risk of electrical shock. Can burn or kill. Do not lift pump by power cord. See “Cord Lift Warning” on Page 5. Do not hang pump from discharge pipe or power cord.

1. Install the pump on a solid, level foundation, or in a sump pit constructed of tile, concrete, steel or plastic. The recommended minimum diameter of the

sump pit is 18" (46cm) diameter and the minimum recommended depth is 30" (76cm). Check local codes for approved materials.

NOTICE: Pump should not be installed on clay, earth or sand surfaces. Clean the area around the pump of small stones and gravel which could clog the pump. Keep the pump inlet screen clear.

2. Thread a 2" discharge pipe into the pump 2" NPT discharge port. Be careful to avoid stripping or crossing threads.

Piping – Effluent Applications (3/4" or Less Solids)

Piping must be 1-1/2" minimum to carry volume of pump discharge. Check local codes to determine if a check valve is required in your system. In cold climates, check valves are not used to prevent effluent from freezing in piping.

Piping – Sewage Applications (2" or Less Solids)

In any case, piping must not be smaller than pump discharge.

When installed in a sewage system, pipe must be capable of handling semi-solids of at least 2" (5.1 cm) diameter.

The rate of flow in the discharge pipe must keep any solids present in suspension in the fluid. To meet minimum flow requirements (2 feet (.6 m) per second in discharge line), size pipe as follows:

A Pipe Size Of:	Will Handle a Flow Rate Of:
1-1/2" (3.8 cm)	12 GPM (45 LPM)
2" (5.1 cm)	21 GPM (79 LPM)
2-1/2" (6.3 cm)	30 GPM (113 LPM)
3" (7.6 cm)	48 GPM (181 LPM)

NOTICE: Use Teflon™ tape on pipe connections. Do not use ordinary pipe joint compound on plastic pipe or pump. Pipe joint compound can attack plastics and damage pump.

™ E.I. DuPont de Nemours and Company Corporation.

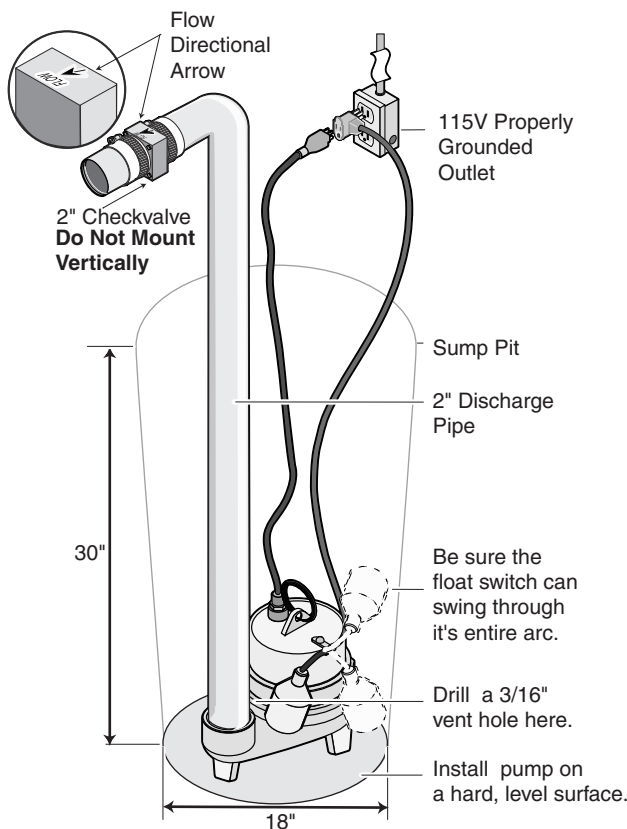


Figure 1

3. To reduce motor noise and vibrations, a short length of rubber hose (1-5/8"(41mm) I.D., e.g. radiator hose) can be connected into discharge line near pump using suitable clamps.
4. If the pump discharge line is exposed to outside sub-freezing atmosphere, then the portion of line exposed must be installed so any water remaining in pipe will drain to outfall by gravity. Failure to do this can cause water trapped in discharge to freeze which could result in damage to pump.
5. Install a 2" check valve in the horizontal portion of the discharge pipe. Make certain, the flow indicating arrow, points away from the pump. This check valve will keep the water from either running back into the basin or into the area being pumped out when the pump is not running. Check valve should be a free flow valve that will easily pass solids.

