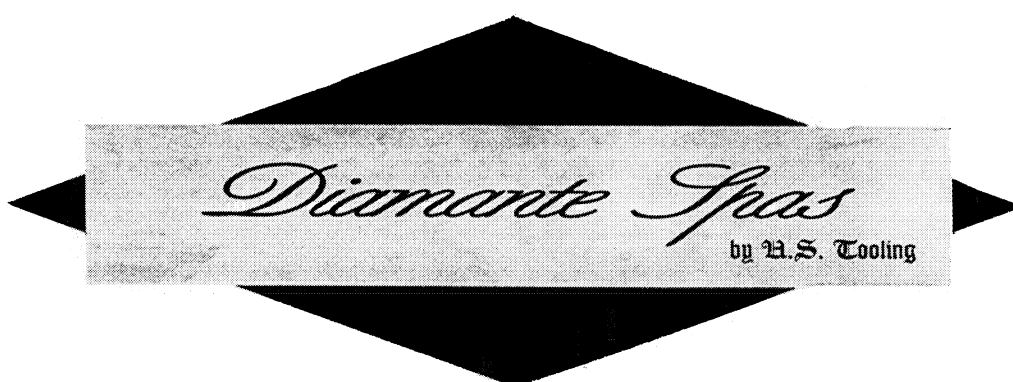


OWNER'S MANUAL



Diamante Spas

by U.S. Tooling

OWNERS MANUAL

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PORTABLE SPA OWNER'S MANUAL

Welcome to a Lifestyle of Good Health and Relaxation.

With proper care, your spa will provide many years of pleasure and comfort for you and your family. Please take time to read the entire Do's and Don'ts of how to care for your spa, before and after installation. This Owner's Manual will help you understand the proper way to care for your spa so you can enjoy the most from your spa.

Please remember that your spa is a powerful appliance. Make sure that the spa is installed correctly and safely to prevent any accidents to you or your family.

This manual will explain safety precautions, installation instructions, operating instructions, and maintenance procedures. If you have any questions regarding this manual after reading it, feel free to ask your Diamante Spas dealer for any assistance.

Read and understand all safety, installation, and operating instructions before adding water or attaching electrical power to your spa. It is your responsibility, the spa owner, to maintain the spa in proper working condition, to place the spa on a level and solid surface supply the spa with the proper gauge wire, voltage, and amperage, keeping the water conditions at safe levels, and the pH levels, chlorine, or bromine levels at an ideal, normal and safe level. The spa's surface is always waxed after every change of water, always keep the cover on the spa when it is not in use.

****SERIAL NUMBERS****

These following numbers are to help identify the spa in case it needs service in the future.

Spa Serial #: _____

Spa Model : _____

Spa Warranty #: _____

Spa Color : _____

Spa Option (Jets): _____

Equipment Manufacturer: _____

Equipment Model : _____

Equipment Serial #: _____

Pump Horsepower: _____ **No. Of Pumps:** _____

Supercharger Horsepower : _____

Also, fill in the bottom portion so you don't forget where you bought your spa if you ever need it to be serviced.

Dealer Name : _____

Address: _____

Phone # _____

DO NOT FORGET TO SEND YOUR WARRANTY CARD
RECEIPT BACK TO THE FACTORY WITHIN
10 DAYS OF DELIVERY WITH A COPY OF
YOUR PURCHASE RECEIPT OR YOUR
WARRANTY MAY BE INVALID.

SAFETY INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

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

Make sure that the following emergency telephone numbers are listed at the nearest telephone to the spa:

- PHYSICIAN
- LOCAL HOSPITAL
- AMBULANCE
- POLICE DEPT.
- FIRE DEPT.
- CLOSEST RELATIVE OR FRIEND
- OR 911

If possible, try to have at least one person in the family who knows CPR (cardiopulmonary resuscitation). It could save a LIFE in any emergency.

WARNING:

To reduce the risk of injury, you should always review these instructions with first time or occasional users of your spa. Remember that they may not be aware of the possible risks with the spa's hot water temperature.

RISK TO CHILDREN OF ACCIDENTAL DROWNING

Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use the spa unless a responsible adult supervises them. It is your responsibility as the spa's owner to prevent unauthorized access to the spa by children or guests that may need adult supervision while using your spa.

ALCOHOL, DRUGS, AND SPAS

The use of alcohol, drugs, or medication before or during spa use may lead to unconsciousness with the possibility of drowning. Persons using medication should first consult their physician before using the spa. Some medication may have adverse interactions with the spa's hot water, so be careful and read your medications directions and ask your physician if you have any questions.

RISK OF HAIR OR BODY ENTRAPMENT

The suction fittings in this spa are sized to match the specific flow rates needed 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 your spa if the suction fittings are missing or broken. Never replace a suction fitting with one rated less than the flow rating on the original. Should your spa be missing or has a broken suction fitting whether the warranty has expired or not call your authorized Diamante Spas dealer to help you fix your spa.

HIGH BLOOD PRESSURE, OBESITY, HEART CONDITIONS

Persons suffering from obesity or who have a medical history of heart disease, low or high blood pressure, circulatory system problems, and/or diabetes should first consult their physician before using a spa or your spa.

