



Booster Pump

Owner's Manual



Model 6060

IMPORTANT SAFETY INSTRUCTIONS

SAVE THIS OWNER'S MANUAL

The Hayward 6060 booster pump is specifically engineered for the demanding requirements of today's in-ground swimming pool cleaning systems. The 6060 booster pump includes an improved seal and impeller design that will provide many years of efficient, dependable, corrosion-free service. The advanced design provides superior performance while reducing maintenance requirements.

Basic safety precautions should always be followed, including the following: Failure to follow instructions can cause severe injury and/or death.

- ▲ This is the safety-alert symbol. When you see this symbol on your equipment or in this manual, look for one of the following signal words and be alert to the potential for personal injury.
- ▲ **WARNING** warns about hazards that **could** cause serious personal injury, death or major property damage and if ignored presents a potential hazard.
- ▲ **CAUTION** warns about hazards that **will** or **can** cause minor or moderate personal injury and/or property damage and if ignored presents a potential hazard. It can also make consumers aware of actions that are unpredictable and unsafe.

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

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⚠ WARNING - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

⚠ WARNING – Suction Entrapment Hazard.



Suction in suction outlets and/or suction outlet covers which are, damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:



Hair Entrapment- Hair can become entangled in suction outlet cover.



Limb Entrapment- A limb inserted into an opening of a suction outlet sump or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.

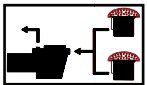


Body Suction Entrapment- A negative pressure applied to a large portion of the body or limbs can result in an entrapment.

Evisceration/ Disembowelment - A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is, damaged, broken, cracked, missing, or unsecured can result in evisceration/ disembowelment.

Mechanical Entrapment- There is potential for jewelry, swimsuit, hair decorations, finger, toe or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.

⚠ WARNING - To Reduce the risk of Entrapment Hazards:



- o When outlets are small enough to be blocked by a person, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall), must be installed a minimum of three feet (3') [1 meter] apart, as measured from near point to near point.
- o Dual suction fittings shall be placed in such locations and distances to avoid “dual blockage” by a user.
- o Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- o The maximum system flow rate shall not exceed the flow rating of as listed on Table 1.
- o Never use Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- o Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- o In addition two or more suction outlets per pump installed in accordance with latest ASME, APSP Standards and CPSC guidelines, follow all National, State, and Local codes applicable.
- o Installation of a vacuum release or vent system, which relieves entrapping suction, is recommended.

⚠ WARNING – Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increase potential for suction entrapment as described above.

⚠ WARNING – Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increase potential for suction entrapment as described above.

⚠ WARNING – Suction outlet components have a finite life, the cover/grate should be inspected frequently and replaced at least every seven years or if found to be damaged, broken, cracked, missing, or not securely attached.

⚠ CAUTION – Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as means of access to the pool by young children. To reduce risk of injury, do not permit children to use or climb on this product. Closely supervise children at all times. Components such as the filtration system, pumps, and heaters must be positioned to prevent children from using them as a means of access to the pool.



⚠ WARNING – Hazardous Pressure. Pool and spa water circulation systems operate under hazardous pressure during start up, normal operation, and after pump shut off. Stand clear of circulation system equipment during pump start up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover, and/or filter housing and clamp due to pressure in the system, which could cause property damage, severe personal injury, or death. Before servicing pool and spa water circulation system, all system and pump controls must be in off position and filter manual air relief valve must be in open position. Before starting system pump, all system valves must be set in a position to allow system water to return back to the pool. Do not change filter control valve position while system pump is running. Before starting system pump, fully open filter manual air relief valve. Do not close filter manual air relief valve until a steady stream of water (not air or air and water) is discharged.



⚠ WARNING – Separation Hazard. Failure to follow safety and operation instructions could result in violent separation of pump and/or filter components. Strainer cover must be properly secured to pump housing with strainer cover lock ring. Before servicing pool and spa circulation system, filters manual air relief valve must be in open position. Do not operate pool and spa circulation system if a system component is not assembled properly, damaged, or missing. Do not operate pool and spa circulation system unless filter manual air relief valve body is in locked position in filter upper body. **Never operate or test the circulation system at more than 50 PSI. Do not purge the system with compressed air.** Purging the system with compressed air can cause components to explode, with risk of severe injury or death to anyone nearby. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.



