



GRAND RIVER SPAS

**OWNER'S
MANUAL**



**2025
NORTH AMERICA - 60HZ**

TABLE OF CONTENTS

Important safety instructions.....	3
Installation and setup instructions	4
240-volt wiring information.....	5
Operating instructions	6
Topside controls navigation	7
Spa jets and air controls.....	8
Installation	9
Maintenance.....	10
Troubleshooting.....	13
Safety warnings	14

IMPORTANT SAFETY INSTRUCTIONS

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

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

- **WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times. Keep spa cover locked when not in use.
- A wire connector is provided on this unit to connect a minimum No. 8 AWG (8.4mm²) solid copper conductor between this unit and any metal equipment, metal water pipe or conduit within 5 feet (1.5m) of the unit.
- **DANGER:** Risk of Injury. The suction fittings in this spa are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the spa if the suction fittings are broken or missing. Never replace a suction fitting with one rated less than the flow rate marked on the original fitting.
- **DANGER:** Risk of Accidental Drowning. Extreme Caution must be exercised to prevent unauthorized access by children. To avoid accidents, insure that children cannot use this spa unless they are supervised at all times.
- **DANGER:** Risk of Electric Shock. Install at least 5 feet (1.5m) from all metal surfaces. As an alternative, a spa may be installed within 5 feet of metal surfaces if each metal surface is permanently connected by a minimum No. 8 AWG (8.4mm²) solid copper conductor to the wire connector on the terminal box that is provided for this purpose.
- **DANGER:** Risk of Electric Shock. Do not permit any electrical appliance, such as a light, telephone, radio or television within 5 feet (1.5m) of a spa.
- **WARNING:** To Reduce the Risk of Injury:
 - Before using your spa you should check the water temperature with a thermometer that is known to be accurate. The water temperature in a spa should never exceed 104°F (40°C). A water temperature of 104°F is considered safe for a healthy adult. Lower water temperatures are recommended for young children and when spa use exceeds 10 minutes. Since excessive water temperatures have a high potential for causing fetal injury during the early months of pregnancy, pregnant or possibly pregnant women should limit spa water temperature to 100°F (38°C).
 - Use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning.
 - Persons suffering from obesity or with a medical history of heart disease, low or high blood pressure, circulatory system problems or diabetes should consult a physician before using a spa.
 - Persons using medication should consult a physician before using a spa since some medication may induce drowsiness while other medications may affect heart rate, blood pressure and circulation.
 - All electrical components must be located or fixed so that they cannot fall into spa.
- Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above the normal temperature of 98.6°F. The symptoms of hyperthermia include an increase in the internal temperature of the body, dizziness, lethargy, drowsiness and fainting. The effects of hyperthermia include:
 - Failure to feel heat
 - Failure to recognize the need to exit the spa
 - Unawareness of impending hazards
 - Fetal injury in pregnant women
 - Physical inability to exit the spa or hot tub
 - Unconsciousness resulting in the potential of drowning
- **WARNING:** The use of alcohol, drugs or medication can greatly increase the risk of fatal hyperthermia. If you suspect hyperthermia, immediately get medical help, lay the victim on their back with the head slightly elevated for easier breathing, cover the body with a blanket and apply ice packs to the head.
- Never touch or come in contact with any electrical accessory when in your spa or when your body is wet.
- Prior to performing any service to the spa pack, turn off ALL power to the system at the main power source breaker, prior to obtaining access to any terminals.

NOTE: A READILY ACCESSIBLE DISCONNECTING MEANS SHALL BE PROVIDED DURING INSTALLATION

- Parts containing live parts, except parts supplied with safety extra low voltage not exceeding 12v, must be inaccessible to a person in the spa.
- Class I Appliances must be permanently connected to fixed wiring.
- Parts incorporating electrical components, except remote control devices, must be located or fixed so that they can not fall into the spa.
- Appliance should be supplied through a residual device "RCD" with a rated tripping current not exceeding 30mA.