RISK OF ELECTRIC SHOCK

Do not permit any electrical appliance, such as a light, telephone, radio, or television within 5 feet (1.5m) of the spa.

RISK OF SCALDING

The water in the spa should never exceed 104 degrees F (40 degrees C). Water temperatures between 100 degrees F (38 degrees C) and 104 degrees F (40 degrees C) are considered safe for a healthy adult (not exceeding 20 minutes). Lower water temperatures under 98 degrees are recommended for extended adult use (exceeding 20 minutes), adults over the age of fifty years of age, and for young children under the age of twelve. Check with your physician if your child or children under the age of twelve are healthy enough and can withstand water temperatures above 98 degrees to use a spa. Remember to always check the water temperature before entering the spa.

RISK TO PREGNANT WOMEN

Excessive water temperatures have a high potential to cause fetal damage to pregnant women. Pregnant or possibly pregnant women should first consult with their physician before using a spa.

RISK OF ELEVATED BODY TEMPERATURE OR DROWNING

Try not to use your spa alone. Long exposure in hot water may cause elevated body temperature. This occurs when the internal body temperature reaches several degrees above normal (98.6 degrees F). Symptoms include dizziness, fainting, drowsiness, and lethargy. The effects of elevated body temperature are:

- Unawareness of impending hazards
- Failure to perceive heat
- Failure to recognize the need to exit the spa
- Physical inability to exit the spa
- Fetal damage to a pregnant woman
- Unconsciousness resulting in a danger of drowning

The use of alcohol, drugs, or medication can greatly increase the risk of elevated body temperature in a spa.

A. SITE PREPARATION

Because your spa is portable, you can locate it just about anywhere you wish on a patio, on a deck, in the middle of your yard, or even indoors. Just be sure to position it above ground in a area with good drainage and on a level, continuous surface which can support the weight of the spa when filled with water and people. The weight of the spa filled with water and its occupants can weigh as much as two and a half tons (5000 lbs.), depending on the model and the amount of people in the spa. Severe damage can occur to your spa if it is not placed in an approved surface.

- Place the spa on at least 3 to 4 inches of solid dry concrete. Do not place spa on wet or not completely dry concrete, which may tend to sink or sag and damage the spa and will void your warranty. Make sure that the concrete slab is level.
- If the spa is to be placed on, a wood deck or patio be sure that the wood structure is able to withstand the weight. Typical standards of weight requirements are anywhere from 75 to 200 pounds per square foot, so first verify with your city code.

- Placing your spa on a bed of pea-gravel or on a dirt surface will damage your spa, voiding your warranty.
- Make sure the wood decking, on which the spa is to rest on, does not have any low spots, high spots, or any gaps between the surface and the bottom of the spa. This will cause damage to your spa and will void your warranty.
- If any damage is done to your spa because the surface on which the spa is placed is not an approved surface, the warranty will be voided.
- It is your responsibility, the spa owner, to make sure that the spa is on a solid, level, and appropriate surface or base.

DANGER RISK OF ELECTRICAL SHOCK

The following steps are the basis for almost any electrical wiring for spas. This work must be done by a licensed electrician. If any damage is done to the spa because of improper electrical installation, your warranty will be voided. Make sure your electrician is knowledgeable in the installation of spas. To ensure proper installation provide a copy of these instructions to better aid the electrician. If your electrician is not sure of the installation procedures, have the electrician call the equipment manufacturer (the Owner's manual is in the packet with all the papers inside the door). **HAVE YOUR ELECTRICIAN READ THIS MANUAL AND SIGN THE APPROPRIATE AREAS SO HE OR SHE IS AWARE OF THE REQUIREMENTS FOR A SPA INSTALLATION.**

SIGNATURE: _____
 PRINT NAME: _____
 COMPANY NAME: _____
 ADDRESS: _____
 CONTRACTORS LICENSE #: _____
 PHONE #: _____

B. ELECTRICAL REQUIREMENTS

220 Volt Systems

220v. 50 amp, 60 Hz, 4 wire

2 Hot wires # 6 AWG

1 Neutral wire # 6 AWG

1 Ground wire # 6 AWG

8 Bonding required. #6 AWG wire is acceptable up to 150 feet, over that you may need # 4 AWG.

NOTE: Always check your local and state codes for wiring requirements that may exceed NEC

110 Volt Systems

110v. 20amp, 60Hz, 3 wire

1 Hot wire # 12 AWG

1 Neutral wire # 12 AWG

1 Ground wire # 12 AWG

#8 Bonding required. #12 AWG wire is acceptable up to 75 feet, over that you need # 10 AWG.

NOTE: Always check your local and state codes for wiring requirements that may exceed NEC.

