



CAT 4000 Cellular Retro Fit Kit

Cellular Retrofit for CAT 4000 Water Quality Controllers

Owner's Manual

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RFK-C4000-CELL

IMPORTANT SAFETY INSTRUCTIONS

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.

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Rockville, MD 20850
www.haywardcommercialpool.com



Introduction

The RFK-C4000-CELL is a retrofit kit used to replace the pager communication components in the CAT 4000 Controller with Cellular components. The RFK-C4000-CELL uses Cellular Internet communication to connect with the PoolCom.

Before You Begin

Write down the following information BEFORE installing the retrofit kit. The numbers below are necessary for activation and will not be accessible after the retrofit kit is installed.

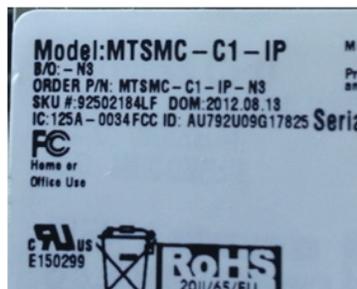
Cell Transceiver Serial Number _____

Cell Transceiver Model Number _____

Cell Transceiver MEID _____



Cell Transceiver Serial Number



Cell Transceiver Model Number



Cell Transceiver MEID

Installation

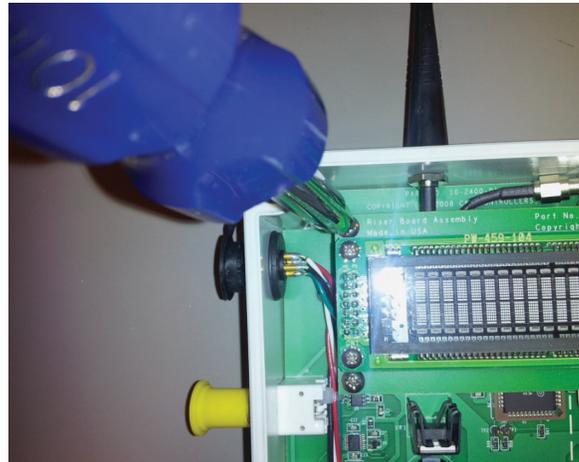
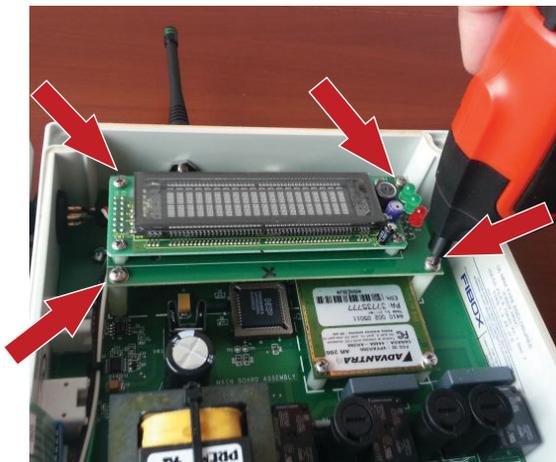
CAUTION: Disconnect power to the CAT 4000 before attempting to install the RFK-C4000-CELL retrofit kit.



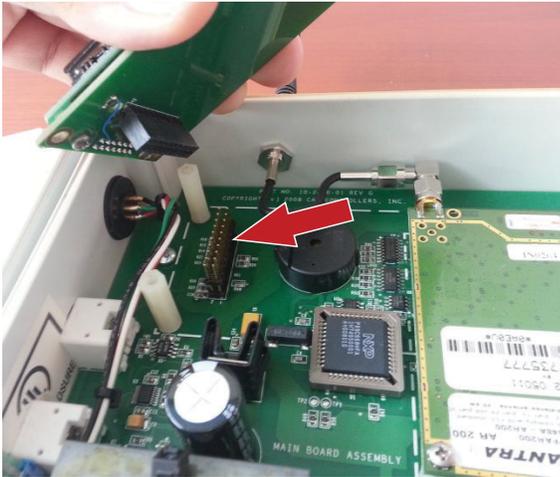
Cell Kit (clockwise): Antenna, Chip Extractor, Comm Board, Transceiver, Orange Ribbon Cable, Adhesive Standoffs, Chip-Return Box, Antenna Cable, Chip, Nylon Mounting Hardware.