NOTICE: For best performance of check valve when handling solids, do not install it with discharge angled more than 45° above the horizontal. Do not install check valve in a vertical position as solids may settle in valve and prevent opening on startup.

6. Drill a 3/16" (4.7mm) hole in discharge pipe about 1"-2" (2.5 - 5.1cm) above pump discharge connection (but below check valve) to prevent airlocking the pump.
7. Insert the float switch piggy-back plug into a properly grounded outlet and the pump plug into the piggy-back plug.
8. Check the installation by observing the pump operation through one complete cycle. Make sure that no parts of the assembly interfere with the float switch.

▲WARNING Risk of flooding. May cause personal injury or property damage. Failure to make this operational check may lead to improper operation, premature failure, and flooding.

ELECTRICAL

▲WARNING Hazardous voltage. Can shock, burn, or cause death. When installing, operating, or servicing this pump, follow safety instructions listed below.

- Step 1. DO NOT splice the electrical power cord.
- Step 2. DO NOT allow electrical cord plug to be submerged.
- Step 3. DO NOT use extension cords. They are a fire hazard and can reduce voltage sufficiently to prevent pumping and/or damage motor.
- Step 4. DO NOT handle or service pump while it is connected to power supply.

Step 5. DO NOT remove grounding prong from plug or modify plug. To protect against electrical shock, the power cord is a three-wire conductor and includes a 3-prong grounded plug. Plug pump into a 3-wire, grounded, grounding-type receptacle. Connect pump according to electrical codes that apply.

For automatic operation, plug or wire pump into an automatic float switch or pump controller. Pump will run continuously when plugged directly into an electrical outlet. Connect or wire pump to its own individual branch circuit with no other outlets or equipment in the circuit. Size fuses or circuit breakers according to chart on Page 3.

▲WARNING Risk of electrical shock and fire. Can burn or cause death. Be sure that power supply information (Voltage/Hertz/Phase) on pump motor nameplate matches incoming power supply exactly. Install pump according to all electrical codes that apply.

OPERATION

NOTICE: Do not allow pump to run in a dry sump. It will void the warranty and may damage the pump.

An automatic overload protector in the motor will protect motor from burning out due to overheating/overloading. When motor cools down, overload protector will automatically reset and start motor.

If overload trips frequently, check for cause. It could be a stuck impeller, wrong/low voltage, or electrical failure in motor. If an electrical failure in the motor is suspected, have it serviced by a competent repairman.

Pump is permanently lubricated. No oiling or greasing is required.

SERVICE

▲WARNING Hazardous voltage. Can shock, burn, or cause death. Before removing pump from basin for service, always disconnect electrical power to pump and control switch.

▲WARNING Risk of electrical shock. Can burn or kill. Do not lift pump by power cord. See "Cord Lift Warning" on Page 5.

Submerge pump in a disinfectant solution (chlorox or chlorine) for at least one hour before disassembling pump.

The pump motor contains a special lubricating oil which should be kept clean and free of water at all times.

Check operation by filling sump with water and observing pump operation through one complete cycle.

▲WARNING Risk of flooding. May cause personal injury or property damage. Failure to make this operational check may lead to flooding and premature failure.


NOTICE: This unit is not designed for applications involving salt water or brine! Use with salt water or brine will void warranty.

TROUBLESHOOTING

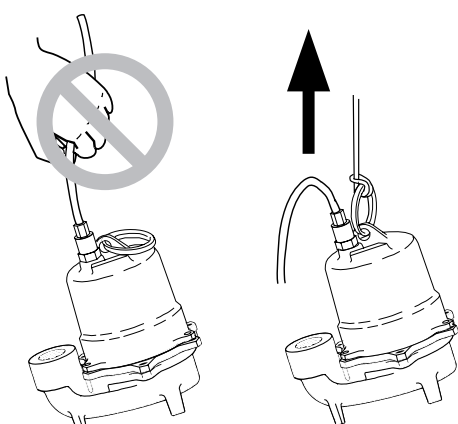
▲WARNING Risk of sudden starts. Can result in electrical shock or pinching of hands or tools. If power to pump is on when thermal overload resets, pump may start without warning. Disconnect power before servicing pump.

