



Where Luxury Is Affordable

2013 Service Manual



After-sale Service Manual

Version: US II

Oriental Recreational Products (Shanghai) Co., Ltd.

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Chapter 1 After-Sale Service Center Operation and Warranty Policy

1.1 After-sale Service Center Set Up

ORPC authorizes after-sale service center in each specified country, region or territory. ORPC requests its service center have necessary staff, equipments and facilities to ensure effective, professional and cost-saving warranty services provided to MSpa customers. The service center must be eligible for the following requirements:

- 1.1.1 Have a service telephone or hotline number for customers to call for warranty services or product related inquiries. The service number must keep in service during work days and normal business hours.
- 1.1.2 The service center must have dedicated staff - customer service representatives or technical personal to answer phone calls, product inquiries or any other warranty related questions.
- 1.1.3 Provide a proper sized warehouse to store MSpa spare parts and returned defective parts from customers.
- 1.1.4 Have a workshop to test and repair defective spas that defect problem cannot be solved by telephone service. Repair service must be under valid warranty period.
- 1.1.5 Have necessary equipments or tools for service engineer to carry out the warranty services efficiently.
- 1.1.6 Set up service procedures to guide and monitor service staffs' daily service activities, include answering customers' phone calls, providing the service, recording service details, and filling in the service report.

1.2 Obligations of the After-sale Service Center

As an ORPC authorized after-sale service center, it is responsible of taking care of all after-sale service related jobs for MSpa customers in the specific territory at its own cost:

- 1.2.1 Listen and answer customers' phone calls, inquiries, or warranty claims in a timely, polite and professional way
- 1.2.2 Verify warranty claims; decide if it's valid or invalid according to the warranty policy by ORPC.
- 1.2.3 Provide technical services by phone to solve simple warranty issues that are not required of returning product for testing and repair.
- 1.2.4 Test and repair the returned warranty spa products and ship back or return the repaired units.
- 1.2.5 Deliver replacement spare parts to customer if the spa is under warranty, and if customers are willing and capable of repairing the spa by themselves.
- 1.2.6 Record and summary service details by filling in the service report. ORPC requires after service center to submit the summary reports regularly for technical analysis and warranty re-verification purposes. The service report should include the following:
 - Model Number
 - Serial Number
 - Customer Name & Contact Information
 - Purchase Date
 - Claim Date
 - Defect Description

- Defective Part Name
- Repaired or Replaced Part Name and Quantity
- Warranty Service Period
- Photocopy of Customers' Purchase Invoice
- Photo of Defective Spa/Part etc.

1.2.7 For any serious quality problems or special warranty issues, the after-service center MUST report to ORPC for approval or confirmation.

1.2.8 Manage spare parts inventory effectively, do stock checking regularly and submit the stock inventory list to ORPC quarterly.

1.3 ORPC Warranty Policy

ORPC provides warranty for MSpa bubble spa products against defects in materials or workmanship under proper usage and maintenance.

1.3.1 Warranty for Distributors/Importers

MSpa distributors and importers are entitled to manufacturer's warranty from the date of arrival at destination port. ORPC/MSpa is only responsible for providing parts, but not services or any labor costs.

Warranty Items: **Inflatable Spas**

Warranty Period:

- Nine(9) months (including three(3) months of storage period) for the spa pool
- Fifteen(15) months (including three(3) months of storage period) for the electric part
- Six(6) months (including three(3) months of storage period) for other spa components like inflatable bladder, spa cover, and other non-electric part

Warranty Items: **Rigid Wall Spas**

Warranty Period:

- Fifteen(15) months (including three(3) months storage period) for the pool liner
- Fifteen(15) months (including three(3) months storage period) for the electric part
- Twenty-seven(27) months (including three(3) months storage period) for the rigid wall frame

Warranty Starting Date: MSpa distributor/importer warranty starts from the arrival date at import port.

1.3.2 Warranty for Consumers

Consumer is entitled to standard consumer warranty from the date of purchase. During the standard consumer warranty, ORPC/MSpa will only provide parts to carry out the warranty repair. The distributor/importer is responsible for all the other costs, including but not limited to labor cost, shipping, and other service related cost. Under all circumstances, it is the importer/distributor's responsibilities to honor the consumer warranty.

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Warranty Items: Inflatable Spas

Standard Consumer Warranty Period:

- Six(6) months for the spa pool
- Twelve(12) months for the electric part

Warranty Items: Rigid Wall Spas

Warranty Period:

- Twelve(12) months for the pool liner
- Twelve(12) months for the electric part
- Twenty-four(24) months for the rigid wall frame

Warranty Starting Date: End customer warranty starts from the date of purchase. Standard consumer warranty apply ONLY to the original MSpa owners.

1.4 ORPC Warranty Obligations to Distributors/Importers

As manufacturer, ORPC provides sufficient support to the authorized after-sale service center to carry out the warranty service by the following activities:

- 1.4.1 Provide free spare part to the after-sale service center for valid distributor warranty claims.
- 1.4.2 Provide and update the service manual and other technical documents regularly. Provide training on warranty policies, procedures and other technical service issues.
- 1.4.3 Provide daily technical support to solve warranty problems effectively and smoothly through email or phone calls.
- 1.4.4 Provide technical service training at Shanghai headquarter upon after-sale service center's requests.
- 1.4.5 Collect, summarize and analyze the regional/territory service reports for future improvements in regards to product quality or service.

Chapter 2. Important Information and Tips for Using Spa Products

2.1 Heating Effect -Temperature Increasing Rate or Speed

For 220-240V 50Hz Spa (EU Standard)

For 2-4 person bubble spa, the heat increasing rate is about 1.5-2 °C/hour. To get a better heat increasing result, put on spa inflatable bladder and top lid.

For 6-person bubble spa, since the water capacity is bigger, the heat increasing rate is lower, around 1.2-1.8 °C/hour.

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For 110-120V 60Hz Spa (US Standard)

For 2-4 person bubble spa, the heat increasing rate is about 1.5-2 °F/hour. To get a better heat increasing result, put on spa top lid.

For 6-person bubble spa , as the spa water capacity is bigger, the heat increasing rate would be a bit lower about 1.2-1.8 °F/hour.

Heat Preservation Mat is helpful to avoid heat loss from bottom and it provides better heat insulation results with the inflatable bladder in use. It is recommended to have the MSpa heat preservation mats in between the spa and ground. Consumer can also apply similar mat which is made of foam material or other material with heat insulation function.

It's only possible to set up and leave the spa at outside temperature lower than 4°C as long as the spa has a constant water temperature guaranteed more then 4°C. The spa can be used under low environment temperature down to maximum -10°C ONLY, if it is set up properly to ensure no frozen water inside control box, pipes or spa pool.

2.2 Filter Cartridge

4.1

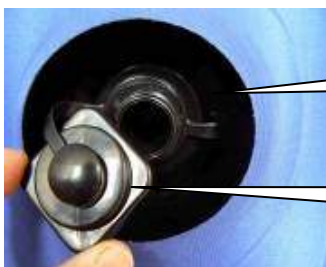


MSpa filter cartridge – Item No. B0300874 is suitable for all bubble spa products.

B0300874 Filter cartridge

2.3 Inflate and Deflate the Spa to Avoid Air Leakage

If customers complains about spas cannot be inflated upon inflating the spa pool with black pipe or their spa pool has got an air leakage, the first step is to make sure if the spa is inflated correctly. **First air valve stopper:** Unscrew only the squared air valve stopper. **The second valve** is for air tightness and deflation of the spa pool. **Please ensure the customers manage the air valves correctly for inflation or deflation purpose.**



Deflate: Unscrew the black stopper for deflation of the spa pool

Inflate: Only unscrew this square stopper for inflation

2.4 Ensure Well Connection of the Signal Cable between Control Panel and Control Box

When connecting of digital control panel, make sure the plugs are properly matched together. Once all matched, then screw the cap, you'll see the yellow light on control panel, no bent or wet for the pin inside the "male connector", which will cause failure connection.