SAVE THESE INSTRUCTIONS

PERSONAL SAFETY PRECAUTIONS

- Please use the spa when others are present.
- Children should have spa access only with the permission and supervision of an adult.
- To reduce the risk of child drowning, keep the spa filter clean and unclogged. Do not modify the suction or filtration systems.
- Exercise caution when entering or leaving the spa. When moving or changing positions, be sure of your footing before applying your full weight as water refraction can be misleading.
- Do not stay in the spa for extended periods of time. Set a reasonable time limit after which you leave the spa, cool down, take a shower, relax and then return for another stay in the spa.

NOTE: This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the spa by a person responsible for their safety. Children should be supervised at all times.

INSTALLATION AND SET-UP INSTRUCTIONS

SURFACE AND PAD REQUIREMENTS

- All spas must be placed on a uniformly firm, flat and level surface that covers the complete bottom of the spa. Your spa cannot be shimmed to be made level
- A concrete pad 4 inches thick is best. In order to prevent flooding of the electrical equipment, the pad must be such that water will drain away from the spa. If your spa is located near sprinklers, adjust or cap them so as not to hit the siding of the spa
- **NOTE:** Do not put your spa on any soft surface such as sand, grass, crushed rock or dirt. Any settling surface will put uneven pressure on the spa structure and may damage your spa.

INSTALLATION ON ANY SOFT SURFACE WILL VOID YOUR SPA WARRANTY

BALCONIES AND DECK REQUIREMENTS

- Please check with a licensed contractor prior to any construction.
- Balconies must be constructed to meet current state and local codes.
- Gates must be self-closing and self-latching.

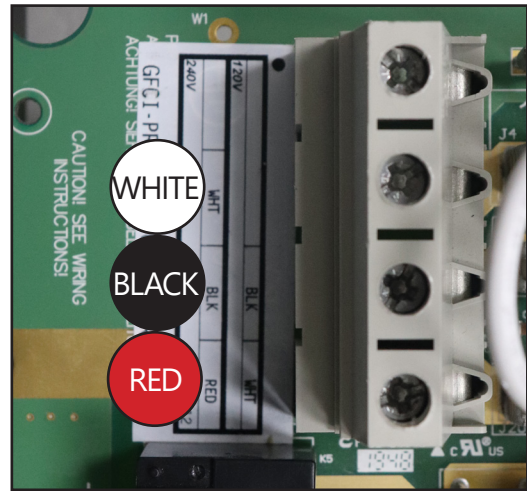
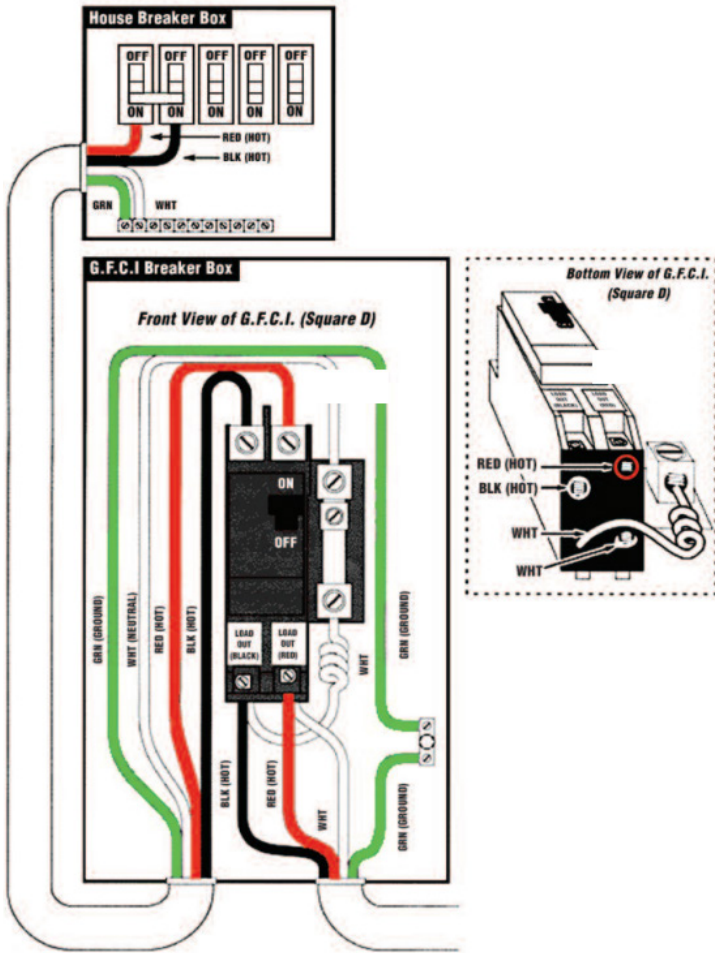
ELECTRICAL REQUIREMENTS