C. DISCONNECTING DEVICE

All spas require a fused disconnecting unit at least 5 feet (1.5m) from the spa. This disconnect is to disconnect all power to the spa in case of an emergency. The device and the installation needs to comply with NEC 680.42 & 680.12 codes. Your electrician should know about these requirements, so ask them about this. If your spa is installed in the middle of your yard where there is nothing on which you can install the disconnect, then you need to place a 4x4 post 5 feet (1.5m) from your spa. The disconnect needs to be at least 4 feet (1m) from the floor or ground. Ground Fault Current Interrupter or GFCI are provided in most spa equipment models, some equipment models can not have a GFCI installed in it so your electrician needs to install one with your disconnect. The disconnect must be in plain view from the spa, and should always be free from any obstructions. If this disconnecting device is not installed on the electrical lines running to your spa, you may be in risk of an accident and your warranty to be voided.

ELECTRICIAN SIGN BELOW.

SIGNATURE: _____

PRINT NAME: _____

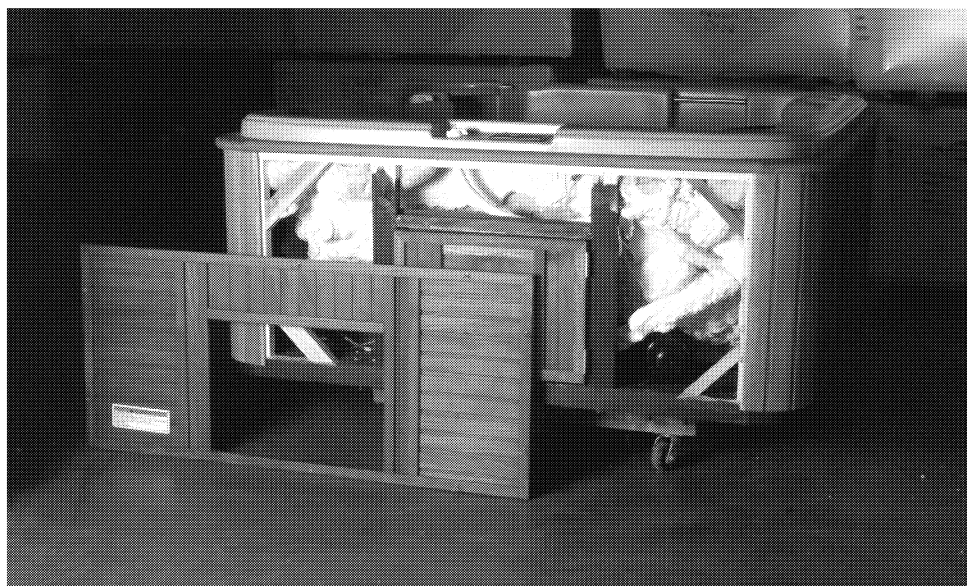
CONTRACTORS LICENSE #: _____

D. INSTALLATION PROCEDURE

1. The main electrical panel for the spa must have a 50-amp GFCI protective device installed for 220v. and 20-amp GFCI protective device for 110v. only when the spa is not equipped with a GFCI.
2. Only use non-metallic conduit and fittings when installing power to your spa.
3. Only, after the spa has been set in its location, run the power through the spa.
4. Make sure the spa is in a location that you, a service technician, or your electrician can have easy access to all four sides of the spa. Failure to do so can result in extra work and can result in a costly charge to you.

E. INSTALLING POWER THROUGH THE SPA SKIRT

1. Remove the front panel by unscrewing the 10 screws.



2. Your electrician may have to drill a hole through the wood panel for the conduit. Make sure you seal any exposed wood after the hole has been drilled.
3. Open the control head panel to reveal the terminal blocks.
4. Run the wires to the blocks in the order that the blocks are marked.
5. On 110v. , the blocks are marked, L1 for a hot (color: black), Neutral (color: white), and a Ground (color: green).
6. For 220v., the blocks are marked, L1 for a hot (color: black), L2 also for a hot (color: red), Neutral (color: white), and a Ground (color: green).
7. Try to use waterproof flexible conduit when running the power lines through the spa (unless local or state laws specify not to use it).
8. Also, refer back to the Equipment manufacturer's diagram for more details.
9. Make sure the wires are all in their correct positions, at the main electrical panel, the disconnecting device, and at the spa before turning on the power.
10. Once everything has checked out, make sure all water gate valves are open (metal stem should be visible with red stem lock in place).
11. Now that the gate valves have been checked, it is time to put the panel back in place.
12. Briefly turn on the power to test that connections are working, test the GFCI to make sure that it is working properly. Also, test the disconnecting device to ensure that it will work in an emergency. **Only test all the junctions for power. Never run a spa without water as it will void your warranty if any damage occurs to the pumps, heater, or control head.**
13. Now turn the power off and start adding water (refer to Starting Up Your Spa section).
14. Each time you *refill* your spa with water you need to apply a spa wax

ELECTRICIAN SIGN BELOW.