1) Unscrew and slowly remove the CAT 4000 face plate. Take care not to stress the ribbon cable attached. Unplug the ribbon cable where shown, and set aside.



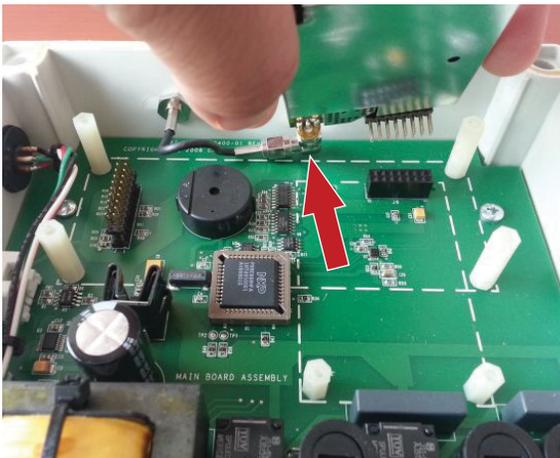
2) Remove the 4 screws holding the display screen. Be sure to remove the screws on the larger board, NOT the smaller one.



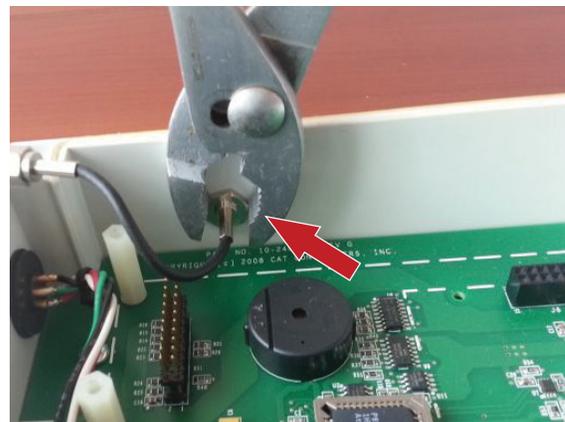
3) Remove the board completely from the unit by gently wiggling and pulling straight up.



4) Remove the 2 screws holding the old transceiver, and remove by pulling straight up.



5) Disconnect antenna cable from old transceiver. **The transceiver must be return-shipped to Hayward along with chip.**



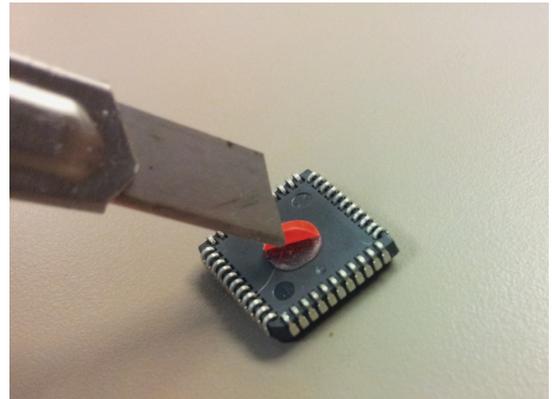
6) Remove the old antenna cable from housing.



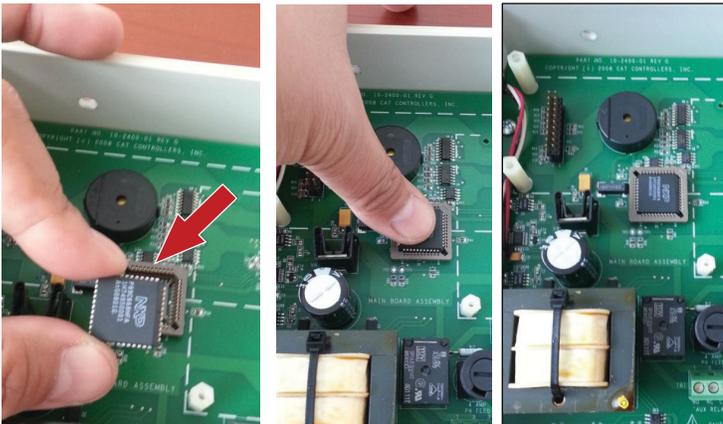
7) NOTE: BEFORE PULLING CHIP, NOTE TEXT ORIENTATION ON CHIP. Using the chip puller supplied, remove old processor chip. **(This must also be return-shipped to Hayward in supplied anti-static case).**