<p>A. Pump fails to operate:</p>	<ol style="list-style-type: none"> 1. Check to be sure that power cord is securely plugged into outlet. Disconnect power to outlet before handling pump or motor. 2. Check to be sure you have electrical power. 3. Check that liquid fluid level is high enough to activate switch or controller. 4. Check to be sure that 3/16" (4.7 mm) vent hole in discharge pipe is not plugged. 5. Check for blockage in pump inlet, impeller, check valve or discharge pipe. 6. Thermal overload may have tripped. Test start pump; if it starts and stops immediately, disconnect from power source for 30 minutes to allow motor to cool, then reconnect to power source. Check for cause of overheating/overloading. 7. Check the float switch operation for maximum possible clearance.
<p>B. Pump fails to empty sump:</p>	<ol style="list-style-type: none"> 1. Be sure all valves in discharge valve are fully open. 2. Clean out discharge pipe and check valve. 3. Check for blockage in pump inlet or impeller. 4. Pump not sized properly. A higher capacity pump may be required. 5. Check the float switch operation for maximum possible clearance.
<p>C. Pump will not shut off:</p>	<ol style="list-style-type: none"> 1. Check switch or controller automatic floats for proper operation, location and clearance. See installation instructions for switch/controller. 2. If pump is completely inoperative or continues to malfunction, consult your local serviceman.

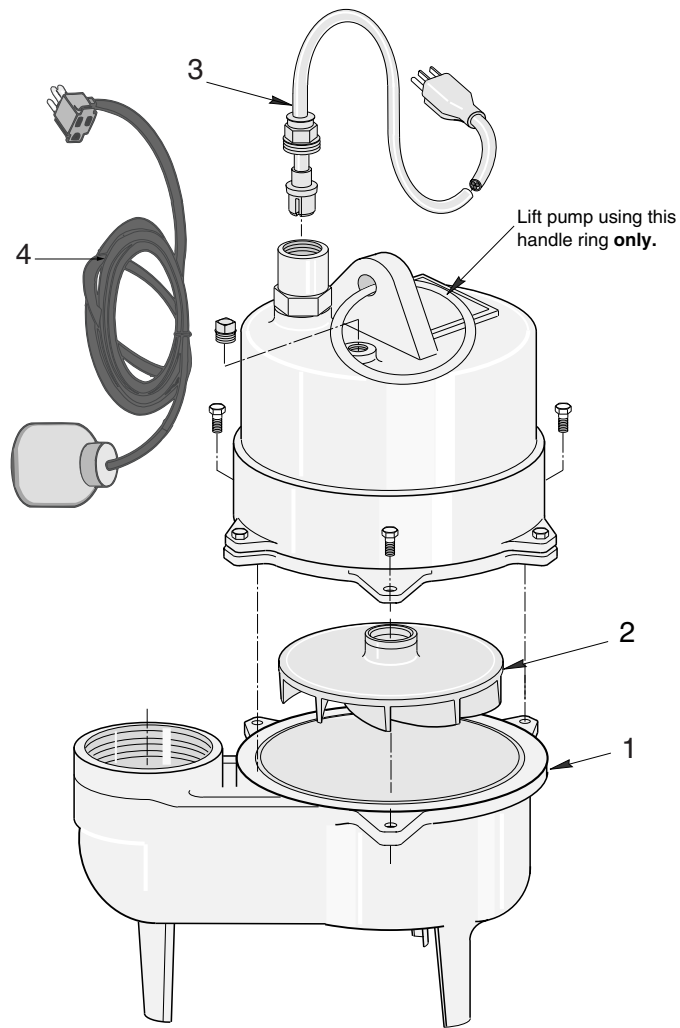
▲ WARNING



**Risk of electrical shock.
Can burn or kill.
Do not lift pump by power cord.**



1. Attempting to lift or support pump by power cord can damage cord and cord connections.
2. Cord may pull apart, exposing bare wires with possibility of fire or electrical shock.
3. Lifting or supporting pump by power cord will void warranty.
4. Use lifting ring or handle on top of pump for all lifting/lowering of pump. Disconnect power to pump before doing any work on pump or attempting to remove pump from sump.



REPAIR PARTS LIST

Key No.	Part Description	Qty	3963 115 Volt
1	Volute	1	PW1-13
2	Impeller	1	PW5-11P
3	Power Cord	1	PW117-237-TSE
4	Automatic Float Switch	1	PS117-145P

IF MOTOR FAILS, REPLACE PUMP.