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⚠ WARNING – Risk of Electric Shock. All electrical wiring MUST be in conformance with applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply. Provide a properly located electrical receptacle. Before working on any electrical equipment, turn off power supply to the equipment. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.

⚠ WARNING – Risk of Electric Shock Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard. Electrical ground all electrical equipment before connecting to electrical power supply.

⚠ WARNING – Risk of Electric Shock Failure to bond all electrical equipment to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, see installation instructions and consult a professional electrician on how to bond all electrical equipment. Also, contact a licensed electrician for information on local electrical codes for bonding requirements.

Notes to electrician: Use a solid copper conductor, size 8 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG (8.4 mm²) [No. 6 AWG (13.3 mm²) for Canada] solid copper bonding wire to the pressure wire connector provided on the electrical equipment and to all metal parts of swimming pool, spa, or hot tub, and metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool, spa, or hot tub.

IMPORTANT - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

⚠ WARNING – Risk of Electric Shock . The electrical equipment 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 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 electrical equipment without the test button being pushed, a ground current is flowing, indicating the possibility of an electrical shock. Do not use this electrical equipment. Disconnect the electrical equipment and have the problem corrected by a qualified service representative before using.

⚠ CAUTION – HAYWARD® pumps are intended for use with permanently-installed pools and may 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.

⚠ WARNING – Risk of Hyperthermia. To avoid hyperthermia the following “Safety Rules for Hot Tubs” are recommended by the U.S. Consumer Product Safety Commission.

1. Spa or hot tub water temperatures should never exceed 104°F [40°C]. A temperature of 100°F [38°C] is considered safe for a healthy adult. Special caution is suggested for young children. Prolonged immersion in hot water can induce hyperthermia.
2. Drinking of alcoholic beverages before or during spa or hot tub use can cause drowsiness, which could lead to unconsciousness and subsequently result in drowning.
3. Pregnant women beware! Soaking in water above 100°F [38°C] can cause fetal damage during the first three months of pregnancy (resulting in the birth of a brain-damaged or deformed child). Pregnant women should adhere to the 100°F [38°C] maximum rule.
4. Before entering the spa or hot tub, users should check the water temperature with an accurate thermometer; spa or hot tub thermostats may err in regulating water temperatures by as much as 4°F (2.2°C).
5. Persons taking medications, which induce drowsiness, such as tranquilizers, antihistamines or anti-coagulants, should not use spas or hot tubs.
6. If the pool/spa is used for therapy, it should be done with the advice of a physician. Always stir pool/ spa water before entering the pool/spa to mix in any hot surface layer of water that might exceed healthful temperature limits and cause injury. Do not tamper with controls, because scalding can result if safety controls are not in proper working order.
7. Persons with a medical history of heart disease, circulatory problems, diabetes or blood pressure problems should obtain a physician’s advice before using spas or hot tubs.
8. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above normal body temperature of 98.6°F [37°C]. The symptoms of Hyperthermia include: drowsiness, lethargy, dizziness, fainting, and an increase in the internal temperature of the body.

The effects of Hyperthermia include:

1. Unawareness of impending danger.
2. Failure to perceive heat.
3. Failure to recognize the need to leave the spa.
4. Physical inability to exit the spa.
5. Fetal damage in pregnant women.
6. Unconsciousness resulting in danger of drowning.