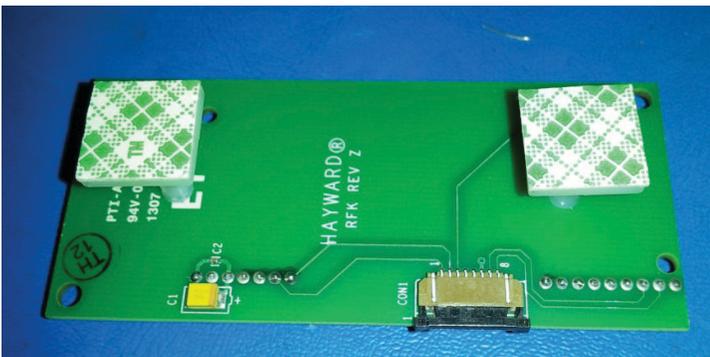
8) Place the old chip in the anti-static case for shipment.



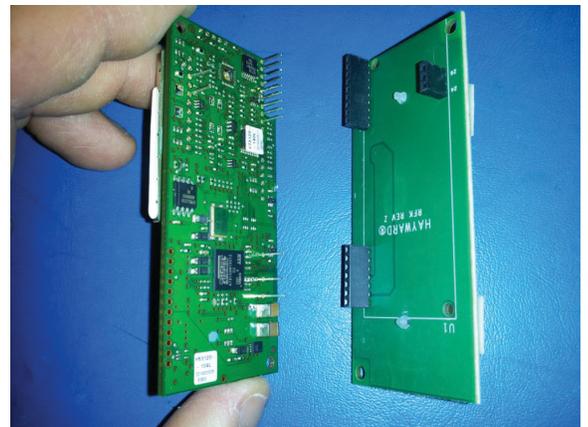
9) Carefully remove the red backing from the adhesive dot on the bottom of the new chip.



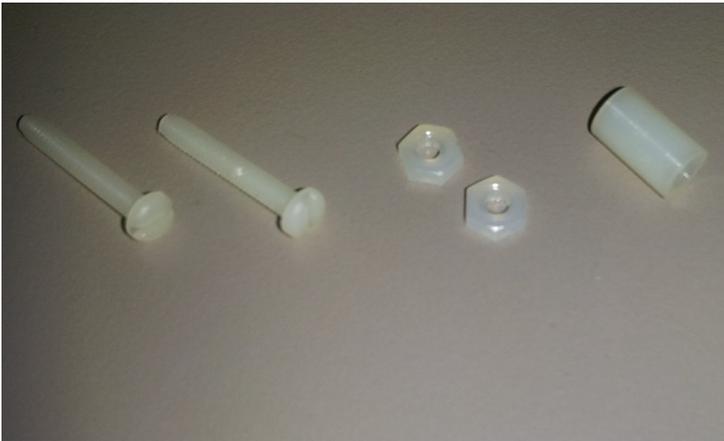
10) Press the chip into the socket making sure that the text orientation is the same as the old chip.



11) Press Adhesive Stand-offs into Comm. Board holes where shown.



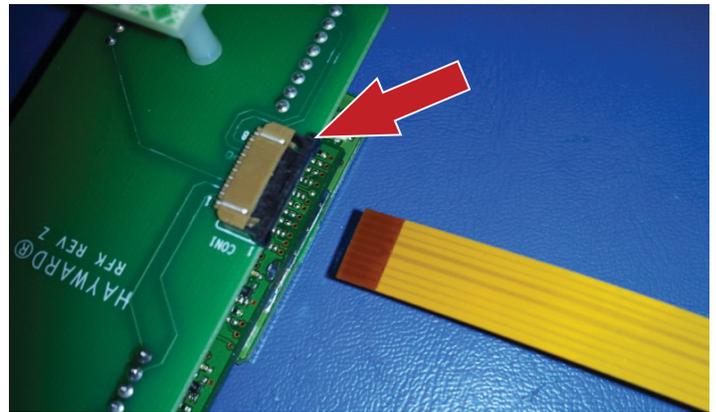
12) Connect transceiver to Comm. Board making sure all pins align with their sockets.