2.5 Avoid Air Leakage from Spa Liner Split or Tiny Holes Due to Over-inflation

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Ensure to ask customers to test the spa pool air pressure with manometer. Testing air pressure is very critical during the installation process, because any air leakages, pool liner splits due to over inflation are not covered by the ORPC/MSpa warranty. It is important to advise customers to watch the MSpa DVD or follow the instruction manual carefully to check and test the air pressure every single time before inflating or using the spa.

2.6 Try to Repair the Tiny Holes or Split on Spa Liner Instead of Replacing a New Spa Liner

For pool liner air leakage caused by tiny holes or splits, it is suggested to first try to repair with glue and PVC swatches provided in the repair kit. You can also order the glue and repair swatches from the spare part list.

With the repair material, most pin holes and splits can be repaired easily within 10 minutes.

2.7 Using Spa in the Cold Weather

It's only possible to set up and leave the spa in the environment of outside temperature of less than 4°C as long as the spa has a constant water temperature guaranteed over 4°C. Spa can only be used for temperature down to maximum -10°C if it is properly set up to make sure no frozen water inside control box, pipes and spa pool.

Heat Preservation Mat is helpful to avoid heat loss from bottom and it provides better heat insulation results with the inflatable bladder in use.

2.8 Temperature issue

If customer ask about temperature display on the control panel cannot reach to the set temperature of 104F (Maximum), it indicates 38°C/100F, 39°C/102 F, 41°C/105F and 43°C/107F. We may explain to the consumer that it is normal to show a minor difference from the actual temperature to the rate displays on the control panel. It's normal for 1-2°C/ gap.

2.9 Flashing temperature indication on the control panel

Flashing temperature light can be turned off by pressing the "temperature" button after preferred temperature rate is set.

2.10 Broken zipper issue

Regarding broken zipper complaint, first check if the air pressure is within the normal range. Over-inflated spa liner could damage the spa cover zipper.

A replaced top lid may not 100% fit onto the spa pool. 3-4cm (1-2") difference is common. Because there might be a little zipper length difference between the new top lid or spa liner and the used ones. To avoid zipper claim, please recommend the customer to maintain the zipper by waxing it regularly.

2.11 Water treatment

Read through the "Water Quality & Filter" sections in the user manual. Always shower before entering the MSpa!

To ensure a healthy spa, test your spa water chemistry and balance the pH, chlorine and alkalinity levels by using the test strip every time before using it. The most desired pH level for a spa is between 7.2 and 7.8. Total alkalinity level is suggested to set between 80 and 120ppm and free chlorine between 3 to 5ppm. Too low of a pH level will result in excessive wrinkles and damage to the spa pool as well as corrosion in the motor unit. Too high of a pH level (hard

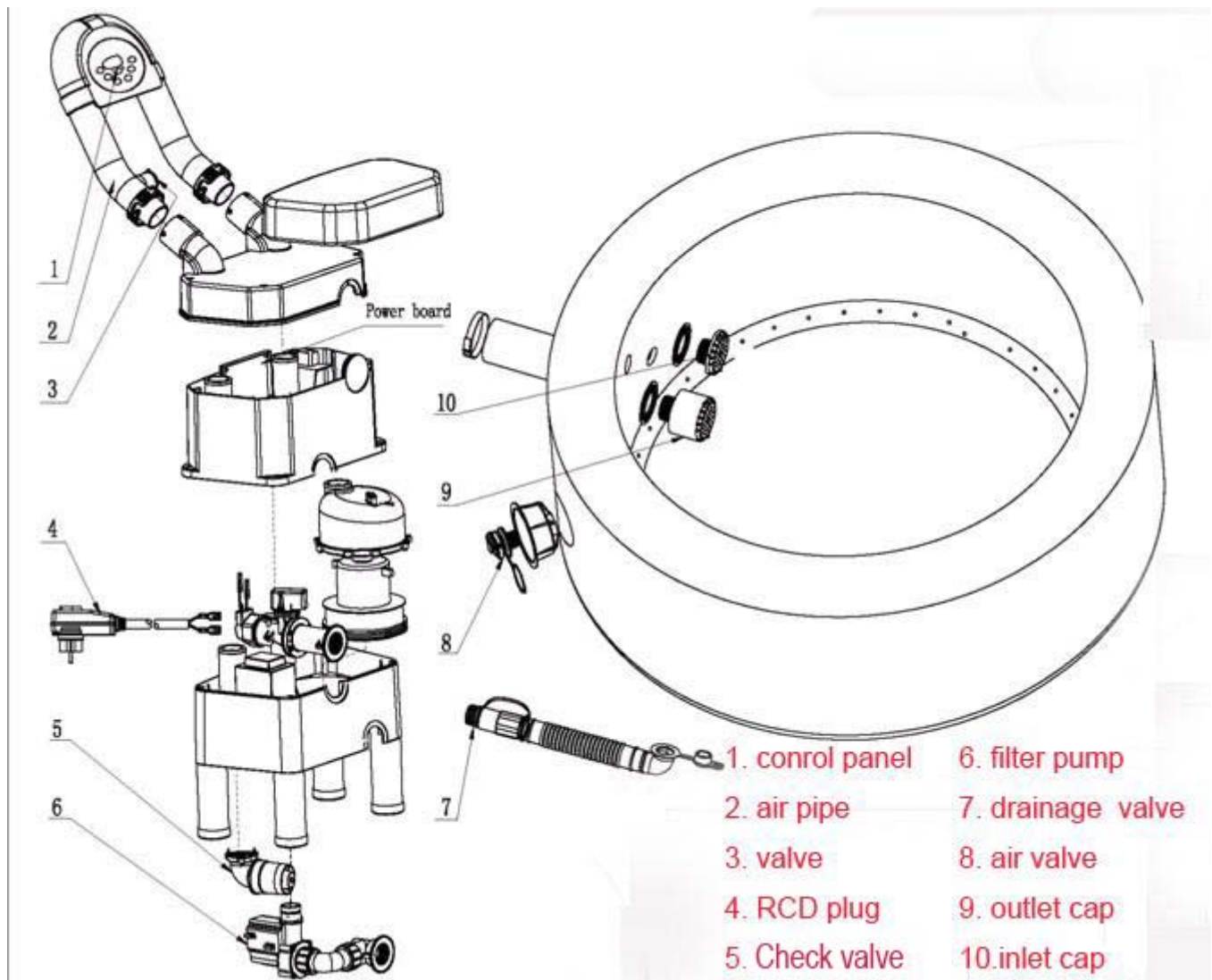
water) will result in scale incrustation, e.g. sheets of white coagulations inside the filter pump, which will lead to block and non-working of the filter pump.

If you have any questions regarding chemicals usages, please contact your local spa/ pool water treatment specialty stores.

It is the spa owner's responsibility to have water maintenance properly. MSpa/ORPC is not responsible for any damages that result from improperly maintained water. Improper water maintenance may result in voiding the warranty.