NOTE: All spa electrical wiring must be performed by a qualified, licensed electrician in order to meet NEC (National Electrical Code) state and local codes.

- The lines carrying power to the spa must be dedicated to the spa and should not be shared with any other appliance(s)
- All electrical wiring lines must originate from the electrical panel and terminate, hard wired, into the electrical wiring compartment. The use of extension cords or improper plug type termination is expressly prohibited and voids the warranty
- Do not use aluminum wiring. Use only copper conductive wiring
- Wire gauge must be in accordance with NEC requirements for the distance from current source to spa and the current rating as stated on the ID label that is attached to the equipment control enclosure
- All wiring installed in conduit must be approved for usage by state and local codes. The conduit must terminate at the electrical access compartment either from the bottom of the spa, through a hole in the side panel of the spa or the corner knockouts.

240V SPAS NOT INSTALLED BY A LICENSED ELECTRICIAN ARE NOT UNDER WARRANTY

240-VOLT WIRING



All converted PnP Models to 240V require a 50 amp GFCI

40 amp GFCI Rating

Sturgeon 1, 2, Manistee

50 amp GFCI Rating

Saginaw 1, Thornapple 1, Muskegon 1

60 amp GFCI Rating

Saginaw 2, Thornapple 2, Muskegon 2

Chesapeake 1, 2, Chariton 1, 2

VOLUME SPECIFICATIONS BY MODEL

Manistee, Manistee Eco	946 liters/250 gallons
Sturgeon 1, Sturgeon 2, Sturgeon Eco	1,022 liters/270 gallons
Muskegon 1, Muskegon 2	1,136 liters/300 gallons
Thornapple 1, Thornapple 2	1,211 liters/320 gallons
Saginaw 1, Saginaw 2	1,136 liters/300 gallons
Chesapeake 1, Chesapeake 2	1,400 liters/370 gallons
Chariton 1, Chariton 2	1,628 liters/430 gallons

OPERATING INSTRUCTIONS

SERIAL PLATE LOCATION

Be sure to have the serial number of your Grand River Spa handy when contacting your dealer. This helps with timely assistance and service clarity. The serial plate is located on the bottom frame of your spa, near the drain.

The location of your spa's equipment can also be found on the same side as the serial number plate. The equipment can be serviced by removing the access panel screws and corners. It is very important to make sure that the spa is filled up to the proper level (2/3 up the skimmer opening) before operating spa. Make sure the gate valves are in the open or up position.

WARNING: Do not run spa with gate valves closed or run pump with no water circulating in spa for long periods. Damage could occur to the spa equipment.



POWER CORD ACCESS LOCATION

Grand River Spas has provided three access points located in the bottom corner to assist in running the electrical conduit to the power system. Simply remove the plug to access the opening.



ELECTRICAL SPECIFICATIONS

IMPORTANT: all spa electrical wiring **MUST** be performed by a qualified licensed electrician in order to meet Territorial & Country Codes.

- The lines carrying power to the spa must be dedicated to the spa and should not be shared with any other appliance(s).
- All electrical wiring lines must originate from the electrical panel and terminate, hard wired, into the electrical wiring compartment. The use of extension cords or improper plug type termination is expressly prohibited and voids the warranty.
- Do not use Aluminum wiring. Use **ONLY** copper conductive wiring.
- Wire gauge must be in accordance with local electrical requirements for the distance from current source to spa and the current rating as stated on the ID label that is attached to the equipment control enclosure.
- All wiring must be installed in accordance with territorial & country codes.