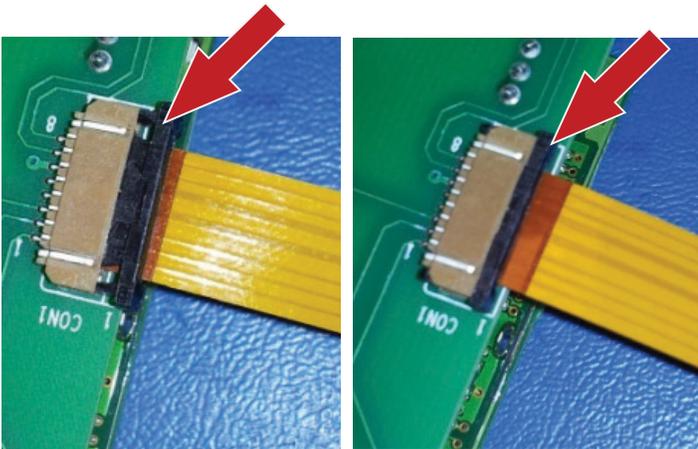
13) Gather nylon screws, nuts and spacers for fastening transceiver to Comm. Board, (Only one spacer shown).



14) Install hardware as shown. Tighten only snugly, preferably finger tight.



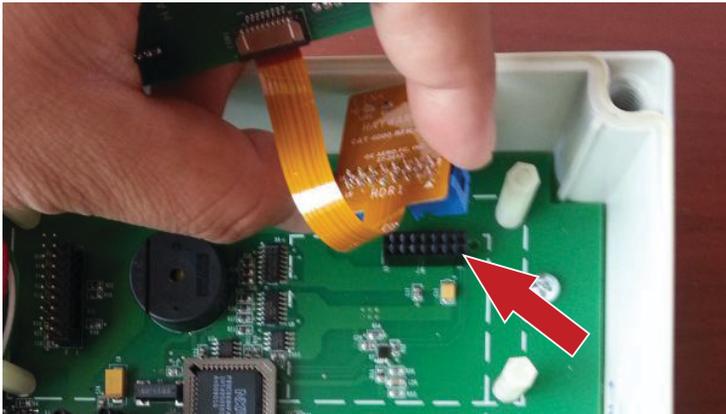
15) With blank side of ribbon cable facing up, and black clip pulled out, insert cable into the Comm. Board connector. After fully inserted, push black clip completely in.



16) Ribbon and Comm. Board properly connected.



17) Transceiver, Comm. Board and Ribbon Cable assembled.



18) Insert ribbon cable into controller as shown. Make sure that all pins are in the correct sockets (blue plug centered over black socket).



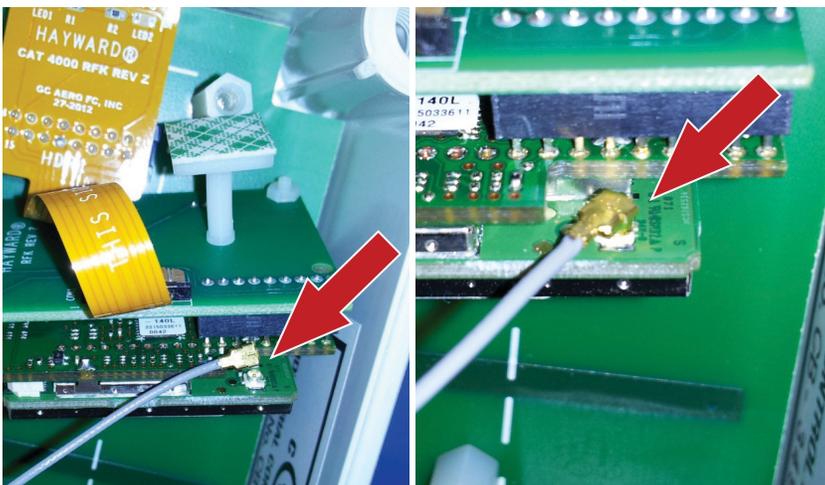
19) Approximate location shown here.