SIGNATURE: _____ PRINT NAME: _____

F. STARTING UP YOUR SPA

1. You do not need to apply a wax on the spa's surface the first time you start up the spa, the spa's surface has already been taken care of at the factory. Each time after that before you refill your spa with water it is necessary to apply the spa wax.
2. Before you add water, apply the spa wax to the spa surface (ask your Diamante Spas dealer for the wax), then begin to fill your spa with water from your garden hose. The water level should be half way up the filter area (approximately 3 inches above the filter opening or on some models until it clears the highest jet or jets).
3. Once the water level is correct, inspect the area around the spa. make sure that no water running from underneath the spa. Sometimes during freight or during a delivery, a hose or a union may get loose. If you see water, immediately locate the leak. If it is a loose pump union or heater union just tighten it as much as you can with your hands only. If leak can not be located, call your Diamante Spas dealer. If everything is fine, you can turn on the power.
4. With the power on, turn on the main pump. Turn the thermostat to begin heating the water and open the pump air bleed valve (if your spa is equipped with one). The pump will sometimes not pump water through the jets immediately, due to air in the plumbing lines. If your spa is equipped with a pump air relief valve by the filter housing, open it to help prime the pump or pumps. Give the pump some time to prime itself. Once the pump has primed itself, you will see the jets begin to work. Press the button for the main pump (or Jets Therapy 1, or Jets 1) so the pump can run on high speed to completely get

all the air out of the main pump. If your spa is equipped with two pumps, press the button for the booster pump (Jets Therapy 2, or Jets 2) so the pump can begin to prime itself. When the pump has primed itself now you can close the air relief valve. You will see the jets begin to work. Give the pump or pumps about 15 to 20 seconds to prime. If by 20 seconds the pumps have not primed, turn off the pumps and try the procedure again. The pump air relief valve can prime both pumps.

5. If your spa is equipped with a supercharger press the button to turn it on. You should see the air bubbles coming out of the jets. The small diverter valve by the control panel will divert the pressurized air to two jet banks in the spa.
6. Turn on your mood light. Press the button for light (or Illumination), and your light should light up your spa.
7. If you have done everything correctly, your spa should be working. If you have purchased a spa equipped with an electronic control head, refer to the manufactures' owner's manual on the start up procedures.
8. If, the pumps are on and you notice that a jet is not working, you can physically turn the jet clockwise or counterclockwise to open or close the jet. NOTE: not all the jets are adjustable so if the jet does not turn do not force it.
9. At this time you can set the thermostat to the temperature you desire. Remember the spa can only heat the water to 104 degrees F (40 degrees C). **NOTE:** your spa heater on a 220v. System can only heat the so fast. A 220v. 5.5kw heater can heat the water from 8 to 10 degrees an hour, don't expect the water to be hot in the first couple of hours. On a 110v. System the 1.5kw heater can heat the water about 3 to 5 degrees an hour. Be patient for the first time you start up your spa.
10. Now that the spa is heating and filtering the water, you can begin to add the chemicals to the water. Be sure to read very carefully how to add chemicals and how much chemicals to add. Your best bet is to ask your Diamante Spas dealer for help regarding water chemistry, since every city has different water conditions. Also, check with your chemical kit instructions manual for proper water chemistry.
11. Always keep your water pH at an ideal level, which is at about 7.4 to 7.6 in the pH scale of 0.0 to 14.0.
12. Failure to keep your pH at a safe level for extended periods can cause bather discomfort, unsanitary water, eyes to burn, clogged plumbing hoses, staining and calcification to the heater or pumps, and will cause the spa's surface to discolor, the surface's texture to get rough, and to crack. This will void your warranty.
13. Over chlorinating or adding too much bromine can also cause your spa surface to discolor, surface to get rough, crack, or even discoloring your jets. This will also cause your warranty to be voided.
14. Now that you have added water, checked that pumps are working properly, and the jets are aerating and water is flowing through them, set your thermostat to the desired setting. Add the right amount of chemicals to the water, cover your spa with its spa cover and lock it down. Depending on the chemicals you have added, if the manual for the chemicals says to keep the cover off for an hour or two, do so. This will vent out any fumes the chemicals in the water give off.
15. Always keep your spa cover on the spa. Leaving the cover off, exposing the spa to the sun or the elements for extended periods, can damage the spa. Any damage caused due to the cover not being on the spa will void the warranty.
16. Let water get warm and enjoy your new Diamante Spas spa. Never use a spa before you have added the spa chemicals to the water. Read the spa's chemical manual regarding when it is safe to enter a spa after the chemicals have been added. Remember to always check the water temperature before entering the spa.

G. MAINTENANCE FOR YOUR SPA

****THE SPA SKIRT****

- You must seal the wood skirt surrounding your spa.
- Seal the wood in the first 5 days after you have received the spa, to prevent the wood from being damaged by the weather, the sun, and the chemicals in the water.
- Depending on where you live, you may need to seal your wood 3 to 4 times a year.
- The factory recommends using stains and sealers available at your Diamante Spas dealer.
- Remove any sprinkler heads that aim the water spray at the spa skirt.
- It is your responsibility the spa owner to always maintain the spa skirt clean, stained, and sealed.

