

SEA FLOW® Pump Owner's Manual

IMPORTANT SAFETY INSTRUCTIONS *READ AND FOLLOW ALL INSTRUCTIONS* SAVE THESE INSTRUCTIONS

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WARNING

Before installing this product, read and follow all warning notices and instructions accompanying this pump. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage.

Important Notice



Attention Installer.

This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner/operator of this equipment.

WARNING



RISK OF ELECTRICAL SHOCK OR ELECTROCUTION

This pool pump must be installed by a licensed or certified electrician or a qualified pool installer in accordance with the 2008 National Electrical Code (“**NEC**”) to current and/or all applicable local codes and ordinances. The specific section of **NEC** covering your pump may vary depending on your location. Some states, and/or municipalities may not have adopted the current NEC code. In this case your state or local code may only be applicable and/or an earlier edition of the **NEC** may apply. Please check your local and state codes and regulations before commencing any installation of this pump. Improper installation could create, among other things, an electrical hazard which may result in death or serious injury to pool users, installers, or others due to electrical shock, and/or property damage. Always disconnect power to the pool pump at the circuit breaker before servicing the pump. Failure to do so could result in death or serious injury to pool users, installers or others (due to electrical shock) and/or property damage.



IMPORTANT PUMP WARNING AND SAFETY INSTRUCTIONS



IMPORTANT NOTICE

This guide provides installation and operation instructions for the SeaFlo® Pump. Consult Lifegard Aquatics for questions regarding this equipment.

Attention Installer: This guide contains important information about the installation, operation and safe use of this product. This information should be given to the owner and/or operator of this equipment after installation or left on or near the pump.

Attention User: This manual contains important information that will help you in operating and maintaining this product. Please retain it for future reference.

READ AND FOLLOW ALL INSTRUCTIONS SAVE THESE INSTRUCTIONS



This is the safety alert symbol. When you see this symbol on your system 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 can cause death, serious personal injury, or major property damage if ignored.

⚠ WARNING

Warns about hazards that may cause death, serious personal injury, or major property damage if ignored.

⚠ CAUTION

Warns about hazards that may or can cause minor personal injury or property damage if ignored.

NOTE indicates special instructions not related to hazards.

Carefully read and follow all safety instructions in this manual and on equipment. Keep safety labels in good condition; replace if missing or damaged.

When installing and using this electrical equipment, basic safety precautions should always be followed, include the following:

⚠ WARNING

Do not permit children to use this product.

⚠ WARNING

RISK OF ELECTRICAL SHOCK. Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI.

⚠ WARNING

This unit must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push the reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the pump without the test button being pushed, a ground current is flowing, indicating the possibility of an electric shock. Do not use this pump. Disconnect the pump and have the problem corrected by a qualified service representative before using.

⚠ CAUTION

This pump is for use with permanent swimming pools and may also be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

General Warnings

- Never open the inside of the drive motor enclosure. There is a capacitor bank that holds a 230 VAC charge even when there is no power to the unit.
- The pump is not submersible.
- The pump is capable of high flow rates; use caution when installing and programming to limit pumps performance potential with old or questionable equipment.
- Code requirements for the electrical connection differ from state to state. Install equipment in accordance with the National Electrical Code and all applicable local codes and ordinances.
- Before servicing the pump; switch OFF power to the pump by disconnecting the main circuit to the pump.
- This appliance is not intended for use by persons (including children) of reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.

⚠ DANGER

FAILURE TO FOLLOW ALL INSTRUCTIONS AND WARNINGS CAN RESULT IN SERIOUS BODILY INJURY OR DEATH. THIS PUMP SHOULD BE INSTALLED AND SERVICED ONLY BY A QUALIFIED POOL SERVICE PROFESSIONAL. INSTALLERS, POOL OPERATORS AND OWNERS MUST READ THESE WARNINGS AND ALL INSTRUCTIONS IN THE OWNER'S MANUAL BEFORE USING THIS PUMP. THESE WARNINGS AND THE OWNER'S MANUAL MUST BE LEFT WITH THE POOL OWNER.

⚠ DANGER

SUCTION ENTRAPMENT HAZARD: STAY OFF THE MAIN DRAIN AND AWAY FROM ALL SUCTION OUTLETS!



THIS PUMP PRODUCES HIGH LEVELS OF SUCTION AND CREATES A STRONG VACUUM AT THE MAIN DRAIN AT THE BOTTOM OF THE BODY OF WATER. THIS SUCTION IS SO STRONG THAT IT CAN TRAP ADULTS OR CHILDREN UNDER WATER IF THEY COME IN CLOSE PROXIMITY TO A DRAIN OR A LOOSE OR BROKEN DRAIN COVER OR GRATE.

THE USE OF UNAPPROVED COVERS OR ALLOWING USE OF THE POOL OR SPA WHEN COVERS ARE MISSING, CRACKED OR BROKEN CAN RESULT IN BODY OR LIMB ENTRAPMENT, HAIR ENTANGLEMENT, BODY ENTRAPMENT, EVISCERATION AND/OR DEATH.