SAVE THESE INSTRUCTIONS

General Information

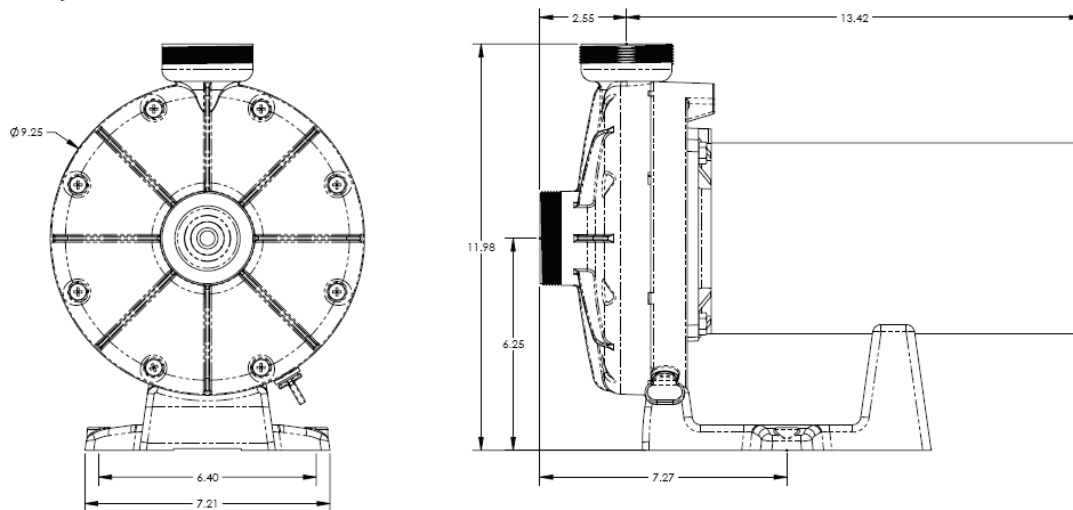
Introduction

This manual contains information for the proper installation and operation of the Hayward 6060 booster pump. The instructions in this manual **MUST** be followed precisely. **Failure to install according to defined instructions will void warranty.**

Product Benefits

- 1 1/2" plumbing union fittings improve performance and allow for easy installation and removal.
- 3/4" hose barb union adapters allow for easy retrofit to existing installations using optional flexible hose for booster pump connections.
- Pump is exceptionally quiet, and uses up to 40% less electricity than competitive booster pumps.
- Pump design allows for *easy* installation and service.
- Suitable for use with all pressure cleaners requiring a booster pump.
- Tall mounting base allows for increased motor ventilation as well as protection from flooding.
- Drain plug requires no tools for installation and removal.
- Volute may be re-oriented in the field for horizontal discharge.
- 1 year warranty.

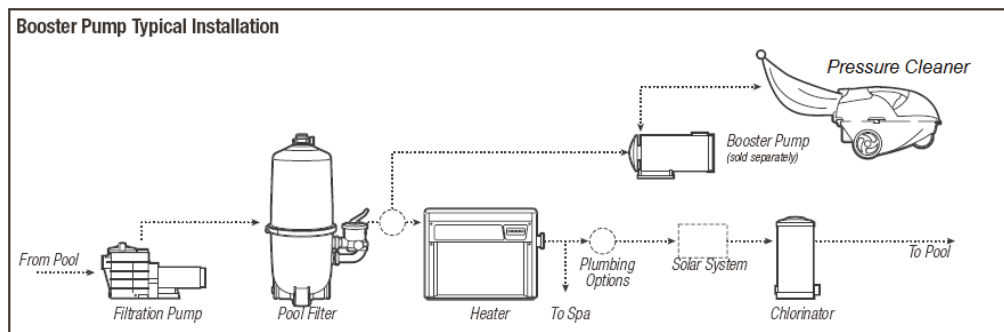
Product Specifications



Installation Instructions

⚠ WARNING – This product should be installed and serviced only by a qualified professional.

Pump Location





Locate booster pump as shown in the diagram on page 4. Run the suction line as directly as possible to reduce friction loss. The suction line should have a continuous slope upward from the lowest point in line. Joints must be tight (but not over-tightened). The suction line diameter must equal to or be larger than the discharge line diameter.

Though the pump is designed for outdoor use, it is strongly advised to place pump in the shade to shield it from continuous direct heat. Select a well-drained area that will not flood when it rains. **Do NOT install pump in a damp or non-ventilated location.** Keep motor clean. Pump motors require free circulation of air for cooling.

Pump Mounting

Install pump on a level concrete slab or other rigid base to meet all local and national codes. Secure pump to base with screws or bolts. This reduces vibration and stress on pipe or hose joints. The base must be level, rigid, and vibration free.

Pump mount must:

- Allow pump inlet height to be as close to water level as possible.
- Allow use of short, direct suction pipe (to reduce friction losses) and gate valves in suction/discharge piping.
- Be protected from excess moisture and flooding, and allow adequate access for servicing pump and piping.