Chapter 3. MSpa Assembly, Wire Diagram & Major Electric Parts

3.1 MSpa Assembly



3.2 MSpa Major Electric Parts

PART LIST



Control panel



Power board



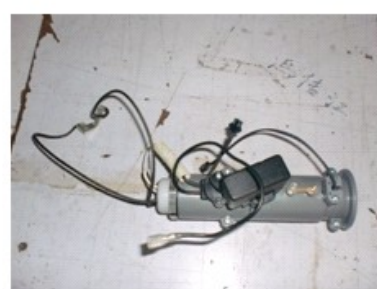
transformer (Double Output)



Filter pump



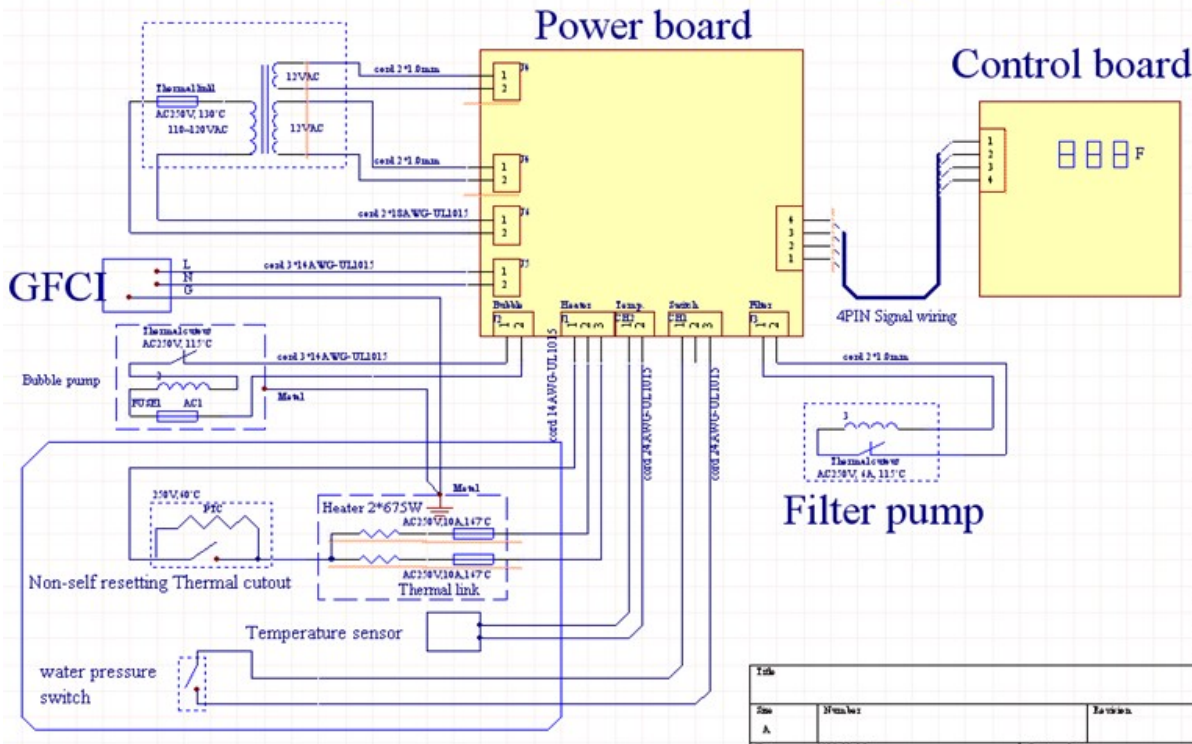
Bubble pump



Heater

3.3 Wiring Diagram

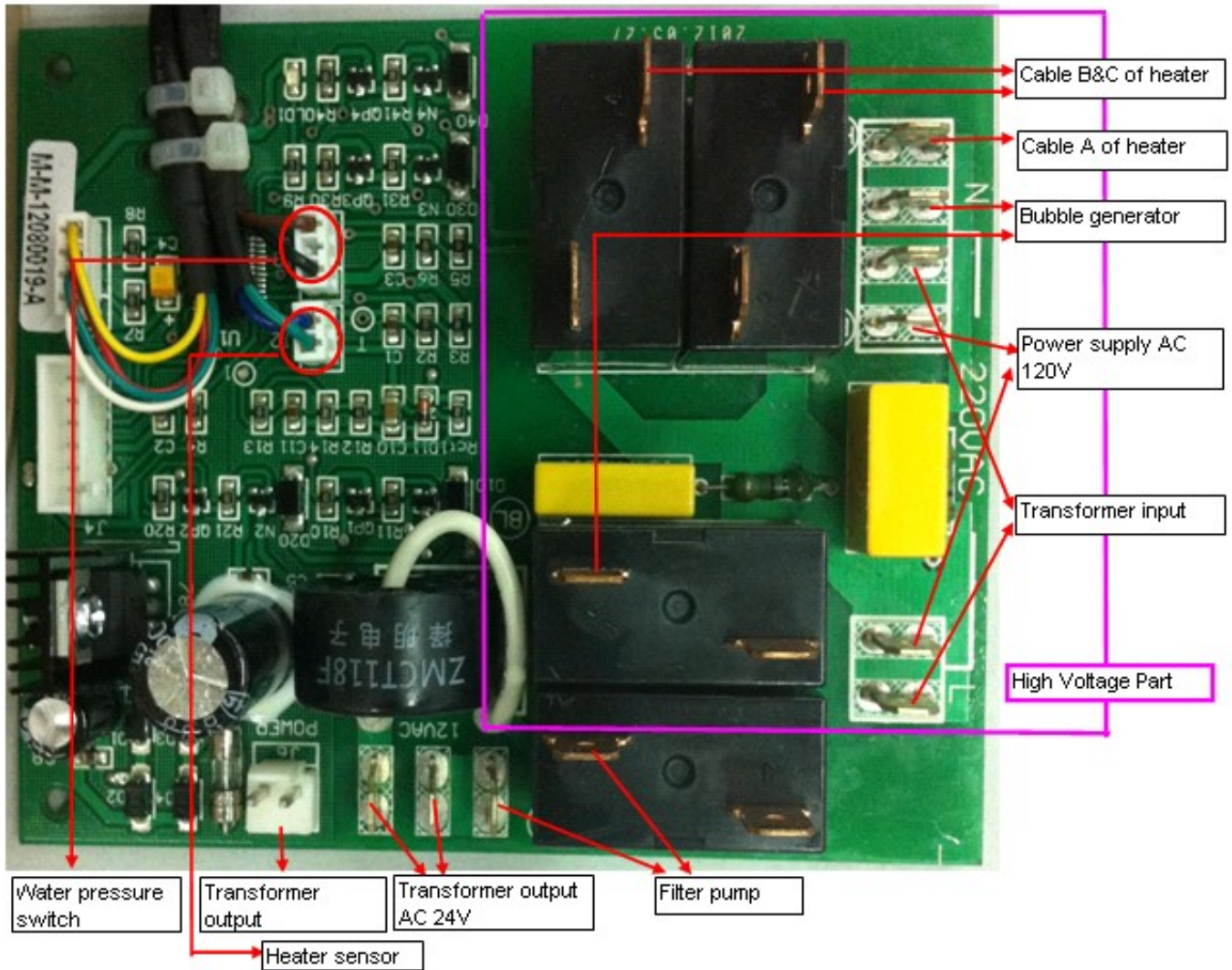
UL2 Wiring diagram





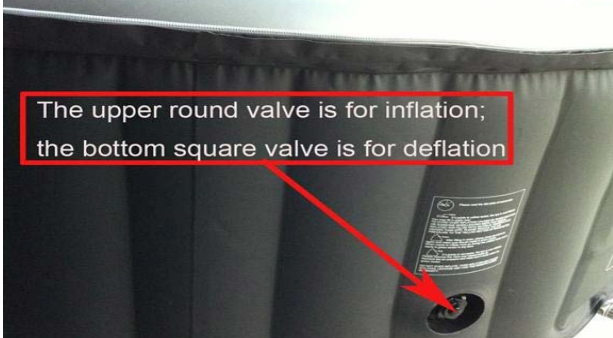





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Chapter 4. How to Replace Mspa Parts



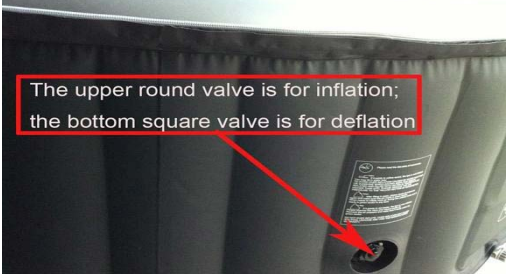







4.1 Power Board Assembly and Wire Terminal Connection





4.2 How to Replace the Filter Pump









	
<p>1. Take off water inlet and outlet caps</p>	<p>2. Remove the air pipe</p>
	
<p>3. Deflate spa pool</p>	<p>4. Turn the control box inside the spa pool upside down</p>
	
<p>5. Unscrew four screws that place filter pump onto the control box.</p>	<p>6. Unplug the filter pump cable connection fitting</p>
	