CONTROL PANEL GUIDES

Locate the topside control panel below that matches the one found on your Grand River hot tub. Simply scan the QR next to the image and you'll be taken to the user guide for that specific control panel. Or, you can visit www.GrandRiverspas.com/resources/owners-manuals-guides/ where you can locate your user guide.

PREMIER AND ECO SERIES - STANDARD CONTROL PANEL



OPTIONAL TOUCHSCREEN CONTROL PANEL



SPA JETS

Adjustable Spa Jets may be turned off and on by rotating jet faceplate clockwise or counter-clockwise.

NOTE: To remove a jet insert, turn jet face counter-clockwise to the shut off point. Continue turning until the jet unscrews from body. To reinstall the jet, insert jet into body and turn clockwise until the jet stops.

WARNING: Do not turn all spa jets off all the same time as this may cause damage to the spa.



AIR CONTROLS

Air controls are adjusted by rotating the topside dial. These controls serve to regulate the amount of air mixed with water when the whirlpool or hydrotherapy jets are operating.



VOLCANO JET (Chariton & Chesapeake only)

The Volcano Jet operates on a diverter located in the middle of the spa or on the wall. Turn the valve to activate the jet. This valve directs one of the pumps and will effect the flow used to power other jets in the spa.



Diverter valve for Volcano jet

AirX Jet Option

If installed these red jets will be controlled using the matching red air control.



AIR X - jets



AIR X - jet control

FILLING DIRECTIONS

NOTE: We do NOT recommend the use of softened water due to the potential of equipment damage

1. Clear all debris from your spa
2. Remove filter element
3. It may be necessary to tighten loose unions and/or fittings before filling your spa with water. Make sure T-Handled gate valves at pump and heater are in the up position, and the valve handle retaining clips are in the fully extended up position (Figure 6.1)
4. Using a garden hose, place hose in filter chamber for filling. It is very important to make sure that the spa is filled at least 3/4 way up the skimmer opening (Figure 6.2). Do not fill higher than three quarters of the way up the skimmer opening.

WARNING: Do not run spa with gate valves closed or run pump with no water circulating in spa for long periods. Damage could occur to the spa equipment.



Figure 6.1

SKIMMER SIDE FILTER

Your spa has a skimmer side filter that does not require “air bleeding” on initial startup. If an air lock develops, loosen the union on the return side of pump. Let a small amount of water drain from that connection while the pump is running. Once the water begins to flow out of the jets, tighten the union. Make sure the T-Handled gate valve is up position and the valve handle retaining clips are snapped into place (Figure 6.1).



Figure 6.2

WATER CARE

The correct use of chemicals will maintain the water in a clean and healthy condition. The parameters that need to be regularly checked are, total alkalinity, pH and sanitizer level. Your authorized Grand River Spas dealer should be able to supply a suitable test kit and advise on its correct use. It is advisable to test the water on a daily basis.

NOTE: Do not mix chemicals. Do not add water to the chemicals, only add chemicals to the water

IMPORTANT: Not maintaining your water chemistry can void parts of your spa warranty.

Draining your spa

Every 90 days, it is recommended you renew the spa water. To drain your spa, power must be disconnected.

1. Locate the drain faucet on the spa cabinet or the corner block
2. Pull the drain out partially to allow water to drain. To fully restrict water flow, pull out all the way.
3. Twist cap off and attach a garden hose to the opening to direct water-flow.
4. Push back partially and drain the spa.
5. Reverse this procedure to shut the water off.
6. Visit "Grand River Spas Service" on YouTube for a step-by-step video on draining your spa.

NOTE: The drain will not totally empty the spa of water, some must be removed manually. Draining the spa alone is not enough to properly long-term store it. See page 12 for more information on long-term storage.