The suction at a drain or outlet can cause:

Limb Entrapment: When a limb is sucked or inserted into an opening resulting in a mechanical bind or swelling. This hazard is present when a drain cover is missing, broken, loose, cracked or not properly secured.

Hair Entanglement: When the hair tangles or knots in the drain cover, trapping the swimmer underwater. This hazard is present when the flow rating of the cover is too small for the pump or pumps.

Body Entrapment: When a portion of the body is held against the drain cover trapping the swimmer underwater. This hazard is present when the drain cover is missing, broken or the cover flow rating is not high enough for the pump or pumps.

Evisceration/Disembowelment: When a person sits on an open pool (particularly a child wading pool) or spa outlet and suction is applied directly to the intestines, causing severe intestinal damage. This hazard is present when the drain cover is missing, loose, cracked, or not properly secured.

IMPORTANT PUMP WARNING AND SAFETY INSTRUCTIONS

Mechanical Entrapment: When jewelry, swimsuit, hair decorations, finger, toe or knuckle is caught in an opening of an outlet or drain cover. This hazard is present when the drain cover is missing, broken, loose, cracked, or not properly secured.

NOTE: ALL SUCTION PLUMBING MUST BE INSTALLED IN ACCORDANCE WITH THE LATEST NATIONAL AND LOCAL CODES, STANDARDS AND GUIDELINES.

⚠ WARNING TO MINIMIZE THE RISK OF INJURY DUE TO SUCTION ENTRAPMENT HAZARD:

- A properly installed and secured ANSI/ASME A112.19.8 approved anti-entrapment suction cover must be used for each drain.
- Each suction cover must be installed at least three (3') feet apart, as measured from the nearest point to nearest point.
- Regularly inspect all covers for cracks, damage and advanced weathering.
- If a cover becomes loose, cracked, damaged, broken or is missing, replace with an appropriate certified cover.
- Replace drain covers as necessary. Drain covers deteriorate over time due to exposure to sunlight and weather.
- Avoid getting hair, limbs or body in close proximity to any suction cover, pool drain or outlet.
- Disable suction outlets or reconfigure into return inlets.

⚠ WARNING A clearly labeled emergency shut-off switch for the pump must be in an easily accessible, obvious place.

Make sure users know where it is and how to use it in case of emergency.

The Virginia Graeme Baker (VGB) Pool and Spa Safety Act creates new requirements for owners and operators of commercial swimming pools and spas.

Commercial pools or spas constructed on or after December 19, 2008, shall utilize:

(A) A multiple main drain system without isolation capability with suction outlet covers that meet ASME/ANSI A112.19.8a Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs and either:

- (i) A safety vacuum release system (SVRS) meeting ASME/ANSI A112.19.17 Manufactured Safety Vacuum Release systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub, and Wading Pool Suction Systems and/or ASTM F2387 Standard Specification for Manufactured Safety Vacuum Release Systems (SVRS) for Swimming pools, Spas and Hot Tubs or
- (ii) A properly designed and tested suction-limiting vent system or
- (iii) An automatic pump shut-off system.

Commercial pools and spas constructed prior to December 19, 2008, with a single submerged suction outlet shall use a suction outlet cover that meets ASME/ANSI A112.19.8a and either:

- (A) A SVRS meeting ASME/ANSI A112.19.17 and/or ASTM F2387, or
- (B) A properly designed and tested suction-limiting vent system, or
- (C) An automatic pump shut-off system, or
- (D) Disabled submerged outlets, or
- (E) Suction outlets shall be reconfigured into return inlets.

For Installation of Electrical Controls at Equipment Pad (ON/OFF Switches, Timers and Automation Load Center)

⚠ CAUTION Install all electrical controls at equipment pad, such as on/off switches, timers, and control systems, etc. to allow the operation (startup, shut-down, or servicing) of any pump or filter so the user does not place any portion of his/her body over or near the pump strainer lid, filter lid or valve closures. This installation should allow the user enough space to stand clear of the filter and pump during system start-up, shut down or servicing of the system filter.



⚠ DANGER



HAZARDOUS PRESSURE: STAND CLEAR OF PUMP AND FILTER DURING START UP

Circulation systems operate under high pressure. When any part of the circulating system (i.e. locking ring, pump, filter, valves, etc.) is serviced, air can enter the system and become pressurized.

Pressurized air can cause the pump housing cover filter lid and valves to violently separate which can result in severe personal injury or death. Filter tank lid and strainer cover must be properly secured to prevent violent separation. Stand clear of all circulation system equipment when turning on or starting up pump.

