



## WATERFALL SPAS INSTALLATION MANUAL



The following pages contain specific instructions and illustration of the Fox WaterFall™ Spas.

## Table of Contents

Table of Contents .....	Page 1
Locating the shell placement .....	Page 2
Installing the spa shell .....	Page 2-4
Deck Support Kit .....	Page 4-5
Plumbing the system .....	Page 6-10
Cleaning the filter .....	Page 11-12
Serial number location .....	Page 12
Draining and filling the spa .....	Page 12
Winterizing the spa .....	Page 13

## LOCATING THE SHELL PLACEMENT

The "New" 08'-09' Waterfall™ spa shells have the spillover spout manufactured into the shell mold. Both the round and square shells measure 84" across and 34" high. With this new shell configuration, there is no need for special pool panels or a special liner. If you intend to install these shells near the pool wall, we suggest that the spas be centered behind any eight foot panel on the pool wall. This placement of the shell will allow for the installation of the "wall angle supports". These wall supports are supplied with the waterfall spa kit and should be placed between the pool wall and the spa shell. The wall angle supports should be attached to the center bolt hole on the panel between the spa shell and the pool wall and secured to the ground with a re-rod stake through the oval slot in the bottom of the brace prior to pouring the footer.

The excavation of the pit will vary depending on your installation. The key to a proper installation is to support the spa's weight by the footwell only.

When installing the spa shell next to the pool wall the underside of the spillway will be positioned to sit on top of the Foxite II® coping at deck level. The center of the spillway should not extend more that 2" into the pool. The top of the shell will finish approximately 7" above the finished deck.