Total alkalinity

The total alkalinity should be in the range of 90 - 150 ppm (parts per million). A spa or hot tub with low total alkalinity would require constant adjustment of the pH. To raise total alkalinity, add sodium bicarbonate in small quantities. To lower the total alkalinity, add acid (Dry Acid – Sodium Bisulphate) in small quantities. Test in one hour.

pH level

pH is the measure of the acid/alkaline level of the water. It is important to maintain the correct pH level as it effects the action of other chemicals. The pH is measured on a scale of 1 to 14. Seven is neutral, below seven is acidic, and above seven is alkaline. Incorrect pH levels can cause poor sanitizer efficiency, eye and skin irritations, corrosion of metal fittings, cloudy water and formation of scale on the pool walls and fittings. The pH should always be above 7.0 (measured at room temperature, not hot) to avoid possible corrosion of equipment. However, it should not be higher than 7.8, as this would reduce the efficiency of the sanitizer. If the pH level needs to be increased, add soda ash; to reduce the pH level, add dry acid. Wait for one hour and test again.

Sanitizing the spa

Sanitizing your spa is essential for safe, healthy water, free of harmful micro-organisms. The most commonly used sanitizer for spa pools is a form of chlorine (Lithium Hypochlorite). Ozone or UV may also be used, but because there can be no residual, a form of chlorine must be used in conjunction with it. The amount of disinfectant required depends on a number of factors, including, water temperature, the frequency of use and the number of people using the spa. It is most important to always keep the sanitizer level at 2.00 to 3.00 ppm. In very hot water, the sanitizer can be used up very quickly, and should be checked regularly while the spa is being used. After heavy use of the spa or on a weekly basis, the water should be shock dosed with sanitizer. Be sure to check the level again before use. If the spa or hot tub is not being used, check your water with a test strip and add sanitizer as needed to maintain recommended levels.

Recommended Levels	
Chlorine	2.0 – 3.0 ppm
Total Alkalinity	90 – 110 ppm
pH Level	7.4 – 7.6

It is important to note that if the right pH and sanitizer levels are maintained, viruses and bacteria should not survive in the water. In terms of general hygiene, it is important to keep the filter and pump clean. Clean the filter regularly and whenever possible always shower before spa use.

SPA SURFACE CARE

Do not use abrasive solvents or cleaners to clean spa surfaces. Only use the following: lemon juice, amonia, vinegar, Simple Green or mild soap and water.

SPA CABINET MAINTENANCE

Your spa cabinet is designed to be maintenance free. However, if dirt or grime should appear use a mild soap solution and clean with a rag.

SPA PILLOW MAINTENANCE

Your spa pillows need to be washed and rinsed periodically to remove any chemical residue. This should help to eliminate pillows becoming stiff and discolored. Spa water level should not be reaching the pillows. If the spa is not to be used for a period of time, pillows should be removed.

NOTE: Your spa pillows are not covered under your warranty.



SPA COVER MAINTENANCE

For proper installation of the cover the tie-down hardware must be installed. Please refer to the cover manufacturers care and maintenance form included in the box the cover came in.

Always leave the cover open for 15 minutes every 30 days to prevent off gas from damaging your spa pillows, cover and other critical components. Signs of off gas damage include, but are not limited to, pillow peeling and bubbling, discoloration, cover failing prematurely, plastics or jet inserts failing.

FILTER CLEANING

Clean spa filters are critical for proper operation. Dirty filters cause water restriction to the pump, which in turn may cause erratic heating of the spa and other service issues. A starving pump will degrade performance, result in dirty or murky water and may cause the heater to malfunction. The filter should be checked every week. If the filter looks dirty, remove it and spray clean. The filter should be replaced at least once a year.

When filters are removed from the spa, make sure that no objects fall into the filter cavity. They can cause obstruction to water movement.

LONG-TERM STORAGE

Water left in the spa during long-term storage may cause freeze damage which is not covered under your warranty. We strongly urge you to contact a local spa dealer to help prepare your spa for storage.