Before servicing equipment, make note of the filter pressure. Be sure that all controls are set to ensure the system cannot inadvertently start during service. Turn off all power to the pump. **IMPORTANT: Place filter manual air relief valve in the open position and wait for all pressure in the system to be relieved.**

Before starting the system, fully open the manual air relief valve and place all system valves in the "open" position to allow water to flow freely from the tank and back to the tank. Stand clear of all equipment and start the pump.

IMPORTANT: Do not close filter manual air relief valve until all pressure has been discharged from the valve and a steady stream of water appears. Observe filter pressure gauge and be sure it is not higher than the pre-service condition.

General Installation Information

- All work must be performed by a qualified service professional, and must conform to all national, state, and local codes.
- Install to provide drainage of compartment for electrical components.
- These instructions contain information for a variety of pump models and therefore some instructions may not apply to a specific model. All models are intended for use in swimming pool applications. The pump will function correctly only if it is properly sized to the specific application and properly installed.

⚠ WARNING Pumps improperly sized or installed or used in applications other than for which the pump was intended can result in severe personal injury or death. These risks may include but not be limited to electric shock, fire, flooding, suction entrapment or severe injury or property damage caused by a structural failure of the pump or other system component.

⚠ WARNING The pump can produce high levels of suction within the suction side of the plumbing system. These high levels of suction can pose a risk if a person comes within the close proximity of the suction openings. A person can be seriously injured by this high level of vacuum or may become trapped and drown. It is absolutely critical that the suction plumbing be installed in accordance with the latest national and local codes for swimming pools.

Warnings and safety instructions for Lifeguard Aquatics pumps and other related products are available at:

<http://www.lifeguardaquatics.com/literature> or call (562) 404-4129 for additional free copies of these instructions.

Please refer to <http://www.lifeguardaquatics.com> for warning and safety instructions related to this product.

SAVE THESE INSTRUCTIONS

⚠ WARNING

To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

⚠ CAUTION

This pump is for use with permanently installed pools and may also be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity and has a maximum dimension of 18 feet (5.49m) and a maximum wall height of 42 inches (1.07m).

⚠ CAUTION

For hot tubs and spa pumps, do not install within an outer enclosure or beneath the skirt of a hot tub or spa unless so marked.

SECTION I. GENERAL INFORMATION

A. Wiring.

⚠ WARNING



RISK OF ELECTRICAL SHOCK OR ELECTROCUTION

This pool pump must be installed by a licensed or certified electrician or a qualified pool installer in accordance with the 2008 National Electrical Code (“NEC”) and/or all applicable local codes and ordinances. The specific section of **NEC** covering your pump may vary depending on your location. Some states, and/or municipalities may not have adopted the current NEC code. In this case your state or local code may only be applicable and/or an earlier edition of the **NEC** may apply. Please check your local and state codes and regulations before commencing any installation of this pump. Improper installation could create, among other things, an electrical hazard which may result in death or serious injury to pool users, installers, or others due to electrical shock, and/or property damage. **Always disconnect power to the pump at the circuit breaker before servicing the pump. Failure to do so could result in death or serious injury to service people, users or others due to electric shock. Read all servicing instructions before working on the pump.**

1. Be sure all electrical breakers and switches are turned off before wiring motor.
2. Be sure the supply line voltage matches the motor voltage listed on the motor plate (example 230 VAC or 115 VAC). If they do not match, permanent motor damage may occur.
3. Use #12 AWG for wire runs up to 100 feet (30.5 meters) and #10 AWG for lengths longer than 100 feet (30.5 meters). When in doubt use a heavier gauge (larger diameter) wire. For more information, see CHART 1.
4. Use strain relief and be sure all electrical connections are clean and tight.
5. Cut wires to the appropriate length so they don’t overlap or touch when connected to the terminal board.
6. Permanently ground the motor using the **green ground** terminal located on the inside of the motor canopy or access plate, see Figure 1. Use the correct wire size and type specified by National Electrical Code. Make sure the ground wire is connected to an electrical service ground.

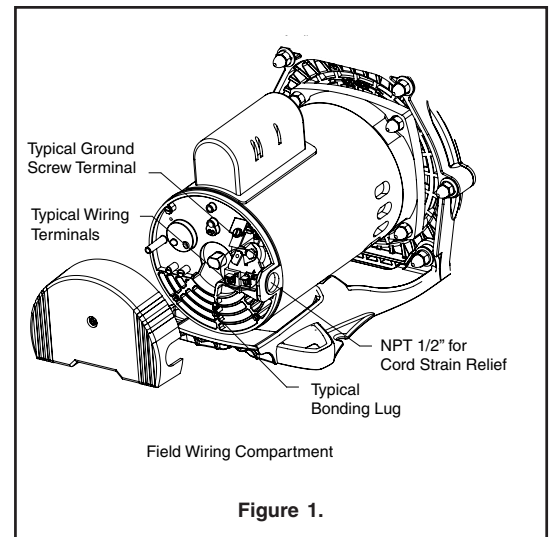
SUPPLY WIRE SIZES (AWG)						
(size and length by horsepower)						
hp	115 volts			230 volts		
	50 ft.	100 ft.	150 ft.	50 ft.	100 ft.	150 ft.
1/3	14	14	12	14	14	14
1/2	14	12	10	14	14	14
3/4	12	12	10	14	14	14
1	12	10	8	14	14	14
1½	10	10	8	14	14	12
2	10	8	8	14	12	12
3	-	-	-	12	12	10

Chart 1.

