great lakes spas®

SPA SERVICE MANUAL

February, 1990

GPM INDUSTRIES INC.

Manufacturers of ***great lakes spas*** *and* ***great lakes pools***

Section 1 Locating Problems

First determine location of leak. Determine where it is dripping and see if there is a component directly above, such as a suction fitting, jet, air channel, etc... Normally the water will drip straight down, which makes it easier to determine where to make the repair. However, occasionally, water will travel through the foam, making it difficult to pinpoint the leak. If such is the case, there are a few options. One way is to let the water drip until it stops at the jets, air control, or the suction fittings. If the water leaks past the jets, drain the spa down to a level just above the air channel. If the water continues to leak past the air channel, there is a good chance the problem is the suction fitting. Keep in mind the air channel is also full of water, so if the water on the inside of the tub stops at the air channel, it will keep leaking underneath until the channel is dry. This works good for finding large leaks. Another way is to drain the water completely out of the spa. Set the spa on blocks and start to fill it. When the water starts to drip, notice where the water level is. After determining which section of the spa is leaking (the jet section, air channel section, or the drain section), probe that section for wet and discolored foam, to pinpoint the location of the leak. Also, the foam will normally be separated from the shell in the area where it is leaking. If the leak still can't be located, give GPM Customer Service a call, at (616) 392-5947.

Section 3 Air Channels

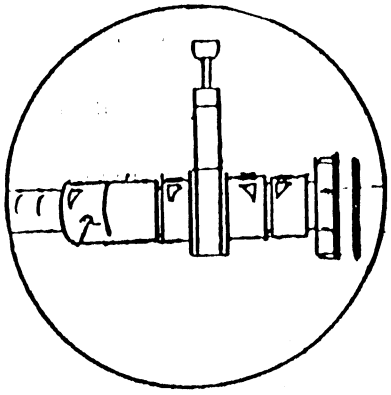
A. If it has been determined that the air channel is leaking, turn the tub on its side, remove approximately eight inches of the foam from the area that leaks. Sand the fiberglass to smooth it out. This will also give the fiberglass material something to adhere to. Mix some resin and M.E.K.(hardener) according to the directions. Put the fiberglass mat on a piece of cardboard, and wet it throughly with the mixed resin. Apply the mat on and around the area that leaks. A paint brush works great for this. Make sure to get all the air bubbles out of the glass. It is always a good idea to brush on any leftover resin to assure a quality repair. Let it dry for approximately three to five hours before refilling tub.

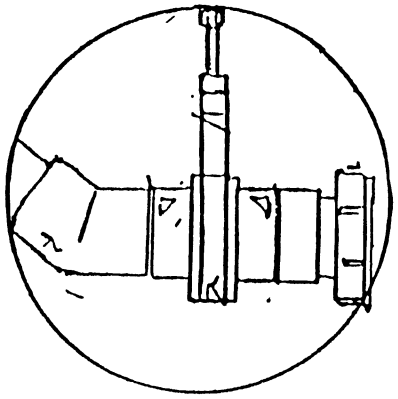
B. When the leak is at the air channel P.V.C. fitting, the fitting nut must be loosened, and resealed with silicone sealant.

Section 5 Unions

A. If there is a defective union, it should be replaced. Cut between the union and the gate valve, as close to the union as possible, so the remaining rigid P.V.C. can be used to glue on the new union.

B. When the union is glued tight against the gate valve, half of the gate valve must also be replaced. This is easily accomplished by removing the four bolts from the valve, replacing the half that is glued to the union and bolting it back together. Then glue in place a new piece of rigid P.V.C. and a new union.





Section 8 Air Venturi

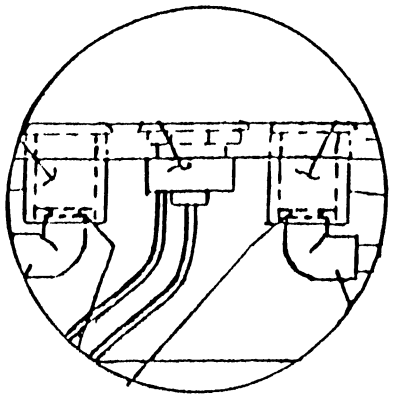
A. Hutchinson models: (Classic Michigan, Classic Huron, All Elite Tubs) If the air venturi isn't operating properly, it can most likely be repaired from the top. Turn the dial to the OFF position. This will enable you to pop it out and check for any debris that might be caught in the venturi. Also check for o-ring break down. If everything appears normal, look to make sure that there is good air flow into the venturi from underneath. If flow is restricted with foam, etc..., remove blockage to create better flow.

B. To replace the venturi, cut the fitting directly below the venturi, as close to the valve as possible. Whether it be a 90°, 45°, or flex P.V.C. There is a four inch length of two inch diameter P.V.C. covering the black venturi nut. Pull the P.V.C. off, which will expose the nut that must be removed to replace the valve. After the nut is removed, pull the valve out and replace. Make sure to seal with silicone sealant between the Hutchinson air venturi and the acrylic. Install the new nut and all the parts needed to make the connection to the one inch flex P.V.C.

Note:

-All the insulation around the valve must be removed in order to make this repair.

-To make a venturi repair on the Ontario Classic, one board must be removed, as explained in section 2B.



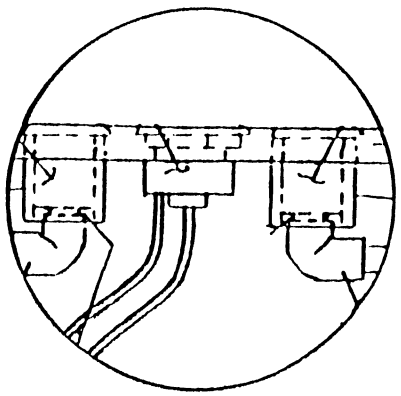
Section 10 Function Switches

Function Switches: If the spa will not switch functions, it is most likely the switch in the spa pack, rather than the function switch in the spa. If it is determined that it is the spa switch, however, we recommend that it be replaced. To do this, remove the clear air hoses at the switch and unscrew the switch manifold. There are two air hoses connected to the manifold. The one in the center connects to the spa pack and the other is a relief. After the manifold is off, the nut that holds the switch in place should be visible. Remove that nut, pop the switch out and replace it. Make sure to seal with silicone between the switch and the acrylic. Reconnect the air lines and refoam, if desired.

Note:

-There will be some insulation to be removed in order to make this repair.

-When making this repair on an Ontario Classic, one board must be removed, as explained in section 2B.



Section 12 Ozone

The ozone line is installed at the first jet on the right. A brass fitting is installed in the top of a "T" fitting off the jet. The black ozone hose comes off the brass fitting, up to the coping, through a loop and back down, where a check valve is installed. The end of the ozone line is plugged, which must be cut off before installing an ozone unit.

To help in trouble shooting ozone, a trouble shooting guide has been included. Hopefully this will be of some help. If there are still problems after reading through the guide, please feel free to give GPM or Oz-O-Pure a call. We would be happy to assist.

Note:

-Gas Purification 1-800-272-7077

-GPM Industries (616) 392-5947