1. If you are not going to use your spa for an extended period of time, drain it as described on Page 11. You will also have to drain the pump.
2. To drain the pump, remove the drain plug from the face of the pump. Additional water removal is required to prevent freeze damage to the spa plumbing assembly.
3. Remove the piping assembly between the pump and the heater by loosening the union at the pump and the union at the heater.
4. Once the piping is removed, use a wet/dry shop vac to vacuum water from both the pump side and the heater side openings
5. Once all water is removed from these lines, place the vacuum over each jet and the suction fittings to vacuum out any remaining water that may be trapped in these lines.
6. You may now reinstall the piping assembly that was removed earlier and reinstall the pump plug.

FREEZE DAMAGE TO THE SPA PLUMBING IS NOT COVERED UNDER WARRANTY

OZONATOR

If you have a factory-installed ozonator it will come from the factory set to filter during filter cycles only. We recommend 4 hours of filtration in a 12 hour window to provide adequate ozonation. This can vary based on use, season, and many other factors unique to you.

NOTE: Please do not attempt to disassemble ozonator if it becomes inoperable. Ozonators contain no user serviceable parts. Please contact your spa dealer for assistance.

TROUBLESHOOTING

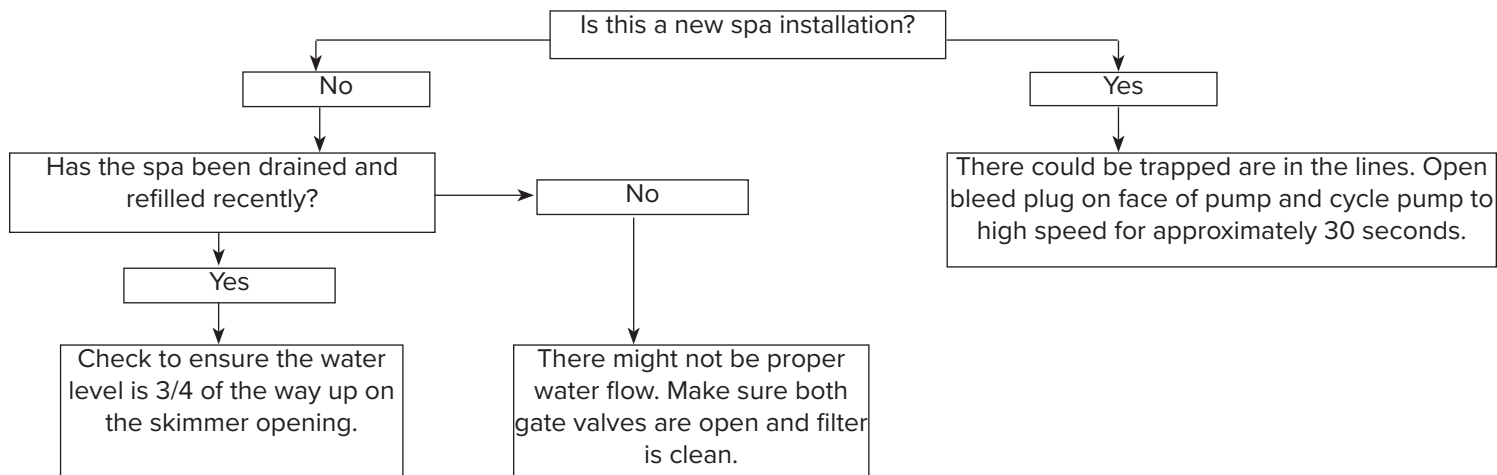
Situation	Cause or Result	Product to use	Solution
Calcium deposits on surfaces of heater, fittings, or plumbing	Hard water	Stain n Scale	Add 1oz. of Stain n Scale
	pH/total alkalinity out of adjustment	pH Up pH Down	Test water - adjust with pH Up or pH Down. For preventative maintenance add Stain n Scale weekly. (1oz. up to 300 gals.)
Cloudy or murky water	pH/total alkalinity out of balance	pH Up pH Down	Test water - add pH Up or pH Down as needed
	Plugged filter	Spa Cartridge Filter Cleaner	Use Spa Cartridge Filter Cleaner (min. once/month)
	No sanitizer residual	Chlorinating Granules	Add Chlorinating or Brominating Granules (no more than 2oz. per treatment).
	Oils, soap, foreign matter and other contaminants	Spa See Clear	Treat water with Spa See Clear twice a week (1oz. contaminants up to 300 gals.)
	Too many conflicting chemicals		Drain & refill if water is older than 60 days
Eye & skin irritation, rashes, allergies	Water balance needs to be corrected (pH/total alkalinity)	pH Up pH Down Total "A"	Test water, add pH Up, pHDown or Total "A" as needed
	Excessive chlorine or bromine		Add fresh water and/or wait a day and re-test sanitizer level
Excessive foam	Build up of body oils, cosmetics and contaminants	Spa Foam Away Spa See Clear	Add Spa Foam Away to foamy area, then add 1oz Spa See Clear
	pH/Total Alkalinity not in balance or calcium level too low	Spa See Clear Spa Stain n Scale	Add Spa See Clear or Spa Stain n Scale to help remove oils and contaminants
Soft water			Drain and refill
Blue water	Copper metals in spa being eroded	Cop-Out pH Up pH Down Total "A"	Use Cop-Out as per instructions. Test and restore alkalinity and pH to proper levels
Pump will not prime or function	Water level may be too low		Ensure water level is 3/4 up on the skimmer opening
	Gate valves closed Improper wiring to spa		Contact your authorized Grand River Spas Dealer for service