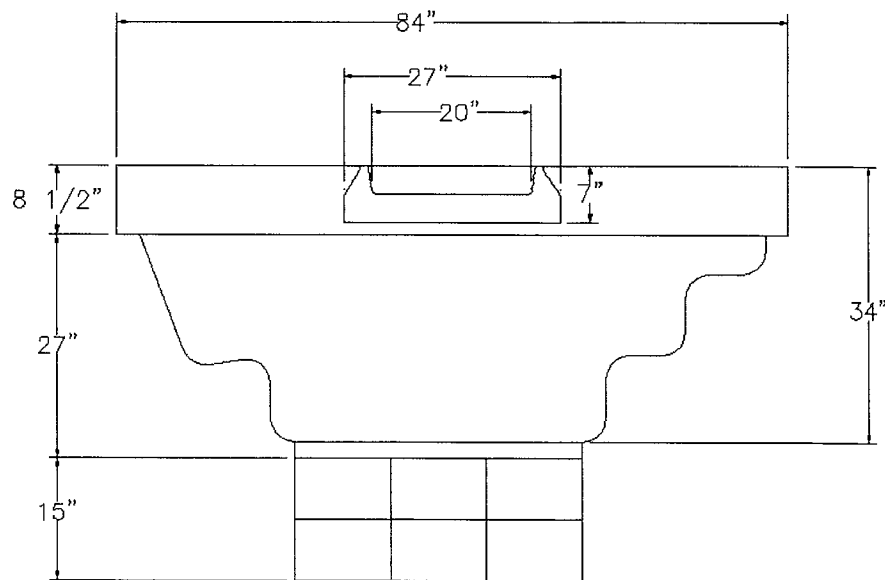


Figure 1

## Spillway Extension

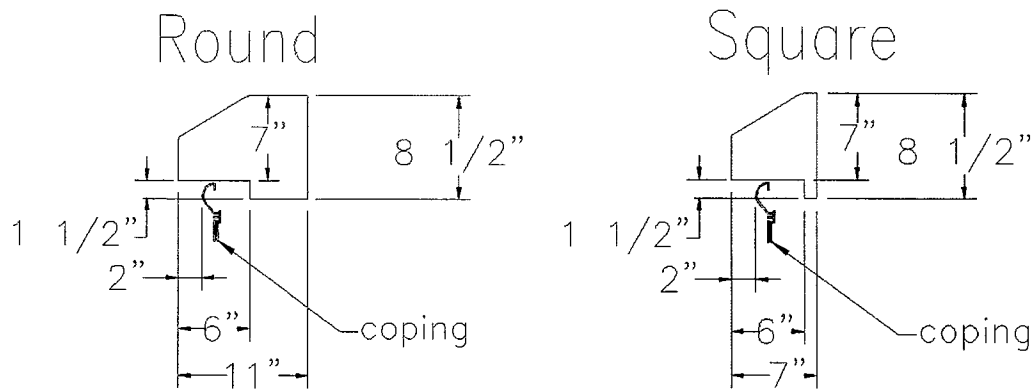


Figure #2

## INSTALLING THE SHELL

1. Vertically dig the spa pit straight down to the depth of the shallow end shelf. A double stack of 16" cinder blocks should be used as a base platform to support the foot well of the spa shell. (See Figure # 1) All these dimensions should be slightly oversized to allow for ease of fit. Once the pit is dug, dig the plumbing trenches into the pit area.
2. With a transit, recheck the elevation to be certain you have the proper depth to set the shell correctly. Once this is determined, you can prepare the foundation for the shell. In addition to the cinder blocks, a 2" layer of cement or bottom mix should be placed on top of the blocks to support the foot well of the shell and assist in leveling the spa.. DO NOT SUPPORT THE WEIGHT OF THE SPA WITH THE SPA LIP. ALL OF THE SPA WEIGHT SHOULD BE SUPPORTED BY THE FOOTWELL ONLY!

After building your foundation you are ready to place the spa in the pit. Use plenty of help to place the shell. DO NOT LIFT THE SHELL BY THE PLUMBING! Place the shell on the bottom foundation bed. Check the elevation to determine if it is at the proper level. Once the elevation is good, level it with a straightedge and a level. Check the level in all directions and adjust as necessary. DO NOT STAND IN THE SHELL! When you are satisfied that the spa shell is level and at the proper elevation, place the four deck supports around the spa as shown in figure's #3 & #4. Pour a concrete footer around the base of the footwell to secure its position.

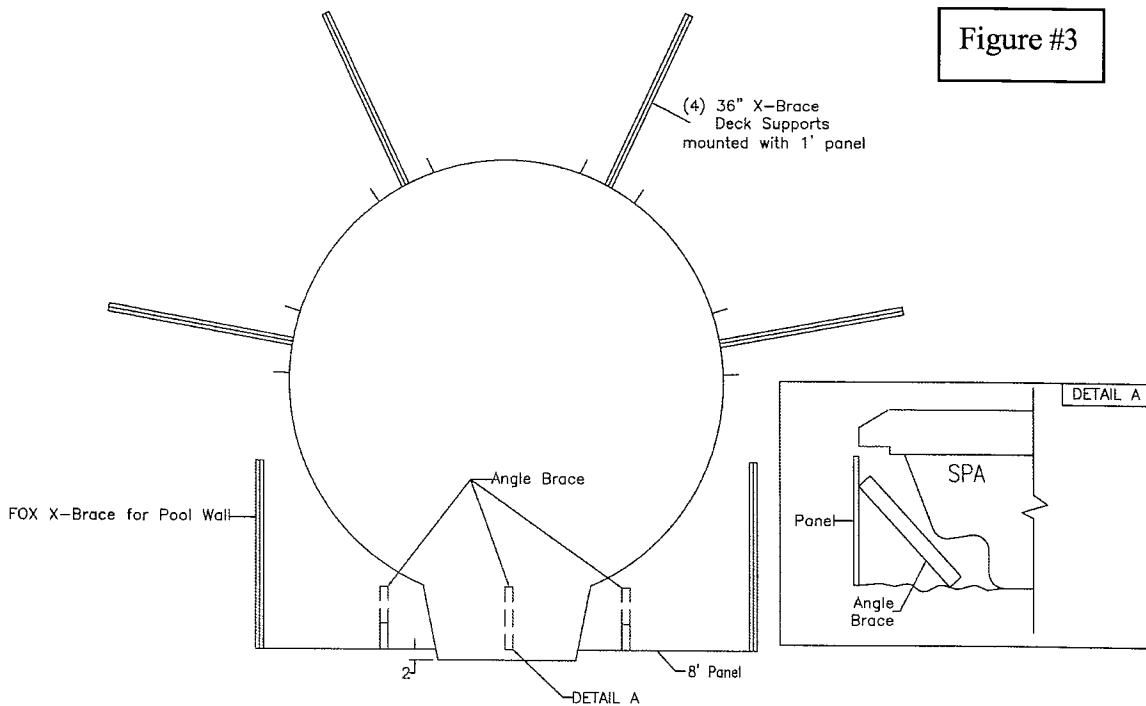
3. You can now start preparing to connect the plumbing. Each 2" pipe attached to the pre-plumbed spa are identified for their purpose. The spa suction and spa return lines will connect to the main pool filtration manifolds. If you have a spa with a booster pump (25-Jet), you will find two additional pipes marked; booster suction and booster return.