NOTE

When pump is mounted permanently within 5 ft. of the inside walls of a swimming pool, you must use a No. 8 AWG or larger conductor to connect to bonding conductor lug.

7. Bond the motor to the pool structure in accordance with the National Electrical Code. Use a solid No. 8 AWG or larger copper conductor. Run a wire from the external bonding to the pool bonding structure, see Figure 1.
8. Connect the wire from the accessible bonding lug on the motor to all metal parts of the swimming pool, spa, or hot tub structure and to all electrical equipment, metal conduit, and metal piping within 5 feet of the inside walls of the swimming pool, spa, or hot tub. For Canada, a 6 AWG or larger solid copper bonding conductor is required.
9. The pump should be permanently connected to either a circuit breaker, 2-pole timer or 2-pole relay. If AC power is supplied by a GFCI circuit breaker, use a dedicated circuit breaker that has no other electrical loads. **Note: When the pump is started and stopped by removing power with a relay or timer, a two-pole device should be used to apply and remove power to both POWER LINE TERMINALS.**



B. The Pump Strainer Basket.

This unit, sometimes referred to as the 'Hair and Lint Pot', is the unit in front of the volute. Inside the chamber is the basket which must be kept clean of leaves and debris at all times. View basket through the 'See Through Lid' to inspect for leaves and debris.

Regardless of the length of time between filter cleaning, it is most important to visually inspect the hair and lint pot basket at least once a week. A dirty basket will reduce the efficiency of the filter and heater and also put an abnormal stress on the pump motor which would result in a costly repair bill.

SECTION II. MAINTENANCE

WARNING

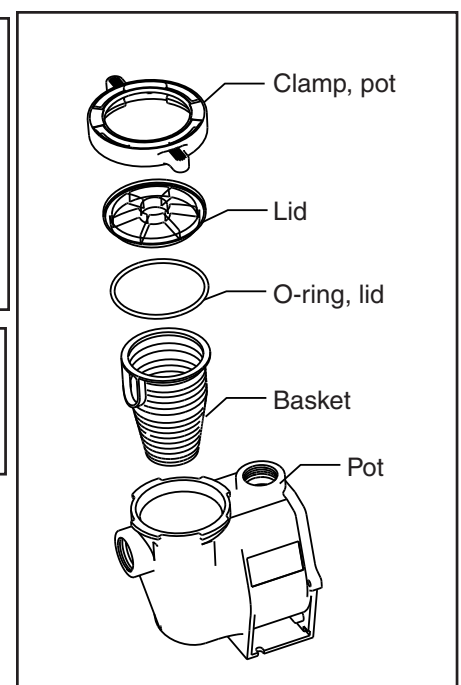
DO NOT open the strainer pot if pump fails to prime or if pump has been operating without water in the strainer pot. Pumps operated in these circumstances may experience a build up of vapor pressure and may contain scalding hot water. Opening the pump may cause serious personal injury. In order to avoid the possibility of personal injury, make sure the suction and discharge valves are open and strainer pot temperature is cool to touch, then open with extreme caution.

CAUTION


To prevent damage to the pump and filter and for proper operation of the system, clean pump strainer and skimmer baskets regularly.

A. Pump Strainer Basket Cleaning Procedures.

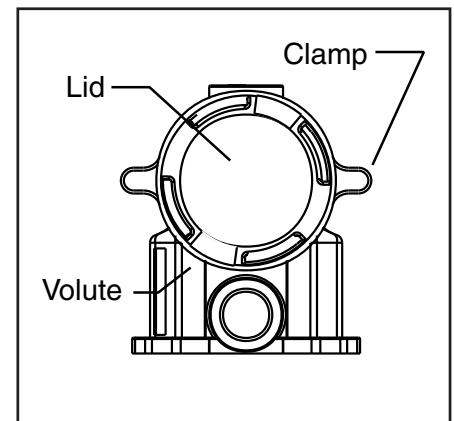
1. Turn off motor.
2. Relieve pressure in the system by allowing the water to cool.
3. Gently tap the clamp in a counter-clockwise direction to remove the clamp and lid.



4. Put the debris from the basket into the trash and rinse out the basket. If the basket is cracked, it should be replaced.
5. Replace the basket and fill the pump pot and volute up to the inlet port with water.
6. Clean the cover, cover O-ring, and sealing surface of the pump pot. Grease the O-ring with silicone.
7. Reinstall the lid by placing the clamp and the lid on the pot; see Figure 2.
 - a. Make sure the lid O-ring is properly placed. Seat the clamp and lid then turn clockwise until the handles are perpendicular to the inlet/outlet ports; see Figure 3.
8. Turn the power “ON” at the house circuit breaker. Reset the pool time clock to the correct time.