NOTE: Most water chemistry problems can be resolved by the recommended solutions above. Extreme chemical conditions may warrant draining and refilling the spa. Stains or calcium deposits on the spa may require attention prior to refilling. Please contact your dealer if you have further questions. Always contact your authorized Grand River Spas Dealer for service.

Caution: Grand River Spas have slide type water shut off valves referred to as Gate Valves. The spa should never be operated with the Gate Valves in the closed position, as this will cause severe damage to the pump and/or heater.

TROUBLESHOOTING

Issue: Spa will not heat



SAFETY WARNINGS

Warning: Children should not use spas or hot tubs without adult supervision
Avertissement: Ne pas laisser les enfants utiliser une cuve de relaxation sans surveillance

Warning: Do not use spas or hot tubs unless all suction guards are installed to prevent body and hair entrapment
Avertissement: Pour éviter que les cheveux ou une partie du corps puissent être aspirés, ne pas utiliser une cuve de relaxation si les grilles de prise d'aspiration ne sont pas toutes en place

Warning: People using medication and/or having an adverse medical history should consult a physician before using a spa or hot tub
Avertissement: Les personnes qui prennent des médicaments ou ont des problèmes de santé devraient consulter un médecin avant d'utiliser une cuve de relaxation

Warning: People with infectious diseases should not use a spa or hot tub
Avertissement: Les personnes atteintes de maladies infectieuses ne devraient pas utiliser une cuve de relaxation

Warning: To avoid injury exercise care when entering or exiting the spa or hot tub
Avertissement: Pour éviter des blessures, user de prudence en entrant dans une cuve de relaxation et en sortant

Warning: Do not use drugs or alcohol before or during the use of a spa or hot tub to avoid unconsciousness and possible drowning
Avertissement: Pour éviter l'évanouissement et la noyade éventuelle, ne prendre ni drogue ni alcool avant d'utiliser une cuve de relaxation ni quand on s'y trouve

Warning: Pregnant or possibly pregnant women should consult a physician before using a spa or hot tub
Avertissement: Les femmes enceintes, que leur grossesse soit confirmée ou non, devraient consulter un médecin avant d'utiliser une cuve de relaxation

Warning: Water temperature in excess of 38°C may be injurious to your health
Il peut être dangereux pour la santé de se plonger dans de l'eau à plus de 38°C

Warning: Before entering the spa or hot tub measure the water temperature with an accurate thermometer
Avertissement: Avant d'utiliser une cuve de relaxation mesurer la température de l'eau à l'aide d'un thermomètre précis

Warning: Do not use a spa or hot tub immediately following strenuous exercise
Avertissement: Ne pas utiliser une cuve de relaxation immédiatement après un exercice fatigant