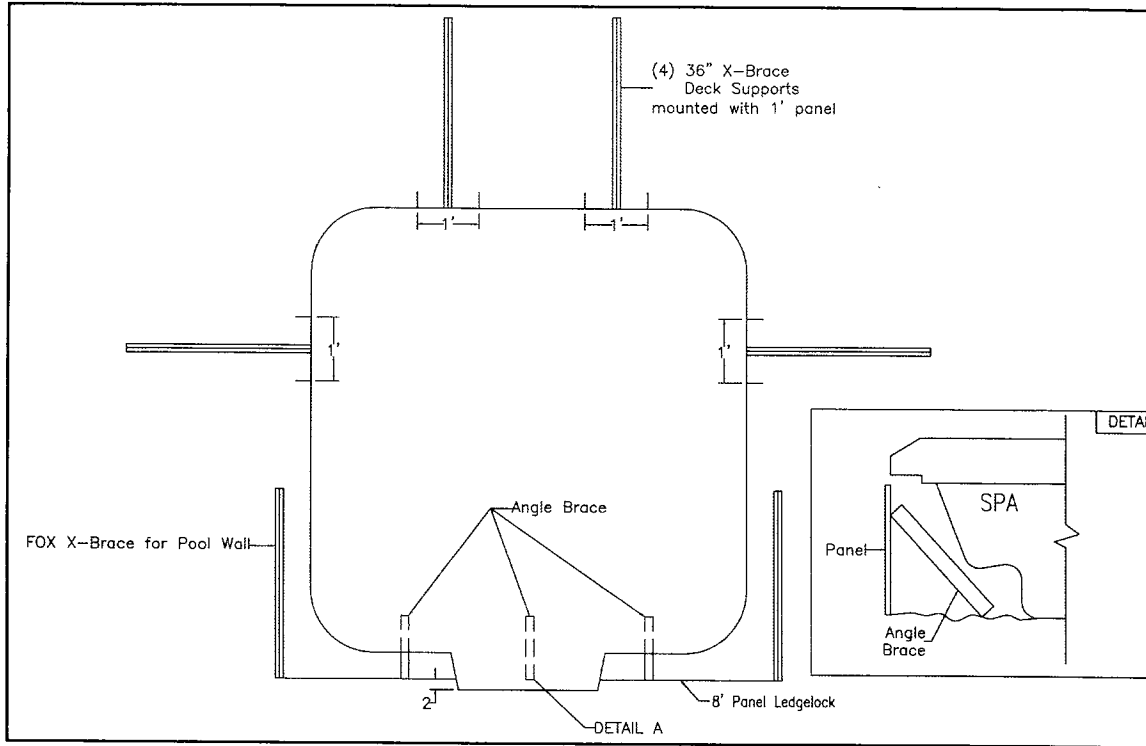
4. As each line is installed and placed in the trench to the support pad, mark it at the pad to identify its function for proper manifold hook-ups at the filter pad. (See Plumbing the Spa instructions on page #6)
5. With the spa shell in place and the pool and spa backfilled, the next step is to make preparation for the deck area around the spa.
6. Proper placement of the concrete at the spa lip is vital. In working the concrete elevation, make certain that the concrete goes under the lip of the spa. Prior to pouring concrete, cover the spa to protect it from overspill and splashing.