	⚠ WARNING
	<p>THIS PUMPS OPERATES UNDER HIGH PRESSURE. WHEN ANY PART OF THE CIRCULATING SYSTEM (e.g., LOCK RING, PUMP, FILTER, VALVES, ETC.) IS SERVICED, AIR CAN ENTER THE SYSTEM AND BECOME PRESSURIZED. PRESSURIZED AIR CAN CAUSE THE LID TO SEPARATE WHICH CAN RESULT IN SEVERE INJURY, DEATH, OR PROPERTY DAMAGE. TO AVOID THIS POTENTIAL HAZARD, FOLLOW THESE INSTRUCTIONS.</p>

9. Open the High Flow manual air relief valve on top of the filter.
 10. Stand clear of the filter. Start the pump.
 11. Bleed air from the filter until a steady stream of water comes out. Close the High Flow manual air relief valve.
- B. Winterizing.**
1. If the air temperature drops below 35° F., the water in the pump can freeze and cause damage. Freeze damage is not warrantable.
 2. To prevent freeze damage follow the procedures listed below:
 - a. Shut off electrical power for the pump at the house circuit breaker.
 - b. Drain the water out of the pump case by removing the two thumb-twist drain plugs from the case. Store the plugs in the pump basket.
 - c. Cover the motor to protect it from severe rain, snow and ice.
 - d. Do not wrap the motor in plastic. It will cause condensation and rust on the inside of the motor.
- C. Care of Electric Motor.**
1. Protect from heat.
 - a. Shade the motor from the sun.
 - b. Any enclosure must be well ventilated to prevent overheating.
 - c. Provide ample cross ventilation.
 2. Protect against dirt.
 - a. Protect from any foreign matter or splashing water.
 - b. Do not store (or spill) pool chemicals near the motor.
 - c. Avoid sweeping or stirring up dust near the motor while it is operating.
 - d. If a motor has been damaged by dirt it voids the motor warranty.
 3. Protect against moisture.
 - a. Protect from splashing pool water.
 - b. Protect from the weather.
 - c. Protect from lawn sprinklers.



- d. If a motor has become wet - let it dry before operating. Do not allow the pump to operate if it has been flooded.
- e. If a motor has been damaged by water it voids the motor warranty.

NOTE

DO NOT wrap motor with plastic or other air tight materials. The motor may be covered during a storm, for winter storage, etc., but never when operating, or expecting operation.

NOTE

When replacing the motor, be certain that the motor support is correctly positioned to support the size of motor being installed.

SECTION III. SERVICE

⚠ WARNING



RISK OF ELECTRICAL SHOCK OR ELECTROCUTION

This pool pump must be installed by a licensed or certified electrician or a qualified pool installer in accordance with the 2008 National Electrical Code ("NEC") and/or all applicable local codes and ordinances. The specific section of NEC covering your pump may vary depending on your location. Some states, and/or municipalities may not have adopted the current NEC code. In this case your state or local code may only be applicable and/or an earlier edition of the NEC may apply. Please check your local and state codes and regulations before commencing any installation of this pump. Improper installation could create, among other things, an electrical hazard which may result in death or serious injury to pool users, installers, or others due to electrical shock, and/or property damage. Always disconnect power to the pool pump at the circuit breaker before servicing the pump. Failure to do so could result in death or serious injury to pool users, installers or others (due to electrical shock) and/or property damage.

⚠ WARNING

DO NOT open the strainer pot if pump fails to prime or if pump has been operating without water in the strainer pot. Pumps operated in these circumstances may experience a build up of vapor pressure and may contain scalding hot water. Opening the pump may cause serious personal injury. In order to avoid the possibility of personal injury, make sure the suction and discharge valves are open and strainer pot temperature is cool to touch, then open with extreme caution.

A. Pump Disassembly.

1. All moving parts are located in the rear sub-assembly of this pump.
Tools required:
 - a. 3/32 inch Allen head wrench.
 - b. 1/2 inch open end wrench.
 - c. 9/16 inch open end wrench.
 - d. Flat blade screwdriver.
2. To remove and repair the motor sub-assembly perform the following procedures.
 - a. Turn off the pump circuit breaker at the main panel.
 - b. Drain the pump by removing the drain plugs.
 - c. Remove the 6 bolts that hold the main pump body (strainer pot/volute) to the rear sub-assembly.
 - d. GENTLY pull the two pump halves apart, removing the rear sub-assembly.
 - e. Use a 3/32 inch Allen head wrench to loosen the two holding screws located on the diffuser.