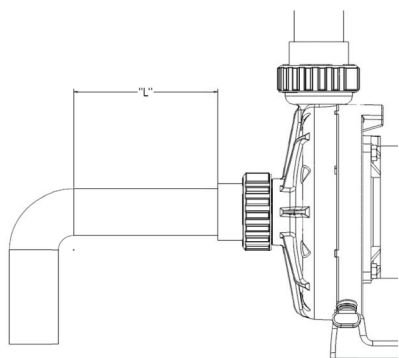
Plumbing

For the best performance, Hayward recommends the use of the supplied union fittings with 1-1/2" pipe. If you are using the booster pump to retrofit to an existing installation that uses flexible hose, use the 6060UB union hose barb fittings included. The filtration system **must** supply a minimum of 8 gallons per minute (GPM) of water to the booster pump. **Do not** connect the booster pump inlet plumbing into the top of a horizontal pipe. If the booster pump is installed below the water level of the pool, a ball valve must be installed between the booster pump and the filtration system to allow servicing of the booster pump.

Fittings restrict flow. For better efficiency, use the fewest possible fittings. Avoid fittings that could cause an air trap.

Pipe Sizing Chart

MAXIMUM RECOMMENDED SYSTEM FLOW RATE BY PIPE SIZE								
Pipe Size [mm]	Flow Rate GPM [LPM]	Suction Pipe Length *	Pipe Size [mm]	Flow Rate GPM [LPM]	Suction Pipe Length *	Pipe Size [mm]	Flow Rate GPM [LPM]	Suction Pipe Length *
1" [32]	20 [75]	5"	1 1/2" [50]	45 [170]	7 1/2"	2 1/2" [75]	110 [415]	12 1/2"
1 1/4" [40]	30 [110]	6 1/4"	2" [63]	80 [300]	10"	3" [90]	160 [600]	15"



*** NOTE** - It is recommended that a minimum length of straight piping (shown as "L" in diagram at left), equivalent to 5 pipe size diameters, be used between the pump suction inlet and any plumbing fittings (elbows, valves, etc.).



⚠ CAUTION – Risk of equipment damage. If the booster pump is connected downstream from a heater, the booster pump plumbing must be a **minimum** of three feet in length between the booster pump inlet and the heater. **Never** connect the booster pump inlet into the three-foot section of heat sink pipe coming directly out of the heater, as this could damage the booster pump and void its warranty. The booster pump must be installed so that it will always be in the water flow. If a solar heating system is used, a diverter valve or tee must be installed on the return line between the filter and solar heater. This assures an ample supply of water and minimizes the possibility of an air lock in the booster pump each time the solar panel is filled. Do not install the booster pump in a “non-flow” pipe when the solar heating system is on, unless an automatic override switch is wired in the system. The override switch will shut the booster pump off while the solar panels are being purged of air. If ball valves are installed between the booster pump and the filtration system, be sure these valves are open before operating the booster pump.

Electrical



⚠ WARNING – Fire Hazard, failure to match supply voltage to motor nameplate voltage can result in a fire resulting in property damage or personal injury. To avoid insure that the electrical supply available agrees with the motor’s voltage, phase, and cycle, and that the wire size is adequate for the HP (kW) rating and distance from the power source. Use copper conductors only. Before working on any electrical equipment, turn off power supply to the equipment.

Voltage

Voltage at motor **MUST NOT** be more than 10% above or below motor name plate rated voltage, or motor may overheat, causing overload tripping and reduced component life. If voltage is less than 90% or more than 110% of rated voltage when motor is running at full load, consult power company.

Grounding and Bonding

Install, ground, bond, and wire motor in accordance with local or national electrical code requirements.

Permanently ground motor. Use green ground terminal provided under motor canopy or access place; use size and type wire required by code. Connect motor ground terminal to electrical service ground.

Bond motor to pool structure. Bonding will connect all metal parts within and around the pool with a continuous wire. Bonding reduces the risk of a current passing between bonded metal objects, which could potentially cause electrical shock if grounded or shorted. **Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and general wiring procedures.** Use a solid copper conductor, size 8 or larger. Run wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG (8.4 mm²) solid copper bonding wire to the pressure wire connector provided on the motor housing and to all metal parts of swimming pool, spa, or hot tub, and to all electrical equipment, metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool, spa, or hot tub.

Wiring



⚠ WARNING – All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code (NEC).

Pump **MUST** be permanently connected to circuit. If other lights or appliances are also on the same circuit, be sure to add their amp loads before calculating wire and circuit breaker sizes. Use the load circuit breaker as the Master On-Off switch.