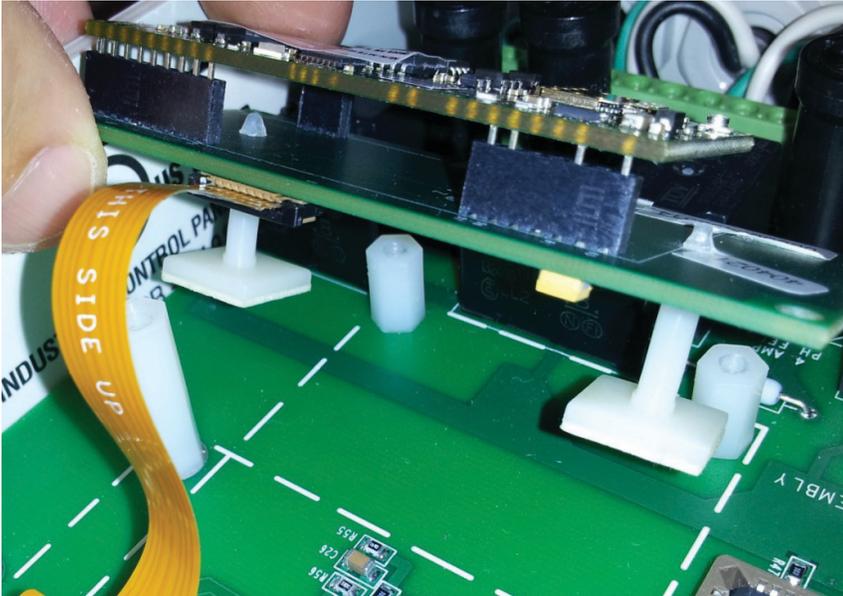
20) With the lock washer on the antenna fitting shaft, insert the antenna fitting through the hole in the bottom of the enclosure. Secure with nut and tighten with pliers.



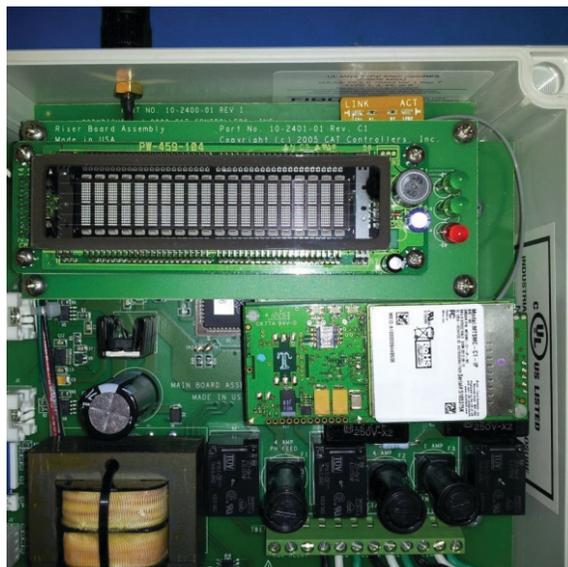
21) Hand tighten antenna onto fitting.



22) Attach antenna cable to transceiver by pushing cable connector onto printed circuit board socket where shown.



- 23) **IMPORTANT!** BEFORE removing adhesive backing from feet, locate assembly on main board where it will not touch existing components and where it will not interfere with the display board when re-installed. Take notice of where the adhesive feet sit and clean these spots with a little alcohol.



- 24) Remove backing from Stand-offs and stick in place. Route the antenna cable as shown, reinstall the display and fasten with (4) screws.



25) Plug in faceplate ribbon cable and attach faceplate. Follow directions for establishing communication. Package Transceiver and Chip for return-shipment.



Activation

After installing the RFK-C4000-CELL retrofit kit, contact Hayward for activation.