### DECK SUPPORT KIT

All of the Waterfall spa packages are supplied with an X-brace® deck support kit. These kits consist of (4) special one foot panels (radius/round spa and straight/square spa) and (4) standard 36" X-braces®.

The panels are placed around the perimeter of the shell as shown but they “do not support the spa shell”. These deck support panels should not be positioned until after the spa is level and resting on its footwell.





To assemble the supports, attach the X-brace® to the “Z” stiffener on the center of the panel with the standard panel nuts and bolts. To place the panels in position, just tilt the top of the panel toward and under the spa lip so that the edge of the shell is positioned between the brackets as shown. After the deck supports are in position the footer can be poured. Figure #5



Figure # 5

## **PLUMBING THE SYSTEM**

### **Connecting the Plumbing Lines**

Note: The Waterfall Spa comes pre-plumbed from the factory. That means all suction, air and water line connections have been made and tested before the foam installation was applied.

#### **12 JET ONE PUMP HOOK-UP**

1. This spa has two 2" PVC pipes with couplings attached, protruding from the foam insulation. These pipes should be identified at the end coupling with blue & white stickers. One line is marked "SPA RETURN" the other is identified as "SPA SUCTION".
2. The 2" suction line should be connected to a (3) three way Fox Smart Valve directly in front of the "Pool" pump strainer basket. Refer to "Plumbing the Pad" for additional information as shown in figure #7 & #8.
3. The 2" return line should be connected to a (3) three way Fox Smart Valve directly after the pool heater. Be sure to install the 2" check valve on the return line to the spa. Refer to "Plumbing the Pad" for additional information as shown in figure #9.

#### **25 JET TWO PUMP HOOK-UP**

This spa has four 2" PVC pipes with couplings attached, protruding from the foam insulation. These pipes should be identified at the end coupling with blue & white stickers. These lines are marked "SPA RETURN", "SPA SUCTION", "BOOSTER SUCTION" AND "BOOSTER RETURN". (See figure #6)

1. The 2" SPA SUCTION line which is attached to the two bottom suction fittings should be connected to a (3) three way Fox Smart Valve directly in front of the "Pool" pump strainer basket. Refer to "Plumbing the Pad" for additional information as shown in figure #7 & #8.
2. The 2" SPA RETURN line which feeds the jets to the right side of the stairway should be connected to a (3) three way Fox Smart Valve directly after the pool heater. Be sure to install the 2" check valve on the return line to the spa. Refer to "Plumbing the Pad" for additional information as shown in figure #9.

3. The 2" BOOSTER SUCTION line, which is connected to the spas cartridge filter, should be connected to the suction side of the booster pump. The 2" BOOSTER RETURN line which feeds the left side diverter valve should connect to the discharge side of the booster pump. Refer to "Plumbing the Pad" for additional information as shown in figure #10.