Time Clock

⚠ CAUTION – Risk of equipment damage. Never run the booster pump without the filtration system operating. Running the booster pump dry will damage the pump and void its warranty.

Installation of a separate time clock for the booster pump is recommended. Set timers so that the cleaner turns on at least one half hour after the filtration system starts, and turns off at least one half hour before the filtration system turns off. Time clocks for the filtration system and the booster pump must be coordinated at all times to insure proper sequence of the filtration system and cleaner operations. If the power to the time clocks is shut off or interrupted for any reason, the time clocks must be reset. A longer than normal cleaning cycle is recommended for the first 30 days of operation. If an automatic control system is used, please refer to the manufacturer’s installation guide.

Motor Specifications

Motor Total Horsepower	Motor Rated Horsepower	Motor Electric V/A		Wire Size / Breaker	
HP (kW)	HP (kW)	Voltage	Amps	AWG	Amps
1.25 (0.93)	0.75 (0.56)	208 - 230 / 115	6.9 – 6.8 / 13.3	14 / 12	10 / 20

Start-Up & Operation

Prior to Start-Up



⚠ WARNING – Separation Hazard: Failure to open all suction and discharge valves could result in severe personal injury. To avoid **OPEN**, all suction and discharge valves as well as filter manual air relief valve (if available) on filter, when starting the circulating pump system for the first time, or after servicing the system. Return to filter to close filter manual air relief valve when a steady stream of water (not air or air and water mix) is discharged from valve.

Starting the Pump:

The filtration system pump must be running, and an automatic pool cleaner must be connected before starting the booster pump. If water leakage occurs from anywhere on the pump or filter, immediately turn off all system circulation pumps and all electrical power before repairing the leak. Do not return to the pump or filter until all water flow has stopped. If no leakage occurs, stand at least 10 feet from pump and/or filter and proceed with starting the booster pump.

⚠ CAUTION – RISK OF EQUIPMENT DAMAGE. Never operate the booster pump without water. Water acts as a coolant and lubricant for the mechanical shaft seal. NEVER run pump dry. Running pump dry may damage seals, causing leakage, flooding, and voids warranty. The filtration system pump must be running before the booster pump is started. It is extremely important for the booster pump to have an adequate water supply from the filtration system at all times. The booster pump is **not** self-priming. To ensure that there is an adequate water supply for the booster pump:

- open any valves at the inlet and outlet of the booster pump before operation.
- set all filtration system valves in a manner that does not deprive the booster pump of water during operation.
- do not operate the booster pump without a pressure cleaner connected to the system.
- set time clocks such that the booster pump only operates when the filtration system is on.
- clean filtration system regularly to prevent flow restrictions.

⚠ CAUTION – RISK OF EQUIPMENT DAMAGE Do NOT add chemicals to pool/spa system directly in front of pump suction. Adding undiluted chemicals may damage pump and voids warranty.

If filtration system pump is to be turned off for any reason, then the booster pump must be turned off before turning off the filtration system pump.

NOTE - If the 6060 booster pump is used to replace the booster pump in an existing pressure cleaner installation, then the cleaner operating pressure should be reset according to the cleaner manufacturer's recommended procedure.

Maintenance

- Hayward pumps have self-lubricating motor bearings and shaft seals. No lubrication is necessary.
- Keep motor clean. Insure motor air vents are free from obstruction to avoid damage. Do NOT use water to hose off motor.
- Occasionally, shaft seals must be replaced, due to wear or damage. Replace with genuine Hayward seal assembly kit. See "Shaft Seal Change Instructions" in this manual.



Storage/Winterization



▲ WARNING – Separation Hazard. Purging the system with compressed air can cause components to explode, with risk of severe injury or death and /or property damage. To avoid do not purge the system with compressed air. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.

NOTICE– Allowing the pump to freeze will void the warranty.

NOTICE– Use ONLY propylene glycol as antifreeze in your pool/spa system. Propylene glycol is non-toxic and will not damage plastic system components; other anti-freezes are highly toxic and may damage plastic components in the system.

Drain all water from pump and piping when expecting freezing temperatures or when storing pump for a long time (see instructions below). Gravity drain system as far as possible.

Keep motor dry and covered during storage. To avoid condensation/corrosion problems, do NOT cover or wrap pump with plastic film or bags.