- f. Hold the impeller securely in place and remove the impeller lock screw by using a #2 Phillips screwdriver. The screw is a left-handed thread and loosens in a clockwise direction.
- g. Remove the shaft cap located at the back of the motor and hold the shaft secure with a ½ inch open-end wrench.
- h. To unscrew the impeller from the shaft, twist the impeller counter-clockwise.
- i. Remove the four bolts from the seal plate to the motor, using a 9/16 inch wrench.
- j. If replacing the mechanical seal set, see Section B. Pump Reassembly/Seal Replacement on below.

B. Pump Reassembly/Seal Replacement; see Figure 4.

NOTE

It is important that the O-rings be kept clean and well lubricated. We recommend a silicone base lubricant for best results.

CAUTION

Be sure not to scratch or mar the polished shaft seal faces; the seal will leak if faces are damaged.

1. When installing the replacement shaft seal, use silicone sealant on the metal portion before pressing into the seal plate, being careful to keep off of the seal face. Ensure the seal is fully seated and allow 24 hours for sealant to cure. (Complete seal plate w/seal replacement kit available, P/N 350201/350101.)
2. Before installing the ceramic section of the seal into the impeller, be sure the impeller is clean. Use a light density soap and water to seal the seal. Press the seal into the impeller with your thumbs and wipe off the ceramic and carbon faces with a clean cloth.
3. Remount the seal plate to the motor by installing bolts in an X pattern and tightening to 70 in-lbs.
4. Clean the motor shaft thread and the impeller insert, then screw the impeller onto the motor shaft.
5. Screw in the impeller lock screw (counter-clockwise and tighten to 25 in-lbs. while holding the motor shaft with wrench).
6. Remount the diffuser onto the seal plate. Make sure the plastic pins and holding screw inserts are aligned.
7. Grease the diffuser O-ring and seal plate gasket.
8. Grease the bolt threads, assemble the motor sub-assembly to the strainer pot-pump body by using the two through bolts for proper alignment. Do not tighten the through bolts until all 6 bolts are in place and finger tightened. Torque in a cross pattern to 110 in-lbs.
9. Fill the pump with water.
10. Reinstall the pump lid and plastic clamp; see SECTION IV. RESTART INSTRUCTIONS.
11. Reprime the system.

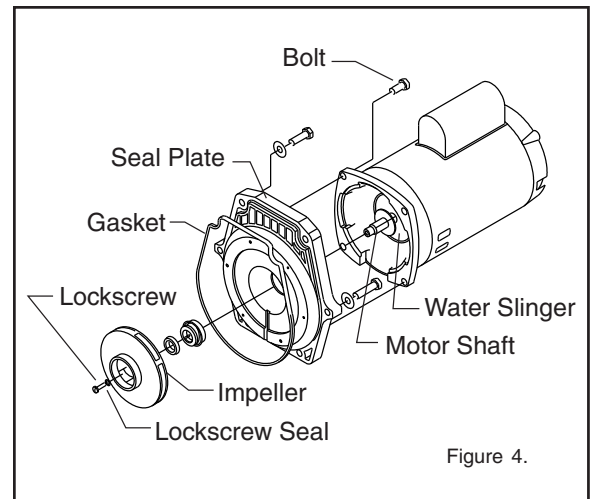


Figure 4.

C. The Shaft Seal.

1. The Shaft Seal consists primarily of two parts, a rotating member and a ceramic seal.
2. The pump requires little or no service other than reasonable care, however, a Shaft Seal may occasionally become damaged and must be replaced.

CAUTION

The polished and lapped faces of the seal could be damaged if not handled with care.

CAUTION

In mild climate area, when temporary freezing conditions may occur, run your filtering equipment all night to prevent freezing.

SECTION IV. RESTART INSTRUCTIONS

- A. If pump is installed below the water level of the pool, close return and suction lines prior to opening hair and lint pot on pump. Make sure to reopen valves before to operating.

CAUTION

DO NOT run the pump dry. If the pump is run dry, the mechanical seal will be damaged and the pump will start leaking. If this occurs, the damaged seal must be replaced. ALWAYS maintain proper water level in your pool (half way up skimmer opening). If the water level falls below the skimmer opening, the pump will draw air through the skimmer, losing the prime and causing the pump to run dry, resulting in a damaged seal. Continued operation in this matter could cause a loss of pressure, resulting in damage to the pump case, impeller, and seal and may cause property damage and personal injury.

B. Priming the Pump.

1. The pump strainer pot must be filled with water before the pump is initially started. Follow these steps to prime the pump:
 - a. Remove the pump lid plastic clamp. Remove the pump lid.
 - b. Fill the pump strainer pot with water.
 - c. Reassemble the pump cover and plastic clamp onto the strainer pot. The pump is now ready to prime.
 - d. Open the air release valve on the filter, and stand clear of the filter.
 - e. Turn on the switch or time clock.
 - f. When water comes out of the air release valve, close the valve. The system should now be free of air and recirculating water to and from the pool.
2. For 2-speed pumps:
 - a. Pump should run on high-speed for priming.
 - b. The pump should not run longer than eight (8) minutes before priming is achieved.