*Plumbing the spa in this fashion will allow water filtration for both pumps.*

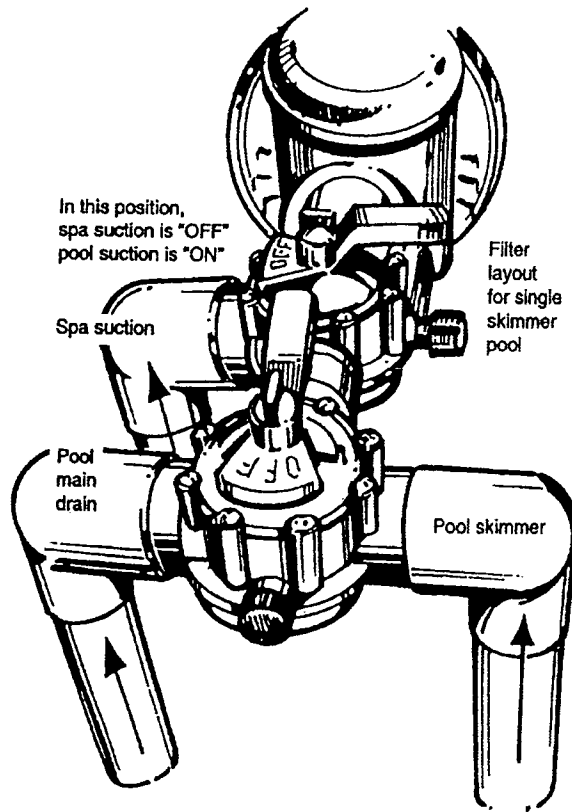


Figure # 6



## PLUMBING THE PAD

The following are a series of suggested plumbing diagrams for installing a single filter system that operates both the pool and the spa. These plumbing layouts will allow for automation of the valves when using electronic control systems.



This plumbing illustration is an example of a one skimmer and main drain pool set-up with the spa suction valve in front of the pump. In this position the spa suction is closed and the pool is operational

Figure #7

Plumbing the system (continued)

The illustration below is set-up for a two skimmer pool with main drain and spa suction. In this position the spa suction is open and the pool suction manifold is closed off.

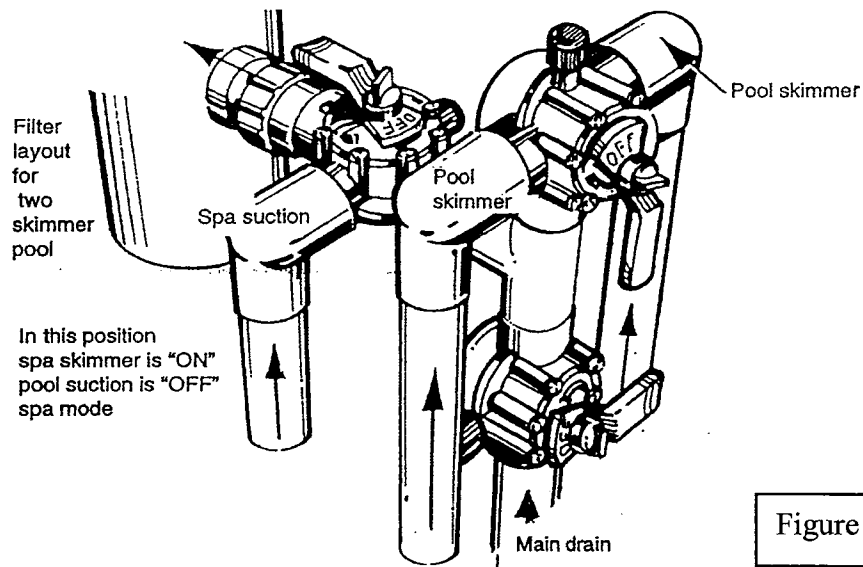


Figure #8

The next illustration (figure # 9), shows the filtered return water coming from the heater and going to the return manifold. In this position the pool return water is closed and the spa is ready for action. *Because the Waterfall spa shell is higher than the pool, a check valve must be installed on the spa return side of the valve to prevent spa water from back feeding into the pool when the system is shut off. This check valve is supplied with your kit.*