****THE SPA'S WATER****

- Remember to always read your chemical kit's instructions before adding any chemicals to the spa water.
- Always use brand name spa chemicals (Leisure Time Chemicals, Baquacil, GLB, Quantum Biochemical, Applied Biochemists, and Sea-Klear just to mention a few).
- Never use spa chemicals if you do not know how to use them.
- Never buy spa chemicals at a yard or garage sale or from any person who does not know how to use the spa chemicals. Never buy spa chemicals at super market, hardware store, or a discount outlet.
- Always buy spa chemicals at a pool and spa supply store or at your dealer who knows how to use the spa chemicals.
- Never add too much of any chemical or not enough of a chemical to the water or risk damage to the spa's surface, the plumbing system, the pumps, or the heater.
- Remember to always keep your water pH balance at an ideal point. Ideal point being 7.4 to 7.6 points in a 0.0 to 14.0 scale.
- Also, remember to always maintain a safe and ideal level of either chlorine or bromine in the spa's water and check with your spa chemical owner's manual for instructions.
- The spa must filter or cycle the water for at least 6 to 8 hours a day. Filter the spa's water longer with heavier use. Program the control head accordingly.
- Failure to keep the spa's water clean, balanced, and filtered may result in clogged jets, calcification to the spa's surface, which may result in discoloration, texture to become rough, and to crack, heater to calcify and stop heating, filter to get clogged more often, and pumps to leak or crack around the unions and seals.
- It is your responsibility, the spa owner, to always maintain clean, balanced, and safe water.

****SPA SURFACE****

- Always keep your spa cover on the spa to avoid the spa's surface from being discolored, cracked, sungrazed, spider-like cracks, or gloss to fade on the smooth glossy acrylic finish.

- In addition, every time you drain the old water and before you add new water to the spa you must wax the spa's surface. There is a wax specially made for spa surfaces available at your Diamante Spas dealer or in certain chemical kits. If the spa wax is not included in your spa chemical kit, ask your dealer for one. This spa wax will keep the surface looking new and protects the surface from the contaminants in the water and the elements. Just follow the directions on the bottle.
- To clean the spa surface, all you need is a soft cotton towel (a chamois) or moist cellulose sponge with clean water. For daily or weekly cleaning just rub lightly with a soft cotton towel (a chamois) or a moist cellulose sponge over the dirty surface with just clean water.
- Softly rub the spa in a circular motion. Do not rub in one place to long. Keep moving the towel or sponge as if you were applying wax on your vehicle. Be sure to remove all the dirt from the spa before you begin adding new water to the spa.
- Never use harsh abrasives, cleaning solvents, acetone, or alcohol to clean the spa. This can fade, discolor, or even crack the surface, voiding the warranty.
- It is your responsibility, the spa owner, to always keep the spa's surface clean and waxed.

****SPA EQUIPMENT AND PUMPS****

- The spa equipment and the pumps do not need any regular maintenance. The equipment and the pumps are maintenance free. However, if you notice the equipment or the pumps not working, call your Diamante Spas dealer to check the problem.
- The same goes for the supercharger (if your spa is equipped with one).
- If you have any questions about the equipment refer to the Owner's manual for the equipment manufacturer.

****JETS****

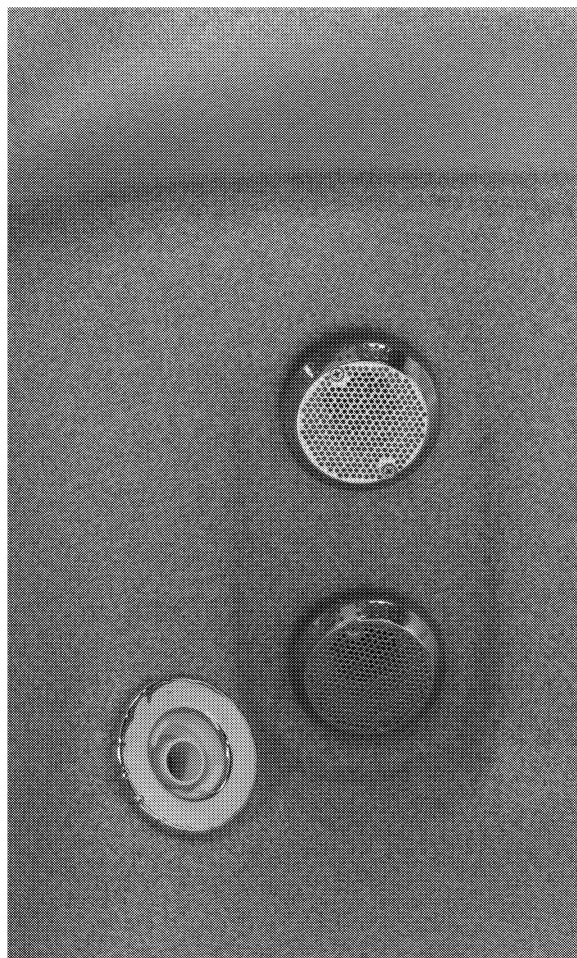
- Once a month check all your jets to see if they are working properly. The jets that are adjustable, turn the face left and right making sure they are free from any obstructions. If your jets are not adjustable, do not try to turn them. See photo #2.
- If the spa you own has jets that spin, the easiest way to check if they are working properly is as follows. If a jet is spinning then it is fine. However, if the jet is not spinning then you need to take the jet out of its jet housing and check for any obstruction in the race of the bearings. Sometimes calcification or too much of a chemical or not enough of a chemical can swell the race or wear it out faster. So, keep a sharp eye on the water balance. Try to clean out any build up or obstructions to free up the bearings. NOTE: build up of any kind is not covered by your warranty. Only if the jet is defective is when it will be replaced free of charge if under warranty.
- It is your responsibility the spa owner to always to maintain clean, balanced, and safe water.