SECTION V. TROUBLESHOOTING

A. Failure to Pump.

1. Pump will not prime - too much air. Remedy:
 - a. Check suction piping and valve glands on any suction gate valves.
 - b. Secure lid on pump strainer pot and make sure lid gasket is in place.
 - c. Check water level to make sure skimmer is not drawing air.
2. Pump will not prime--not enough water. Remedy:
 - a. Make sure suction lines, pump strainer, and pump volute are full of water.
 - b. Make sure valve on suction line is working and open, (some systems do not have valves).
 - c. Check water level to make sure water is available through skimmer.
3. Pump strainer clogged. Remedy: a. Clean pump strainer pot.
4. Pump strainer gasket defective. Remedy: a. Replace gasket.

B. Reduced Capacity and/or Head.

1. Air pockets or leaks in suction line. Remedy:
 - a. See item A.1. of this section, above.
2. Clogged impeller. Remedy:
 - a. Disassemble; per SECTION III. A. Pump Disassembly.
 - b. Clean debris from impeller. If debris cannot be removed, complete the following steps.
 - (1) Remove left hand thread anti-spin bolt and O-ring.
 - (2) Remove, clean and reinstall impeller.
 - c. Reassemble; per SECTION III. B. Pump Reassembly.
3. Pump strainer clogged. - Remedy: a. Clean suction trap.

SECTION VI. TECHNICAL DATA

A. Replacement parts.

Item No.	P/N	Description
1	357199	Clamp, Cam & Ramp, almond
1	357150	Clamp, Cam & Ramp, black
2	357151	Cover, clear, WFE pump
2	357156	Cover, chemical resistant Cam & Ramp
3	350013	O-ring, WFE cover
4	070387	Basket, AQ & WFE
5	070430	Bolt, 3/8, 16 x 1.25 hex hd. SS, 4 req.
6	072184	Washer, 3/8 x 13/16 o.d. SS, 6 req.
7	070431	Bolt, 3/8, 16 x 1.75 hex hd. SS, 2 req.
8	071403	Nut, 3/8, 16 hex hd., 2 req.
9	357100	Black Gasket for Seal Plate
10	350015	Volute, WFE pump & pot, almond
10	357157	Volute, WFE pump & pot, black ❶
11	355227	O-ring parker No. 2-238, WFE pump
12	071660	Set screw, 4-40 x 1-1/8 WFE, 2 req.
13	072928	Diffuser assembly, WFE-12, 3 HP only
13	072927	Diffuser assembly, WFE-2-8, 1/2 HP – 2.5 HP
14	071652	Set screw, 1/4, 20 x 1 lh. Phillips
15	075713	Rubber washer, WFE pump
16	071734S	Seal PA-7 w/ceramic seat, PS1000
16	071728	Seal A7 w/ceramic seat, PS201 ❶
17	070429	Bolt, 3/8, 16 x 7/8 SS hex hd., 4 req.
18	350201	Seal Plate Kit WFE, almond (Includes Mechanical Seal installed)
18	350101	Seal Plate Kit WFE, black (Includes Mechanical Seal installed)
19	070927	Foot, WFE-4 pump, almond
19	357159	Foot, black ❶
20	070929	Foot insert, WFE pump, almond
20	357160	Foot insert, WFE pump, black ❶
21	071657	Screw, 1/4, 20 x 1 in. hh. SS, 2 req.
22	071406	Nut, 1/4, 20 hex. hd. SS, 2 req.
23	072183	Nut, 1/4, 20 hex. hd. SS, 2 req.
24	071131	Knob plug drain, 2 req. almond

ITEM 28 — IMPELLER CHART

HP	PUMP MODEL	STD PART NO.
1/2	WFE-2, WF-2, WF-23, WFK-2	073126
3/4	WFE-3, WFE-24, WF-3, WF-24, WFK-3, WFDS-24	073127
1	WFE-4, WFE-26, WF-4, WF-26, WFK-4, WFDS-4, WFDS-26	073128
1-1/2	WFE-6, WFE-28, WF-6, WF-28, WFK-6, WFDS-6, WFDS-28	073129
2	WFE-8, WFE-30, WF-8, WF-30, WFK-8, WFDS-8, WFDS-30	073130
3	WFE-12, WF-12	073131