Storing Pump For Winterization



▲ WARNING – ELECTRICAL HAZARD: Failure to disconnect power may result in serious personal injury or death. To avoid dangerous or fatal electrical shock hazard, turn OFF power to motor before draining pump.

1. Turn booster pump off before turning off the filtration system pump.
2. Turn the filtration system pump off.
3. Remove drain plug from seal plate (see Parts Diagram on page 10 of this manual for pump component locations), and completely drain water from booster pump.
4. Winterize above and below ground piping in accordance with winterizing practices.
5. Refer to pressure cleaner owner's guide for cleaner system winterizing practices.

HAYWARD® Pool Products Limited Warranty

To original purchasers of this equipment, Hayward Pool Products, Inc. warrants its pumps to be free from defects in materials and workmanship for a period of ONE (1) year from the date of purchase, when used in single family residential applications.

The limited warranty excludes damage from freezing, negligence, improper installation, improper use or care or any Acts of God. Parts that fail or become defective during the warranty period shall be repaired or replaced, at our option, within 90 days of the receipt of defective product, barring unforeseen delays, without charge.

Proof of purchase is required for warranty service. In the event proof of purchase is not available, the manufacturing date of the product will be the sole determination of the purchase date.

To obtain warranty service, please contact the place of purchase or the nearest Hayward Authorized Service Center. For assistance on your nearest Hayward Authorized Service Center please visit us at www.hayward.com.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

The Hayward Pool products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its' pool products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature.

Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

*Supersedes all previous publications.

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Shaft Seal Change Instructions



IMPORTANT SAFETY INSTRUCTIONS PLEASE READ AND FOLLOW ALL INSTRUCTIONS

When servicing electrical equipment, basic safety precautions should always be observed including the following. Failure to follow instructions may result in severe personal injury or death.



- A. Disconnect all electrical power service to pump before beginning shaft seal replacement.
- B. Only qualified personnel should attempt rotary seal replacement. Contact your local authorized Hayward Dealer or service center if you have any questions.

Exercise extreme care in handling both the rotating and the stationary sections of the two-part replacement seal. Foreign matter or improper handling will easily scratch the graphite and ceramic sealing surfaces.

Removing the Motor Assembly (See Parts Diagram on page 10 of this manual for pump component locations.)

1. Remove the eight (8) 1/4" x 1-1/4" self-tapping screws (item #1), which hold the volute (item #2) to the seal plate (item #7), using a Phillips head screwdriver.
2. Slide the motor assembly out of the volute (item #2), exposing the impeller (item #4).

Removing the Impeller (See Parts Diagram on page 11 of this manual for pump component locations.)

3. Remove the motor canopy by removing the two (2) screws and pulling the canopy away from the motor.
4. To prevent motor shaft from turning, carefully place a 7/16" open-end wrench over the two (2) flats on the end of the shaft.
5. Remove the impeller (item #4) by rotating counterclockwise.

Removing the Ceramic Seat (See Parts Diagram on page 10 of this manual for pump component locations.)

6. Remove the spring seal assembly (item #6) and seal plate (item #7) from the motor by removing the four (4) 3/8" x 1" bolts (item #11) that secure it to the motor, using a 9/16" wrench or socket.
7. Press the ceramic seat with rubber cup out of the seal plate (item #7). If tight, use a small screwdriver to tap seal out.
STOP - Clean all recesses & parts to be reassembled. Inspect gaskets & replace if necessary.

Seal Installation (See Parts Diagram on page 10 of this manual for pump component locations.)

8. Clean and lightly lubricate the motor shaft and seal recesses in the seal plate (item #7) with a dilute solution of non-granulated liquid-type soap. Gently wipe the polished face of the ceramic seal with a soft cotton cloth. Lubricate the rubber cup on the ceramic seat and press it firmly into the recess of the seal plate (item #7), with the polished ceramic surface facing out.
9. Reassemble the motor to the seal plate (item #7) using the four (4) 3/8" x 1" bolts (item #11).
10. Gently wipe the black, polished surface of the spring seal assembly (item #6) with a soft cotton cloth.
11. Press the spring seal assembly (item #6) onto the motor shaft, with the black polished surface facing the ceramic seat.