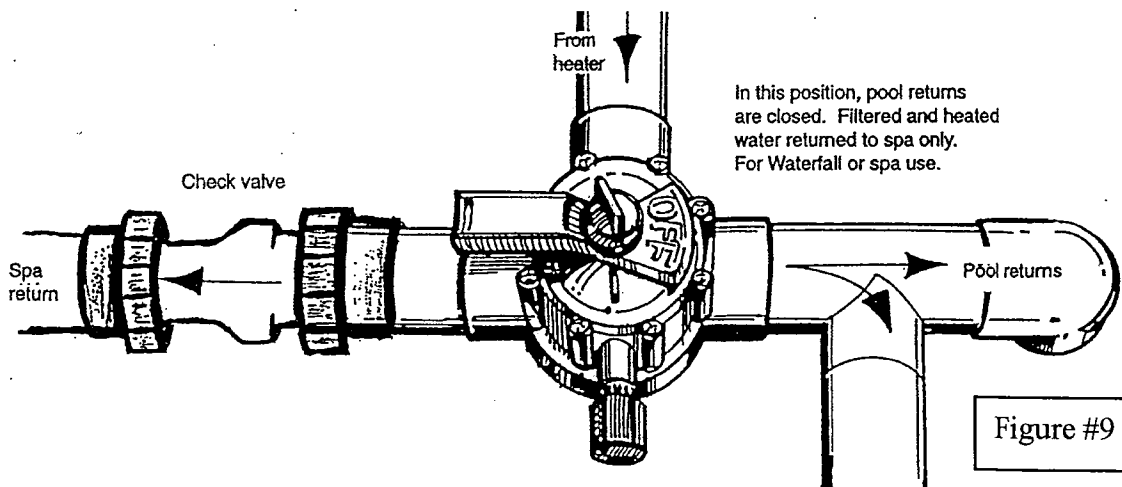


Figure #9

## 25 Jet Booster Pump

The 25 jet Waterfall Spa Kit includes a (F3-134) 2 Speed Booster pump.

1. Install two 2" MPT X S unions into the inlet and outlet ports of this pump using your standard thread sealant.
2. Install a two-way valve into each union to allow water shut off when servicing the pump.
3. Connect the spa plumbing line marked booster suction into the suction side of the pump.
4. Connect the spa plumbing line marked booster return to the outlet side of the pump. (see figure #10)

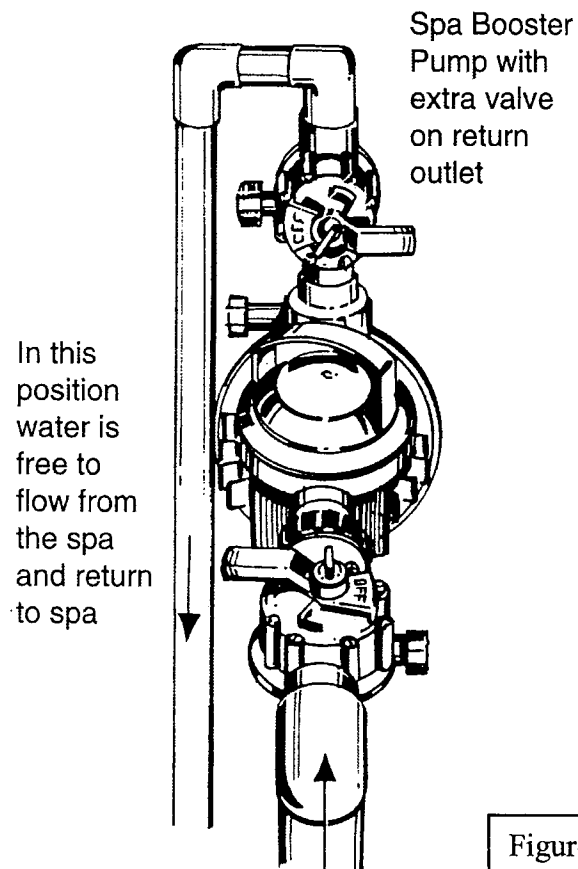


Figure #10

## CLEANING THE FILTER

### **Removing the Cartridge**

The Waterfall Spa comes with a pre-installed 50 sq. ft. Anti Vortex cartridge filter system to maintain water clarity. Before removing the cartridge, turn off the spa pumps. Lift the Anti Vortex cover lid from the chamber crown and the basket below. Lift the cartridge from the canister for cleaning.