<p>7. Loosen the filter pump inlet valve</p>	<p>8. Take out the original filter pump and assemble the new filter pump in reverse order.</p>

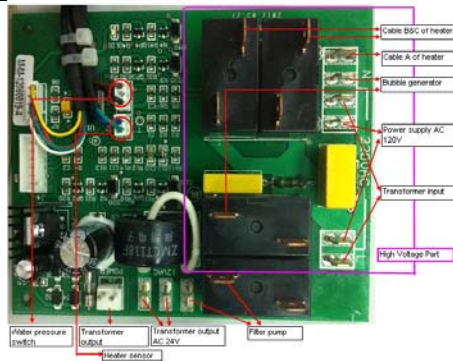
4.3 How to Replace the Heater Element

	
<p>1. Take off water inlet and outlet caps</p>	<p>2. Remove the air pipe</p>
	
<p>3. Deflate spa pool</p>	<p>4. Unscrew the check valve plastic nut</p>
	
<p>5. Take out control box from spa pool</p>	<p>6. Remove the foam</p>
	
<p>7. Loosen four screws on the top lid</p>	<p>8. Disassemble the mid part of the control box</p>
	
<p>9. Take out the power board from the case</p>	<p>10. Unplug heater elements cables on the power board</p>

	
<p>11. Unscrew four screws that place heater elements onto the control box.</p>	<p>12. Take out the original heater elements from the control box and assemble the new heater elements in reverse order.</p>

4.4 How to Replace the Power Board







	
<p>1. Take off water inlet and outlet caps</p>	<p>2. Remove the air pipe</p>
	
<p>3. Deflate spa pool</p>	<p>4. Unscrew the check valve plastic nut</p>
	
<p>5. Take out control box from spa pool</p>	<p>6. Remove the foam</p>
	
<p>7. Loosen four screws on the top lid</p>	<p>8. Take out the power board from the case</p>





9. Disconnect all electrical cables from the original power board and connect all cables to the new power board correctly and assemble the power board into the control box in reverse order.

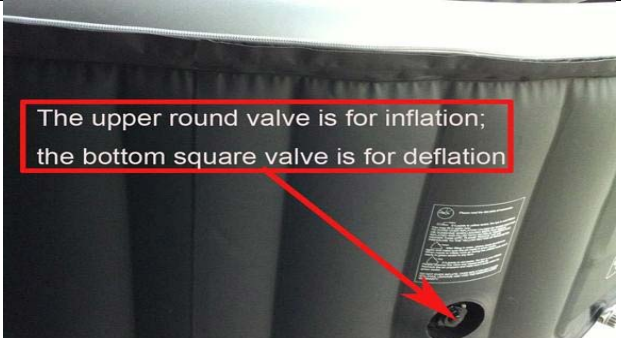




4.5 How to Replace the Bubble Generator

<p>1. Take off water inlet and outlet caps</p>	<p>2. Remove the air pipe</p>
<p>3. Deflate spa pool</p>	<p>4. Unscrew the check valve plastic nut</p>
<p>5. Take out control box from spa pool</p>	<p>6. Remove the foam</p>



	
<p>7. Loosen four screws on the top lid</p>	<p>8. Disassemble the mid part of the control box</p>
	
<p>9. Take out the power board from the case</p>	<p>10. Unplug bubble generator cables on the power board</p>
	
<p>11. Unscrew four screws that place bubble generator onto the control box.</p>	<p>12. Take out the original bubble generator from the control box and assemble the new one in reverse order.</p>

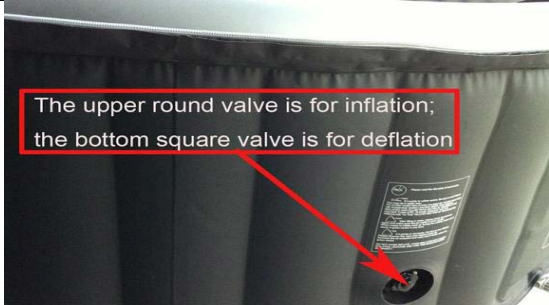









4.6 How to Replace the Check Valve

	
<p>1. Take off water inlet and outlet caps</p>	<p>2. Remove the air pipe</p>

 <p>The upper round valve is for inflation; the bottom square valve is for deflation</p>	
<p>3. Deflate spa pool</p>	<p>4. Turn the control box inside the spa pool upside down</p>
	
<p>5. Unscrew the screws that fix check valve in place.</p>	<p>6. Get rid of the original check valve and put the seal ring in good condition.</p>
	
<p>7. Assemble the new check valve by screws.</p>	

4.7 How to Replace the Transformer

	
<p>1. Take off water inlet and outlet caps</p>	<p>2. Remove the air pipe</p>

 <p>The upper round valve is for inflation; the bottom square valve is for deflation</p>	
<p>3. Deflate spa pool</p>	<p>4. Unscrew the check valve plastic nut</p>
	
<p>5. Take out control box from spa pool</p>	<p>6. Remove the foam</p>
	
<p>7. Loosen four screws on the top lid</p>	<p>8. Disassemble the mid part of the control box</p>
	
<p>9. Take out the power board from the case</p>	<p>10. Unplug heater elements cables on the power board</p>
	
<p>11. Unscrew the screws that fix the transformer onto the control box.</p>	<p>12. Take out the original transformer from control box and install the new transformer in reverse order.</p>