Replacing the Impeller and Diffuser

(See Parts Diagram on page 10 of this manual for pump component locations.)

12. Screw the impeller (item #4) onto the motor shaft in a clockwise direction. Tighten snugly by holding motor shaft with wrench as noted in step #4.

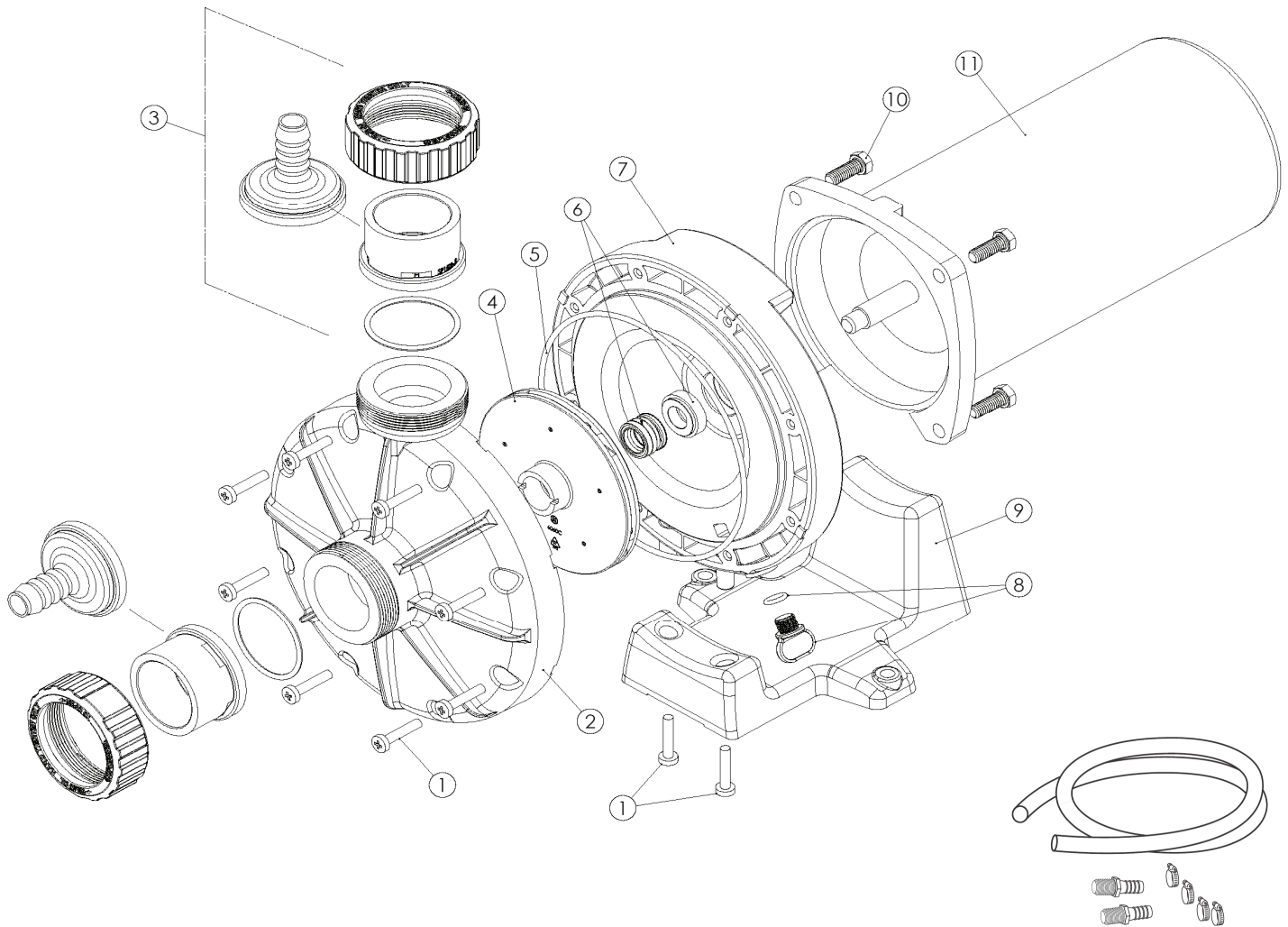
Replacing the Motor Assembly (See Parts Diagram on page 10 of this manual for pump component locations.)