### **Cleaning the Cartridge Filter**

After the cartridge is removed from canister, hold the cartridge in an upright position and spray downward into the pleats of the fabric with a garden hose to flush away debris. Cleaning will be easier if the garden hose can be adjusted to a single jet spray. This procedure should be done at once a week. Once a month, the cartridge should be soaked in a cartridge cleaner solution.

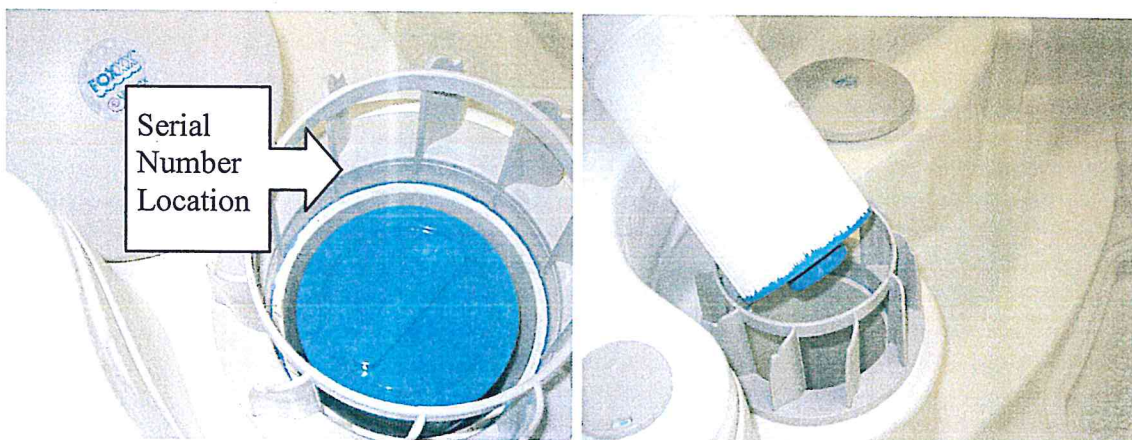


Figure #11      Figure #12

After hosing off the cartridge, it is highly recommended that the cartridge be allowed to soak in a filter-cleaning solution which is available through your local dealer. Soak the cartridge for 24 hours to remove body oils and body lotions that become impregnated in the cartridge fabric during filtration. After soaking, rinse the cartridge again before placing it back into operation.

### SERIAL NUMBER LOCATION

On your spa, the serial number is located on the inside ring of the filter canister just above of the cartridge filter. Please locate the serial number and document it for future reference. See figure #11 for serial number location.

SPA SERIAL NUMBER: SP-\_\_\_\_\_

## DRAINING AND FILLING THE SPA

**WARNING:** Do not drain the spa during a ground water saturation condition. Do not leave the spa shell empty for long periods of time. Both of these situations can cause underground water pressure to lift the shell out of position and may void the warranty.

### WINTERIZING THE SHELL

If you choose to winterize or shut down your spa for a long period of time, be sure to follow these instructions.

*“Do Not” drain the spa shell under extreme wet conditions. If underground water may be present due to ground water saturation, the shell could shift or lift from its position and may void the warranty.*

1. To winterize the shell first the spa must be drained. Remove all the jets from there sockets by turning the adjustable face ring counterclockwise until you feel it pop. Disconnect the plumbing lines from the pump and using a shop- vac or compressor, remove the water from all the plumbing lines.
2. Plug the jet sockets using the rubber expansion plugs supplied with the spa kit. For added protection, RV antifreeze can be added to the plumbing lines as well as the shell itself.
3. The suction fittings in the foot well should be blown dry. After the lines are cleared, close the valves at the pad to lock out the water from returning into the pipes.
4. After the lines are emptied and the jets are plugged the shell must be refilled with water to weight the shell down. You may want to consider lining the shell with vinyl or heavy plastic to protect the shell and keep it clean from stagnate residue.