****SUCTIONS****

- Before any spa activity, check for any obstructions caught in front of the suctions. See photo #3.
- If you find there is an obstruction caught in the suction, make sure to turn the power off.
- With the power off you can get into your spa to remove any obstructions from the front of the suctions.



(Photo # 2)



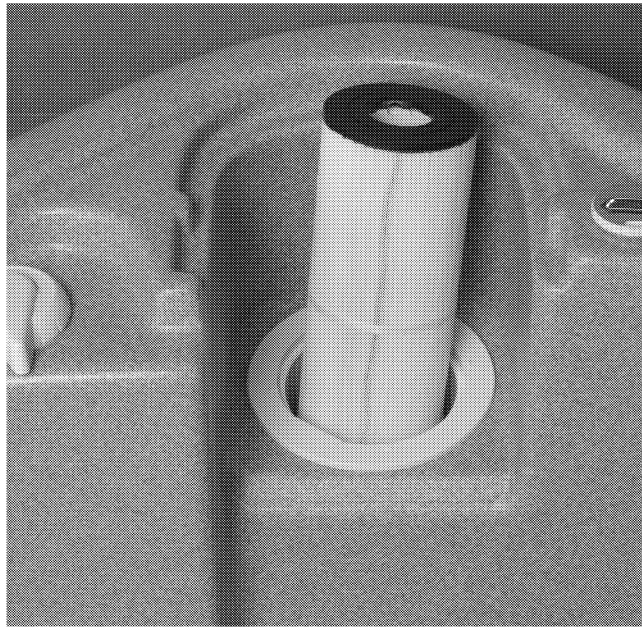
(Photo # 3)

- With the suctions all clear, the power can be turned back on. **Be careful - Risk of Shock:** if you have just exited the spa you are probably soaking wet, try to have someone else turn the power back on. If no one is around to help you, dry off the water before touching any electrical equipment.
- Remember, just like in the section of Risk of Hair or Body Entrapment never use your spa if a suction fitting is broken or missing. Visit your Diamante Spas dealer for a replacement fitting.
- It is your responsibility, the spa owner, to check and report any problems to your dealer.

****CHECKING YOUR FILTER ELEMENT****

- You should check your filter element once a week. If your filter element looks clean there is no reason to clean it. However, if your filter element is beginning to get dirty you will need to clean it.
- Go to your Diamante Spas dealer for a new filter element or recommendations on a good method of cleaning your filter element.
- To replace your filter element follow the steps listed next:
- Turn off the power to your spa. You may have to re-adjust your timer to the correct time when you turn our power back on.
- With the power off, you can remove the filter floating weir and strainer basket by giving the assembly a ¼ turn counterclockwise. You than lift the assembly off.. NOTE: Hot water tends to swell the assembly, so do not worry if it is a bit difficult to get off.

- Once you have removed the floating weir and the strainer basket, you can now see and remove the filter element. Lift the filter element out and clear of the spa, so you do not accidentally drop dirt from the filter element into your clean water. Inspect your filter element for any ripped or cracked areas and to see if the filter element is clean enough to put back in the spa. If the filter element is ripped or cracked go to your Diamante Spas dealer to purchase a new one.



(Photo # 6)

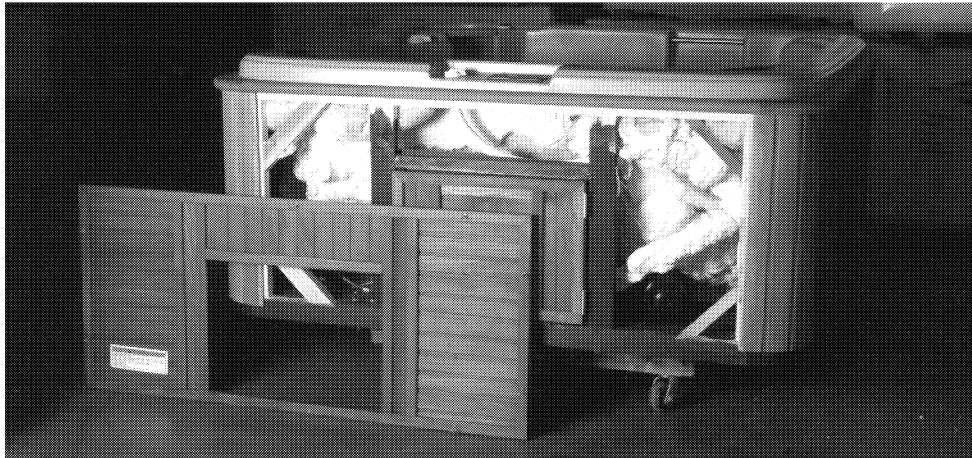
- If the filter element needs to be cleaned, use the cleaning solution you can purchase at your Diamante Spas dealer and follow the directions.
- After, the filter element has been inspected and cleaned place the filter element in its canister.
- Now, place the floating weir and the strainer basket on the canister and turn the assembly $\frac{1}{4}$ turn clockwise to lock it in place.
- It is now time to turn your power on. Turn on the main pump (Jets Therapy 1) to see that water is being pulled through the filter. If it looks O.K., you are now finished checking your filter element.
- It is your responsibility, the spa owner, to always check the filter and maintain clean, balanced, and safe water.