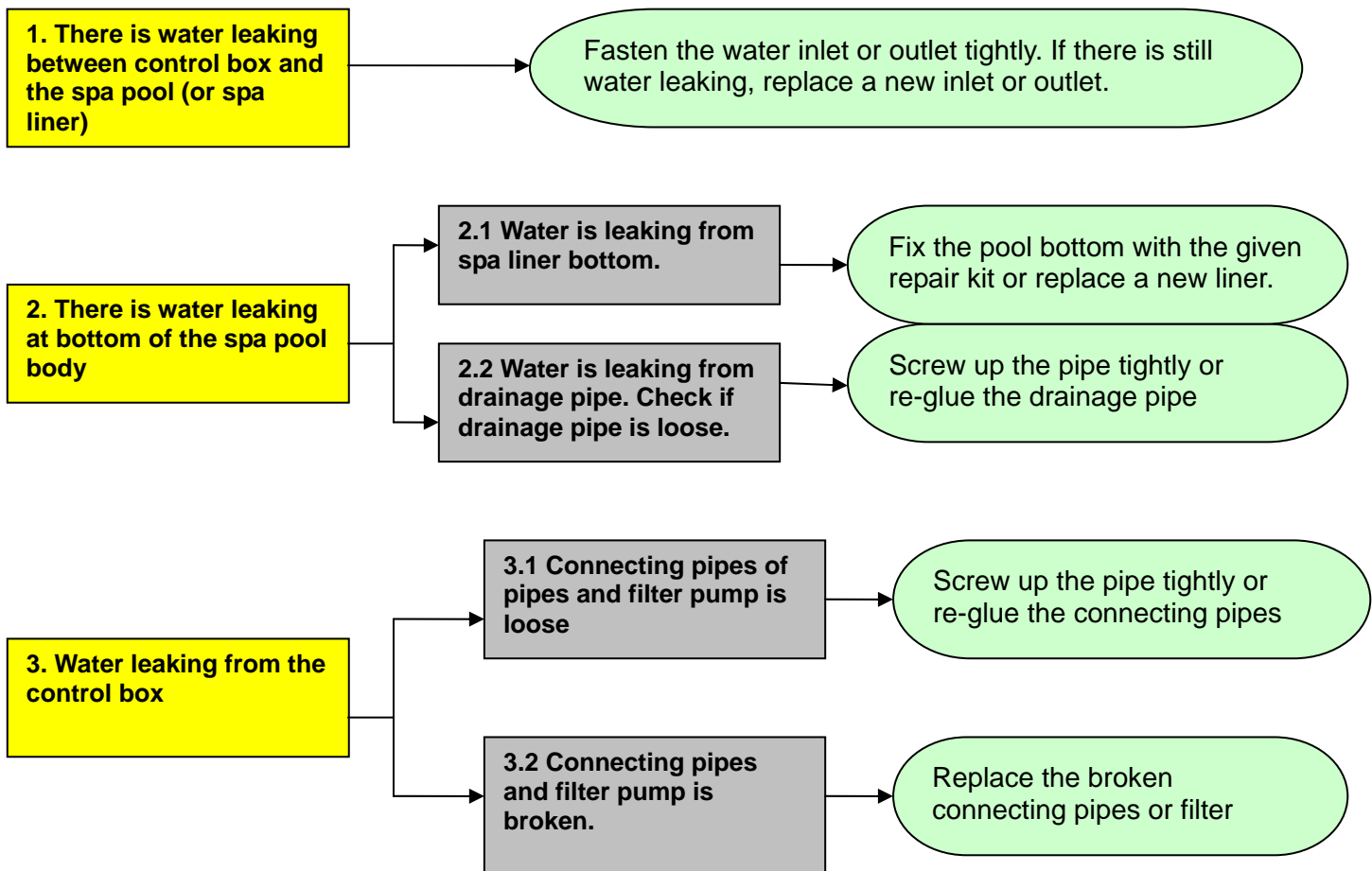
Chapter 5. Trouble Shooting Guide

5.1 The following Check Flow is as attached.

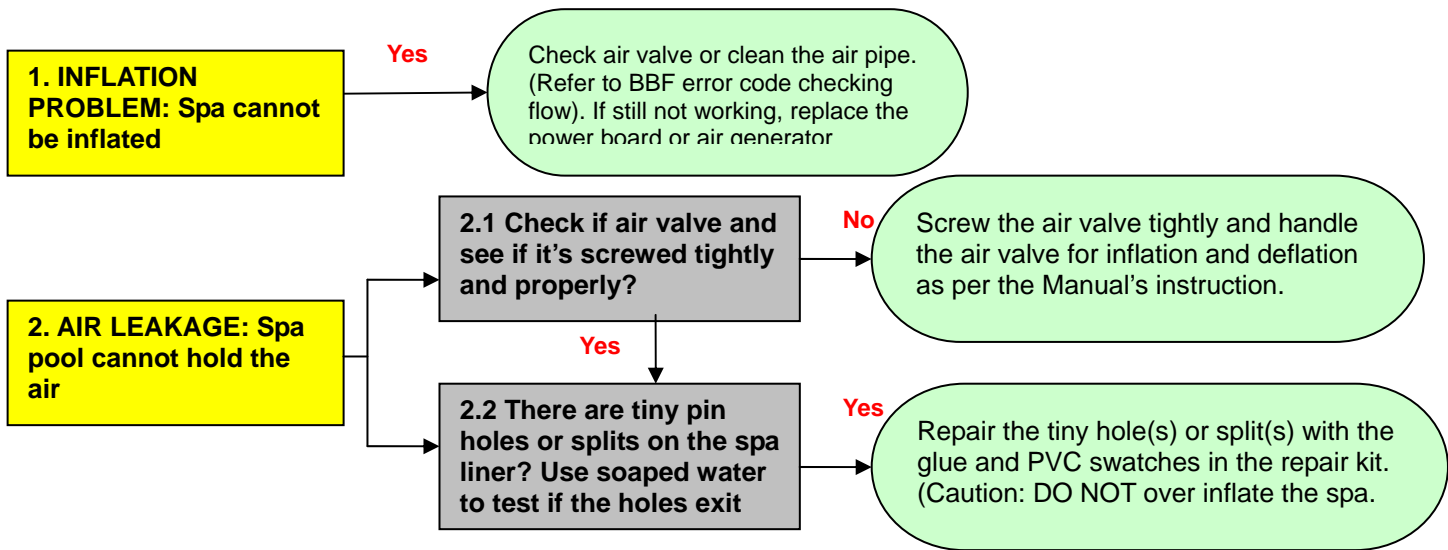
Check Flow F1-F4.pdf
 Check Flow Heating Failure.pdf
 Check Flow SPL & SPH.pdf
 Check Flow Bubble Failure.pdf
 Check Flow No Display on Control Panel.pdf

Tips: To keep the filter pump and heater at a great performance, proper maintenance and cleaning of filter pump, paper filter cartridge and water inlet is highly recommended. How often to clean depends on the local water conditions and user habits. Regular fresh water and vinegar are suggested for the filter pump cleaning.

5.2 Water Leaking Problem Checking Flow Chart



5.3 Air Leakage and Inflation Failure Checking Flow Chart



Chapter 6. Frequently Asked Questions

1: Question: Approximately, how many gallons / liters of water does the spa pool hold?

Answer: When filled to 80% of max water capacity, as recommended, the spa pool water volume is approximately:

- For 4-6 person spa 1200ltr/320gal.
- For 4 person spa 800ltr/211gal.
- For 2-4 person spa 700ltr/185gal.

2: Question: Can I set the spa up on a concrete patio?

Answer: Yes, but a ground cloth is highly recommended, and do not drag the spa pool across the concrete patio as the abrasion may cause holes on the spa pool. The surface of the patio must be smooth, level, stable and free of any sharp objects.

3: Question: Can the spa be left up year-round?

Answer: It depends on where you live. It is not recommended to keep your spa on if your temperature falls lower than 0 degrees Celsius or 32 degrees Fahrenheit. The spa may freeze and cracking may occur. Spa can not withstand the weight of ice and snow. It is recommended to store the spa when you will not use it for a while.

4: Question: Do you recommend using chemicals?

Answer: Yes. Contact your local spa supply store to check what chemical to use and your local water conditions.

5: Question: Does the spa pool require any special care to ensure durability?

Answer: Keep sharp objects out of the spa pool or from underneath of the spa pool. Maintain proper PH level of water and keep the spa sanitary and clean.

6: Question: How do I prevent dirt and grime from getting into the spa water?

Answer: Use the top lid to keep your spa covered when not in use. This will help keep wind and other elements from depositing dirt and debris in your spa, and will also prevent excess rainwater from overflowing your spa.

7: Question: How do I protect the spa from damaging grass or fungi developing on the concrete?

Answer: It is impossible to prevent grass or lawn damage under the spa. Keep this in mind when selecting your site for setting up the spa. Keep the grass and concrete floor or patio as dry as possible.

8: Question: How do UV rays affect the materials that the spa pool is made of?

Answer: All PVCs degrade over prolonged exposure to excessive sunlight. Our Spas are manufactured with UV inhibitors to delay the degradation caused by sunlight.

However the spa pool can get an irregular shape if the pressure is too high due to strong hot sunshine. The customers can buy a spa cover to protect the spa pool from UV and pollution.

9: Question: How much water or how high of the spa pool shall the consumer fill water in the spa?

Answer: There are two water lines printed on the inner wall of the spa pool: Minimum Water Level and Maximum Water Level, The customer needs fill the water into the spa between the two water level liners.

Special Attention:

1. Fill in water into the spa pool carefully especially for the first time of use. The water must reach the minimum water line but not exceed the maximum water line, otherwise it may cause filter pump failure.
2. Please avoid water spillage from the spa pool, the spilled water may flow into the control box and damage the components inside the control box.
3. After filling in water, please check air pressure again and make sure the indication pin reads in green sector. When needs to inflate more air during use, please make sure the indication pin also point within green sector in any term.
4. Please reduce the air pressure to the yellow sector of manometer to avoid over inflation due to warm weather or sunshine etc. after leaving the spa pool outside under the sunshine for long.

10: Question: How long does it take to fill the spa with water?

Answer: Around 10 minutes or more, it depends on the hose size and water pressure. Remember to observe the initial filling of the spa for several minutes in order to make sure that the spa is well setup and the bottom is flat.

11: Question: How many seasons should the spa last?

Answer: It depends on how the consumer uses, maintains and cares the spa. Regular maintenance and proper storage of the spa in the off-season will prolong its life. Warranty on the spa liner is maximum 6 months from the date of purchase.