13. Re-attach motor canopy using the two (2) hex headed screws. Slide the motor assembly into pump volute (item #2).
14. Fasten motor assembly to pump volute (item #2) using the eight (8) 1/4" x 1-1/4" screws (item #1). (Be sure housing gasket (item #5) is in place, and lubricated. Replace if damaged). Using a torque wrench, tighten screws alternately and evenly to 70 inch-pounds.



Replacement Parts

Parts Diagram



Parts Listing

Ref. No.	Part No.	Description	Ctn. Qty.
1	AX606oZ1	Screw, 1/4" Type B x 1-1/4" (set of 10)	10
2	AX606oA	Pump Volute	1
3	AX606oUNPAK	Union Connector Kit (incl. 2 ea. Union Hose Connector, Union Pipe Connector, Union Nut, and Union O-Ring)	5
4	AX606oC	Impeller Assembly	1
5	AX606oS	Seal Plate O-Ring	10
6	SPX270oSA	Shaft Seal Assembly	10
7	AX606oE	Seal Plate Assembly (incl. Drain Plug w/O-Ring)	1
8	SPX400oFG	Drain Plug w/O-Ring	10
9	AX606oG	Motor Support	1
10	SPX320oZ5	Motor Bolt	1
11	SPX2707Z1B	Motor, 3/4 HP, Square Flange	1
	606oHKIT	Hose Kit (incl. Hose, 2 Hose Fittings, and 4 Hose Clamps)	1

Optional Hose Kit 606oHKIT



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Trouble Shooting

Motor Will NOT Start – Check For:

Make sure the terminal board connections agree with the wiring diagram on motor data plate label. Be sure motor is wired for available field supply voltage (see pump operating label).

1. Improper or loose wiring connections; open switches or relays; tripped circuit breakers, or blown fuses.
Solution: Check all connections, circuit breakers, and fuses. Reset tripped breakers or replace blown fuses.
2. Manually check rotation of motor shaft for free movement and lack of obstruction.
Solution: Refer to Steps 4 & 5 of “Shaft Seal Change Instructions” in this manual.
3. If you have a timer, be certain it is working properly. Bypass it if necessary.

Motor Shuts OFF – Check For:

1. Low voltage at motor or power drop (frequently caused by undersized wiring or extension cord use).
Solution: Contact qualified professional to check that the wiring gauge is heavy enough.

NOTE: Your Hayward pump motor is equipped with an “automatic thermal overload protector.” The motor will automatically shut off if power supply drops before heat damage can build up causing windings to burn out. The “thermal overload protector” will allow the motor to automatically restart once the motor has cooled. It will continue to cut On/Off until the problem is corrected. **Be sure to correct cause of overheating.**

Motor Hums, But Does NOT Start – Check For:

1. Impeller jammed with debris.
Solution: Have a qualified repair professional open the pump and remove the debris.

Low Flow – Generally, Check For:

1. Clogged or restricted strainer or suction line.
Solution: Contact a qualified repair professional.
2. Undersized pool piping.
Solution: Correct piping size.
3. Plugged or restricted discharge line of filter, valve partially closed (high gauge reading).
Solution: Sand filters – backwash as per manufacturer’s instructions; D.E. filters – backwash as per manufacturer’s instructions; Cartridge filters – clean or replace cartridge.
4. Air leak in suction (bubbles issuing from return fittings).
Solution: Re-tighten suction and discharge connections using Teflon tape. Inspect other plumbing connections and tighten as required.
5. Plugged, restricted, or damaged impeller.
Solution: Replace including new seal assembly.

Noisy Pump – Check For:

1. Air leak in suction piping, cavitation caused by restricted or undersized suction line or leak at any joint, low water level in pool, and unrestricted discharge return lines.
Solution: Correct suction condition or throttle return lines, if practical. Holding hand over return fitting will sometimes prove this point.
2. Vibration due to improper mounting, etc.
Solution: Mount the pump on a level surface and secure the pump to the equipment pad.
3. Foreign matter in pump housing. Loose stones/debris hitting impeller could be cause.
Solution: Clean the pump housing.
4. Motor bearings noisy from normal wear, rust, overheating, or concentration of chemicals causing seal damage which will allow chlorinated water to seep into bearings wiping out the grease causing bearing to whine.
Solution: All leaking seals should be replaced at once.