****SPA COVER****

- Your spa cover is very durable and will rarely require cleaning. However, when it does get soiled you will need to clean it. Use a soft bristle brush with clean water and a small amount of non-abrasive dish detergent or baking soda. Make sure to thoroughly rinse off all the soap and then put the cover back on the spa and let it dry on the spa.

****SPA LIGHT****

- To replace your spa light bulb you need to first turn your power off.
- Then remove the front panel by unscrewing the 10 screws and removing the panel. Place the panel on a dry flat surface so it does not warp.



- Follow the thin black and white wires to the light housing and turn the light bulb holder ½ to one full turn counterclockwise to release the holder.
- Pull the bulb out with a towel or clean rag. Be careful the bulb may be hot. Also, don't touch the new bulb with your fingers, try to use a towel or clean rag to replace the bulb. You can find the new bulb at your Diamante Spas dealer.
- Now put the light bulb holder on the light housing and give it a ½ to one turn clockwise until it is snugly in place.
- Turn the power on and test the light to make sure that it is working properly.
- Put the panel back on the spa frame and replace all the screws. Be careful not to over tighten the screws and risk breaking a screw or the panel.
- Do not forget to turn the light off before you go inside your house.

H. TROUBLESHOOTING

SYMPTOMS

1. No equipment operates:

CORRECTIVE ACTIONS

- *Check to see if the spa wires have not come loose.
- *Check that the breaker has not been turned off.
- *Check if the GFCI has not tripped. Push the RESET button to repower the spa.
- *Check the HIGH HEAT LIMIT reset button (red button).
- *Check that the disconnect box has not been shut off.

- | | |
|---------------------------|--|
| 2. Pump does not work: | <ul style="list-style-type: none"> *Check all items on No equipment operates. *Make sure that there are no blockages in front of the suctions. *Check if the pump cord has not come loose. *Check if the gate valves have been shut. *Check if the filter element has been clogged. *Check if the air lines from the buttons to the control head have not come loose (or the plug of wires for the electronic control head). |
| 3. Inadequate jet action: | <ul style="list-style-type: none"> *Check items on above two sections. *Check that the air controls are open to MAX. *Check that the correct pump for the jets in question is on. *Make sure that the jets are all open. |
| 4. No heat: | <ul style="list-style-type: none"> *Check items on first two sections. *Make sure the thermostat dial is on the WARM end. *Make sure that spa needs the heater to be on. *Check that the water level is not too low, causing no water flow through the heater. |
| 5. No light: | <ul style="list-style-type: none"> *Press the light button to turn on the light. *Make sure the light bulb is not burned out. *Make sure power is turned on to the spa's control head. |
| 6. Pump surging: | <ul style="list-style-type: none"> *Check for blockages or restrictions in the suctions or filter. *Make sure filter is clean or not damaged. *Check items on sections 1 and 2. *Check that the water level is not too low. |
| 7. Water is cloudy: | <ul style="list-style-type: none"> *Check your chemistry balance; pH, chlorine, bromine, acidity, alkalinity or calcium levels. *Check filter to see if it needs to be cleaned or replaced. *Make sure the spa is circulating a minimum of 4 hours per day (depending use you may need to filter the water more often) to ensure properly filtered water. |

I. HOW YOUR SPA WORKS

****HOW YOUR PUMPS WORK****

If you have purchased a spa with an air switch control head (or pack), then you have round air buttons on the control panel. On the main pump (Jets Therapy 1) when you press the button you will activate the high speed on your main pump (Jets Therapy 1). When you press the button again, the pump will turn off. However, if you had the main pump (Jets Therapy 1) running on low speed to either filter and/or heat your spa. Then after you have pressed the button for the main pump (Jets Therapy 1) to turn off the high speed, the pump will go back to low speed and continue filtering and or heating your spa. The booster pump (Jets

Therapy 2) is just a one speed pump. Press the button for the booster pump (Jets Therapy 2) and the pump will activate on high speed only. Press the same button again and the pump will turn off. To make the main pump (Jets Therapy 1) turn on low speed you will need to either activate the thermostat to higher temperature or the Time clock.



If you have upgraded your spa equipment to an electronic control head (or pack), then only one pump will work somewhat different. The main pump (Jets 1) will still work the same. However, the booster pump (Jets 2) has one more feature. The booster pump (Jets 2) now has two speeds. Press the icon button for the booster pump (Jets 2) and high speed will turn on. Press the same button a second time and the pump will go to low speed. Press the button for third time and the pump will turn off. **NOTE, NEVER UNDER ANY CIRCUMSTANCES TURN A PUMP OR PUMPS ON AND LEAVE IT ON IF YOU ARE NOT PLANNING TO USE THE SPA.** If you leave a pump running and forget to turn it off, the pump will add heat to the water that the High Limit switch may not register. A pump running for 1 hour will create 1 to 1 ½ degrees of friction heat to the water. This can result in a possible scalding. Remember to always check the water temperature before entering the spa.