12: Question:	How much air should the consumer inflate the spa?
Answer:	The spa can be Inflated until it becomes stable with approx.85% capacity only. An over inflated spa may burst or suffer from leaks in the seam while it's filled with water and heated by the sunshine in hot summer. Always remember to use manometer to test and adjust the air pressure of the spa pool to a suitable status (make sure the air pressure indicating needle stay within the green sector after filling the water). When the spa needs to inflate more air during use, please also make sure the air pressure indicating needle reads in green sector at any time.
13: Question:	How often should the water be changed?
Answer:	The frequency to change the spa water can vary due to different usage ways of the spa and different chemical balance of the water. If properly filtered and chemically balanced, no need to change the water through the whole summer season. The frequency to change water can be reduced by keeping the spa covered when not in use, testing the water regularly to ensure proper chemical balance, operating the pump for an adequate number of hours each day, keeping the filter pump cartridge clean, and replacing the cartridge when needed.
14: Question:	Is their a video available to show how to set up the spa?
Answer:	Yes. The spa setup DVD is included in the spa package. You may also visit the website as www.the-mspa.com for solutions to your questions.
15: Question:	Is it safe for pets to play in the spa?
Answer:	No, dogs, cats, and all other household pets should be kept away from the spa to avoid possible danger of being drowned inside the pool water, and also to protect the spa side walls, inflatable ring, RCD plug cable etc from pets bites or scratches which may cause punctures, holes, opening crack and other damages to the spa pool or the RCD plug.
16: Question:	Is there repair material enclosed for spa liner repair?
Answer:	Yes, but only a few pieces of repair PVC swatches are included in the package. For safety reason, the repairing glue is not included to the package. But consumers can ask for the glues from the service center or can try to find a similar glue used for PVC gluing for such repair at their local shops. Small tears or holes can be repaired with the enclosed repair PVC swatches. The surface should be dry and clean while affixing the PVC swatch to the leaking tiny holes or tears.
17: Question:	1.4.11.1.1.1 How often to test the spa water?
Answer:	Spa water should be tested each time before using the spa. Take an easy test with the pH test strip to check alkalinity, chlorine or bromine level of water. Keep the pH level and alkalinity in a proper range, this also helps to extend the product life of filter pump and heater.
18: Question:	Should I install my spa inside or outside?

Answer: Each location has its pros and cons. Outside installations may compromise some of your privacy, but you can add screens, shrubbery, or fencing to minimize peering eyes. The outside weather can be a deterring factor, although many people absolutely love the experience of lounging in bubbling hot water while a light rain or snowflakes are falling! It can be exhilarating. Awnings can be built to shelter the effects of weather. It should be noted for those of you who have not experienced it, hot water raises your body's core temperature, so you will normally not feel cold even when exiting a hot tub outdoors in the dead of winter.

Inside installations will add humidity to the air in your home. It is imperative that proper ventilation be maintained to control this moisture and to prevent mildew and other damage. If you decide on an inside installation, be sure to take into account the draining and filling of the unit. There are two other important questions: will it fit through your doorway, and is your flooring strength adequate? Keep in mind that a typical 3-person spa weighs about 2500 pounds filled with water. On the plus side, you will have privacy and convenience. Your unit and cover will also be fully protected from the weather.

19: Question: **What could cause the spa to be lopsided?**

Answer: The base or bottom of the spa is not laid out flat (without wrinkles). The spa pool liner and cover must be extended evenly around when the spa is filled with water.

20: Question: **Can I use Chlorine and Bromine sanitizer products together?**

Answer: NO. Chlorine and Bromine sanitizing products shall never be mixed up together. This is very dangerous. If customer usually uses chlorine, but wants to switch to Bromine, or vice versa, make sure to drain out the water and refill with fresh water before switching chemicals.

21: Question: **What should I do if there is a strong chemical odor or my skin is irritated when having a bath in the spa?**

Answer: The spa might contain a high concentration of Chloramines. Drain out the spa water, clean the spa pool wall and re-fill with fresh water.

22: Question: **How often should I wash or change the filter cartridge?**

Answer: It depends on both how often the customer uses the spa and how the water quality is. Filter cartridge can be rinsed by the hose after it has been working for 1-2 weeks. If the filter cartridge remains to be soiled and discolored, the filter cartridge should then be replaced.

26: Question: **Can I use the spa during cold weather? How to use?**

Answer: Yes, the spa can be used during cold weather by following the suggested ways as below:

1. Fill the spa with warm water to warm up the control box first to avoid SPL alarm and this will shorten the course to heat up the water.
2. Drain the spa water when the spa is not going to be used for a while or keep the heater on. Do not put the spa outside with temperature less than minus 10 °C (14°F) even the heater is kept on

27: Question: **What is needed to prepare a site for the spa?**

Answer: A level, stable surface is needed and all sharp objects must be removed. A ground cloth or tarp should be placed under the spa prior to setting it up. If a site does in fact have hardy types of grass it is recommended to remove these grasses before initial set up. Do not set up Mspa in a place where it can be flooded with water.

28: Question: **What is the approximate depth of the water for spa?**

Answer: If the spa is filled with 80% of its maximum water capacity, the depth is about 44-46cm.

29: Question: What is the steepest slope that I am able to set up my spa on?

Answer: For best results the surface should be perfectly level. Pay close attention to the spa's stability and levelness in the early stages of filling your spa up with water. If after about an inch of water is accumulated, and the water is not spreading out evenly, or the spa appears to be bulging to one side, stop filling the spa, drain the water, and select a new site. If the spa is set up on a slope, the spa will be lopsided and could collapse.

Never set up the spa on slope ground.

30: Question: What material is the spa made of?

Answer: The spa pool is mainly made with heavy gauge of PVC.

31: Question: What other surfaces can be safely used to set up my spa?

Answer: The spa can be set up on grass or pavement that is completely smooth, level and stable. A ground cloth or tarp is recommended. The spa should NOT be set up on sand or muddy ground that could possibly shift around.

32: Question: What should the customer use to clean his spa before storing it for the winter?

Answer: The customer can use mild soap and water to wash his spa. He shall wash the spa thoroughly and make sure the spa is completely dry before storing.

33: Question: Why sometimes can algae be found in the spa even the customer runs the filter pump regularly?

Answer: The filter pump itself will not prevent algae from growing in the spa water; this can only be done by maintaining proper chlorine and pH levels at all times. The customer can check the local pool chemical supplies store for further information.

34: Question: Would excessive spa chemicals affect / cause deterioration to the spa pool(liner)?

Answer: Excessive or concentrated chemicals may cause damage to the spa liner and the user.

35: Question: Why an extension cord should not be used as stated in the spa set up instruction?

Answer: In order to reduce the risk of electric shock, the customer can't cut off the cord and connect the cord with other one to extend the length of the power supply cord by himself since this may cause potential danger. It is important only to use a 16A power supply. If the customer has to use an extension cord/connecting cable, please make sure this is for 16A purpose and for outdoor use. For safety reasons, set up spa a few meters away from power supply.

36: Question: Is the heater defective if the heater button does not light up when the set temperature is lower than the environment or water temperature?

Answer: No.

37: Question: Why does the bubbling stop working suddenly?

Answer: It is normal. As our spa is designed to have automatic stop of the bubbling function.

For the bubble spa, the bubbling function will stop working for 10 minutes after having worked 20



minutes and needs to be restarted by pushing the bubble function button manually.

38: Question: Why is the filter function activated at the same time upon pressing the heater button?

Answer: It is normal. The heater function cannot be turned on independently, when the customer pressed the heater function, the filter function also starts at the same time. At the same time, when the heater is working, the filter function cannot be turned off individually either, but can only be turned off by pressing "HEATER" button but not "FILTER" button.

39: Question: How to get a better heating result for the water inside the spa pool?

Answer: We strongly recommend the top lid of spa is covered with inflatable bladder when the heater function is on to prevent the heat loss.

And also temp barrier mat can be used at the bottom to have better heat preservation result.