Item No.	P/N	Description
Motors		
27	071313S	3/4 HP, 60 Hz, WFE-2, 3 & 24, 1 spd., almond, 9 lbs. ❷
27	071314S	1 HP, 60 Hz, WFE-4 & 26, 1 spd., almond, 33 lbs. ❷
27	071315S	1-1/2 HP, 60 Hz, WFE-6 & 28, 1 spd., almond, 39 lbs. ❷
27	071316S	2 HP, 60 Hz, WFE-8 & 30, 1 spd., almond, 40 lbs. ❷
27	071317S	3 HP, 60 Hz, WFE-12, 1 spd., almond, 40 lbs. ❷
27	356630S	1 HP, WFDS-4 & 26, 2 spd., 34 lbs. ❸
27	071320S	1-1/2 HP, WFDS-6 & 28, 2 spd., 36 lbs. ❸
27	071321S	2 HP, WFDS-8 & 30, 2 spd., 45 lbs. ❸
27	075232S	1/2 HP, WF-2 & 23, 1 spd., almond, 39 lbs. ❹
27	075233S	3/4 HP, WF-3 & 24, 1 spd., almond, 26 lbs. ❹
27	075234S	1 HP, WF-4 & 26, 1 spd., almond, 28 lbs. ❹
27	075235S	1-1/2 HP, WF-6 & 28, 1 spd., 39 lbs. ❹
27	075236S	2 HP, WF-8 & 30, 1 spd., 32 lbs. ❹
27	075237S	3 HP, WF-12, 1 spd., almond, 40 lbs. ❹
27	355203S	WFK-4 motor, 3 ph, 1 spd., black, 28 lbs.
27	355204S	WFK-6 motor, 3 ph, 1 spd., black, 30 lbs.
27	355205S	WFK-8 motor, 3 ph, 1 spd., black, 37 lbs.
27	355398S	WFK-12 motor, 3 ph, 1 spd., black, 35 lbs.
27	356626S	1 HP, 3 ph, 1 spd., sq. flg., almond
27	356627S	1-1/2 HP, 3 ph, 1 spd., sq. flg., almond
27	356628S	2 HP, 3 ph, 1 spd., sq. flg., almond
27	356629S	3 HP, 3 ph, 1 spd., sq. flg., almond
27	356630S	1 HP, 1.5A, 2 spd., 1 ph, sq. flg., almond

Not Shown

79129900	2-Speed Toggle Switch
350202	Seal Plate Kit: Seal plate (almond), Gasket (black), with installed Seal (Includes items: 9, 16, & 18)
350203	Seal Plate Kit: Seal plate (black), Gasket (black), with installed Seal (Includes items: 9, 16, & 18)
357243	Pot Assembly, Almond NPT. (Includes items: 1-4, 10, 24 [qty. 2], 25 [qty. 2])
357244	Pot Assembly, Black NPT. (Includes items: 1-4, 10, 24 [qty. 2], 25 [qty. 2])

Power End Subassy. Includes Items: 12-18, 27-28

075136	WFE-2
075137	WFE-3, WFE-24 ❷
075138	WFE-4, WFE-26 ❷
075139	WFE-6, WFE-28 ❷
075140	WFE-8, WFE-30 ❷
075141	WFE-12 ❷
075145	WFDS-3, WFDS-24 ❸
075142	WFDS-4, WFDS-26 ❸
075143	WFDS-6, WFDS-28 ❸
075144	WFDS-8, WFDS-30 ❸
075251	WF-2, WF-23 ❹
075252	WF-3, WF-24 ❹
075253	WF-4, WF-26 ❹
075254	WF-6, WF-28 ❹
075255	WF-8, WF-30 ❹
075256	WF-12 ❹

Fluid Ends-All Parts, w/o Motor

075452	WFE-3 fluid end, 3/4 HP
075453	WFE-4 fluid end, 1 HP
075454	WFE-6 fluid end, 1-1/2 HP
075455	WFE-8 fluid end, 2 HP
075456	WFE-12 fluid end, 3 HP

- ❶ CSA/CUL (only) for Canada.
- ❷ Energy efficient, single phase.
- ❸ Standard efficiency, single phase.
- ❹ Two speed, single phase.

Warranty Policy

- Warranty period starts from date of purchase and must be validated with copy of original purchase receipt.
- Warranty requests by phone will not be honored.
- Warranty items returned without copy of original purchase receipt will not be honored.
- Products purchased from EBay, Craig's List, etc. cannot be honored for warranty unless returned by original purchaser with proof of purchase.
- All items must first be returned to Lifegard Aquatics for inspection, evaluation, and processing to determine if product qualifies for warranty replacement or repair. No warranty (repair, replacement, or credit) will be issued prior to inspection of product.
- **Please contact us first for warranty assistance. Many times the product can be repaired without the cost and time involved in sending it back.** If absolutely necessary, return product **FREIGHT PREPAID** for warranty evaluation and processing. Call or email our office to obtain RMA number and shipping address.

Lifegard Aquatics

Tel (562)404-4129

Fax (562)404-4159

Email: info@lifegardaquatics.com

- **3 year warranty** from date of purchase on **Quiet One Pump Motors Only**.
- **60 day warranty** from date of purchase on **Shafts and Impellers for All Types of Pumps**.
- **60 day warranty** from date of purchase on all **Ultraviolet Bulbs**.
- **60 day warranty** from date of purchase on all **Test Strips**.
- **1 year warranty** from date of purchase on **All Other Products**.



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