****HOW YOUR SUPERCHARGER WORKS****

If your spa is equipped with a Supercharger system then you will see a big difference in the performance of your spa. The Supercharger is a high-pressure air pump that pushes air into your jets. The air being pushed to your jets is mixed with the water and gives you a broader, more invigorating massage. You see the difference and can feel the difference when you turn your Supercharger on or off.

Press the air button for the Supercharger (if you have an air switch pack) and it will turn on. Press the same button again and the Supercharger will turn off. If you upgraded your spa equipment to an electronic control head, the Supercharger is now a two speed (only on certain electronic models) Supercharger. Press the icon button for the Supercharger and the Supercharger will activate on high speed. Press the same icon button and the Supercharger will go to low speed. Press the button for a third time and the Supercharger will turn off.

****HOW YOUR THERMOSTAT AND HEATER WORK****

The way your spa water gets hot is the same way your house does. When you want your house to get hotter or warmer in the winter, you turn up the thermostat. When your house is at a set temperature the furnace turns off. Your spa is the same way. When you want your spa water to get hotter, just turn up the thermostat and the main pump (Jets Therapy 1) will turn on low speed. The heater has a delay built in, so the heater will turn on a few seconds after the main pump (Jets Therapy 1). Remember, the heater will only turn on if the water temperature is below 104 degrees F (40 degrees C). When the water temperature has reached the set temperature the heater and the main pump (Jets Therapy 1) will turn off.

****HOW YOUR SPA LIGHT WORKS****

The spa light is very simple to operate. On the air switch control head, push the button that says Illumination. This button will turn on and off the light. Press the button once light turns on, press the button again the light turns off. If you upgraded to an electronic control head, the functions are the same. Just press the button for the light and it will work the same way, as the air switch control head.

****HOW YOUR SPA WATER DRAIN SPIGOT WORKS****

To drain the water from your spa use the drain spigot. Open the door and you will see a yellow spigot on either the left or the right side of the control head. Remove the white cap and attach your garden hose to it. Turn the black valve to open and begin to drain the water. **NOTE: when you drain your spa make sure that the power to the spa is turned off.** The spa will usually take about two to 4 hours to drain the water. **NOTE:** do not drain spa water on grass, trees, or plants. The chemical contents in the water will harm or even kill the grass, trees, or plants. Once, the spa water has been drained. Close the spigot valve, remove the garden hose, replace the white cap, and close the door. Refer back to section F, “ Starting Up Your Spa”. Turn on the power, reapply the chemicals needed, set your thermostat and/or time clock, and get ready to enjoy the spa once more.



****HOW YOUR TIME CLOCK WORKS****

When the power has been turned on, you need to set your time clock on air switched control heads. Set the time on the time clock to the same time on your house clock. Then push in the individual tabs to set the filtration cycle to the desired filtration cycles. Each tab represents 15 minutes. If you want the filtration cycle to be on for two hours then you need to push in eight tabs. That is all it takes to set your time clock. If you have purchased an electronic control head, refer to the Equipment owner's manual to reset the time clock.

****HOW YOUR LARGE WATER DIVERTER VALVE WORKS****

The large water diverter valve diverts the water to either the whirlpool jet or a bank of jets. The handle on the diverter valve turns only 180 degrees of half a circle. All spas are different on the actual position of the diverter valve and are different on the function and position of the handle. Turn the handle all the way to your left while standing directly behind it. Do not force it, it should turn easily. See what jet or jets are working and make a note of it. Turn the handle all the way to your right while standing directly behind it and see what jet or jets are now working. This is the simplest way to explain the function of the large water diverter. **NOTE:** If your spa is equipped with an ozonator it will function more efficiently if, when you are finished using your spa, turn the handle so that the whirlpool jet is on. The ozone jet will draw more air through the ozonator when the whirlpool jet is on. Doing this will help keep your spa water cleaner.

****HOW YOUR OZONATOR WORKS****

If your spa is equipped with an ozonator, this paragraph will help you understand how it works. The ozonator is a unit in which it uses an ultraviolet lamp to add an extra oxygen atom to the oxygen molecule. Instead of O₂, which is in the normal oxygen molecule, the ozonator makes it into O₃, which is ozone. The molecule ozone is actually an oxidizer that can kill bacteria in the spa's water, and will help reduce the use of chemicals. Do not be mistaken, you still need to use your spa chemicals to keep your spa water clean and balanced. The ozonator will help you use less chemicals but will not totally get rid of your spa chemicals.

IF YOU HAVE ANY QUESTIONS VISIT OR CALL YOUR DEALER FOR ASSISTANCE ON ANY CONCERNS WITH YOUR SPA. ALL THE INSTRUCTIONS IN THE MANUAL ARE SUMMARIZED OVERVIEWS FOR THE SPAS. SOMETIMES YOU MAY NEED TO GET ASSISTANCE FROM YOUR DEALER TO FURTHER UNDERSTAND THIS MANUAL OR FOR ASSISTANCE ON THE SPA.