Activation Phone Number: 301-838-4001

Be prepared to provide the following information:

Name

Company Name

Contact Information

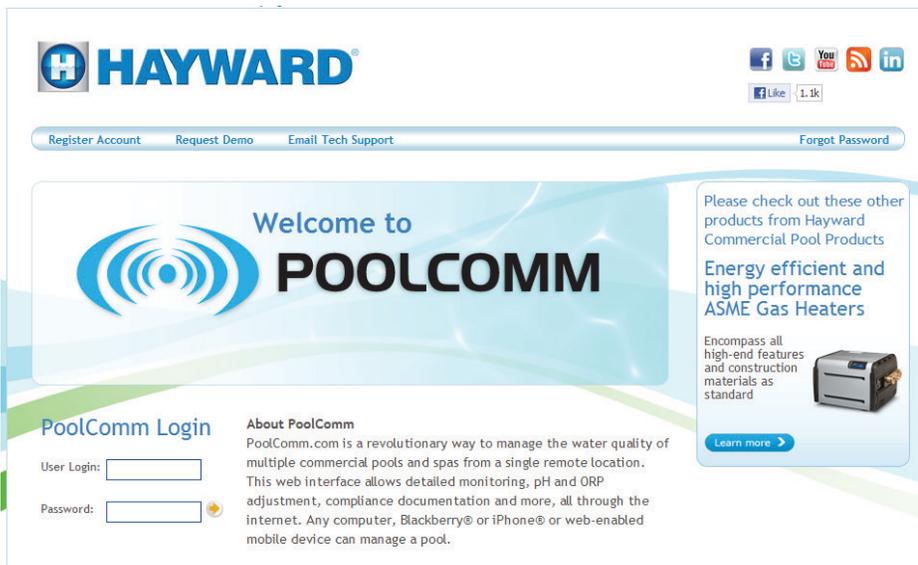
Facility Name

Cat Serial Number

Cell Transceiver Serial Number (refer to page 1)

Cell Transceiver Model Number (refer to page 1)

Cell Transceiver MEID (refer to page 1)



- 1) Register Controller to your Poolcomm.com account. (You may do this before or after set up of unit).



2) Plug in controller and after the unit is fully powered up, press MENU. Scroll up to "Configuration Setup" and press ENTER.



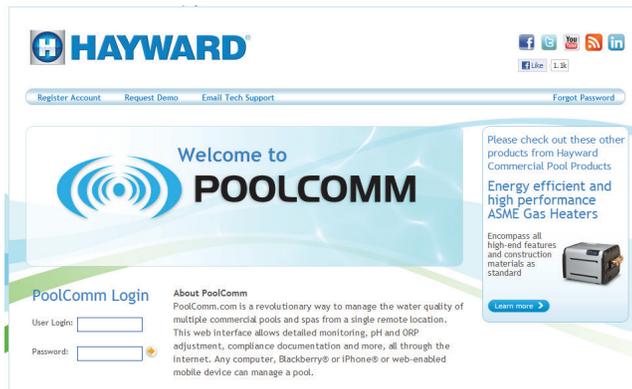
3) Scroll up to "Cell Setup" and press ENTER.



4) Press ENTER under the "Reprovision" option.



5) Press ENTER to Provision the unit. The menu will flash to the "Reprovision" screen.



6) After 2-5 minutes, the unit should connect to the network. You may test unit to website connection by going to "Menu", then "Configuration Setup" and scroll to "Display System Info". Once there, press ENTER. If the unit has today's date, return to the main display screen and press the Transmit button on the front of the controller. An alert will be sent to the Poolcomm site as a "Service Request".

Returning Original Parts

Pack the original Microprocessor chip in the provided anti-static box and the original Transceiver in the provided anti-static bag and ship to:

Hayward Industries
Attn: Patti Eads
61 Whitecap Drive
N. Kingstown, RI 02852

Note: Parts must be returned within 30 days to receive \$100.00 credit.





▲ 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.

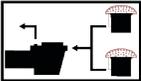


Body Suction Entrapment- A negative pressure applied to a large portion of the body or limbs can result in an entrapment.

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 ten 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.**



⚠ 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.

SAVE THESE INSTRUCTIONS

For further information, visit our website at
www.haywardcommercialpool.com



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