40: Question: What is wrong when the control panel display such code as "HEF", "FEF", "BBF", "SPH" or "SPL"?

Answer: Please see the troubleshooting guide to find out the error code checking flow steps.

41: Question: How high the water temperature will be increased after using heater?

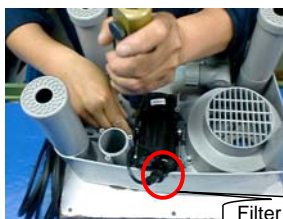
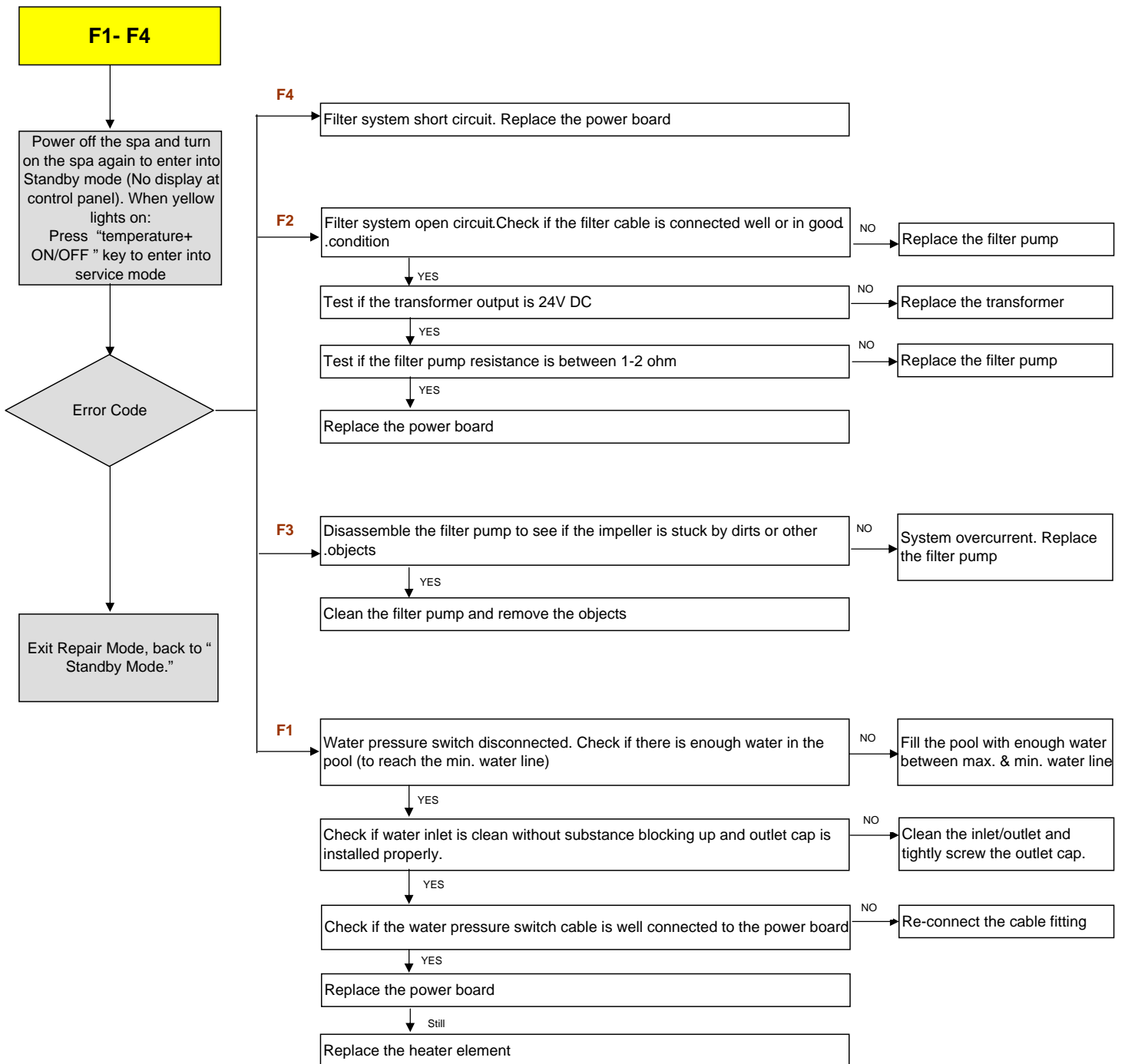
Answer: Maximum 42°C or 104°F while there may be some indication tolerance which will indicate about 38°C or 100°F. This is normal. And also please note that the following conditions will lead to slow and even heating without heating phenomenon:

1. Environmental temperature lower than 10°C(50°F)
2. Outdoor wind force above Gentle breeze/F 3
3. Environmental temperature lower than 10°C(50°F) and wind power above Gentle breeze/F 3
4. Activate bubbling system when heating
5. Spa lid is not covered or improperly covered when heating

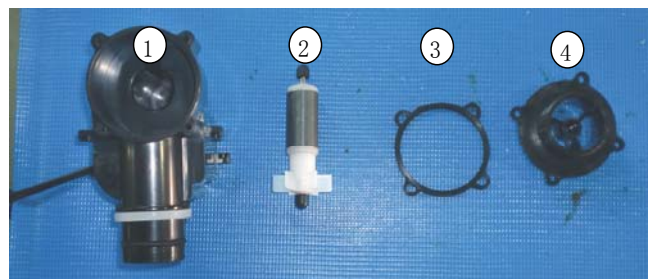
So the customer is recommended to fill spa with warm water for quick heating and energy saving if necessary.

Chapter 7. Attachment

- Check Flow F1-F4.pdf
- Check Flow Heating Failure.pdf
- Check Flow SPL & SPH.pdf
- Check Flow Bubble Failure.pdf
- Check Flow No Display on Control Panel.pdf

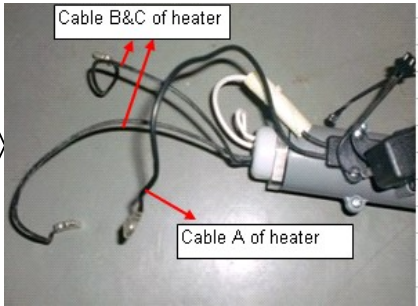
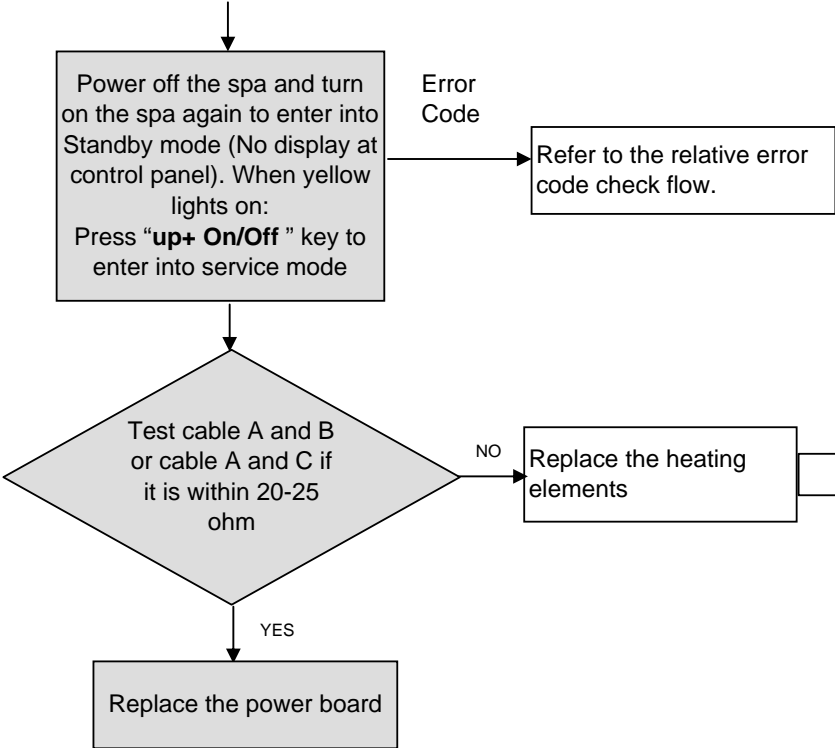


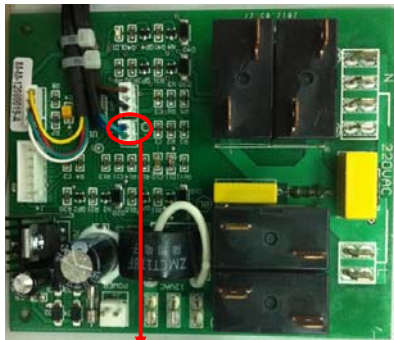
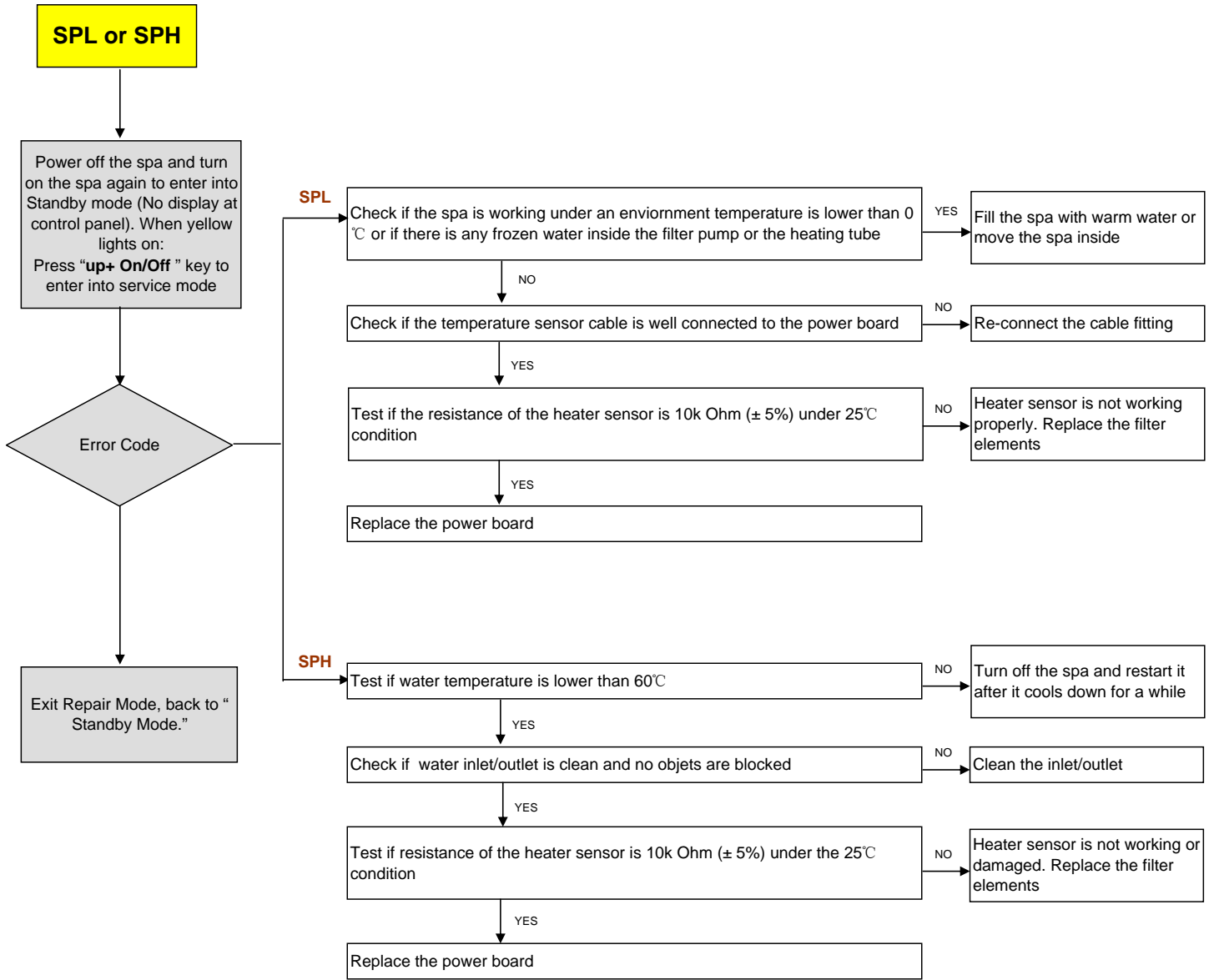
Filter cable connection



Filter Pump uninstallation order

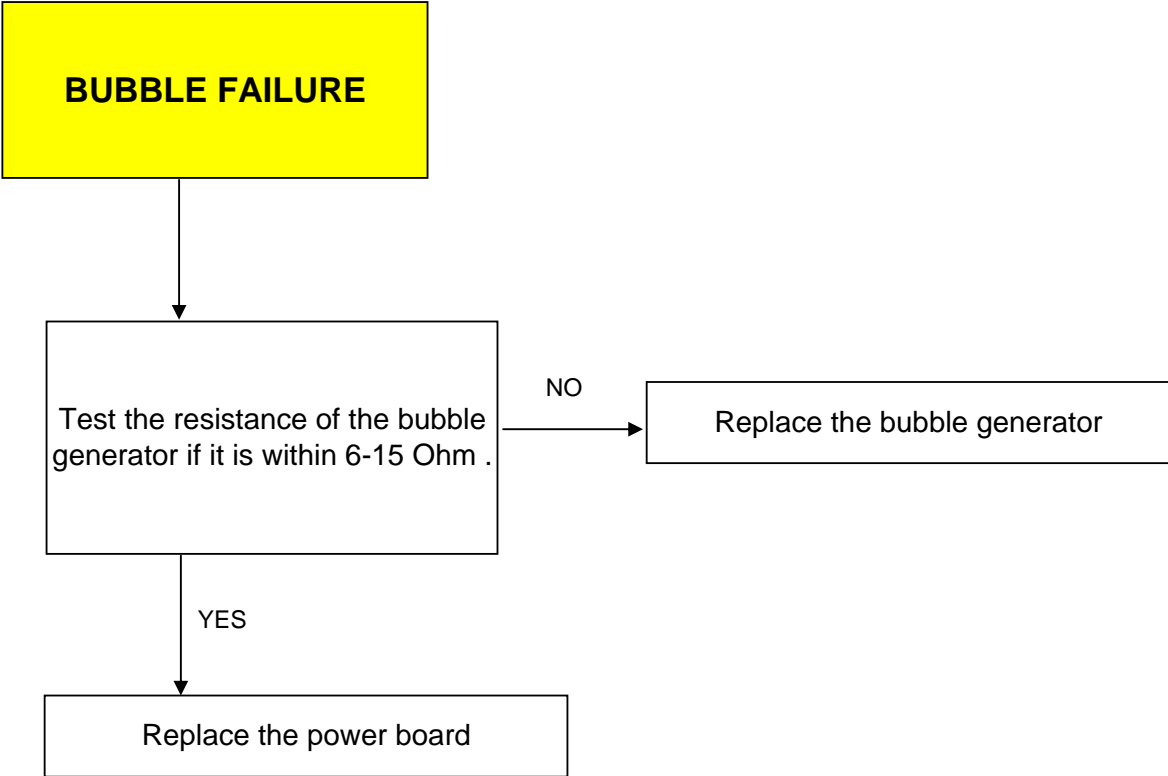
HEATING FAILURE





Heater sensor

Resistane of the Temperature Sensor			
Temperature (°C)	Resistance (K ohm)	Temperature (°C)	Resistance (K ohm)
20	12.488	28	8.778
21	11.939	29	8.408
22	11.418	30	8.056
23	10.922	31	7.721
24	10.450	32	7.401
25	10.000	33	7.097
26	9.573	34	6.806
27	9.166	35	6.529



NO DISPLAY ON CONTROL PANEL

