CLEANING THE INJECTOR ON A FRESHWATER III OZONATOR:
It has been identified through field experience that a mineral build-up can accumulate in the injector when the spa water has a high amount of total dissolved solids or is exceptionally hard. A mineral build-up in the injector is usually indicated by few or no ozone bubbles entering the spa from the heater return. There are two ways to eliminate a mineral build-up in the injector: 1) flush white vinegar through the ozone injector or 2) physically remove the obstruction.

READ AND FOLLOW ALL INSTRUCTIONS

NOTE: In many cases, low or no ozone flow can be caused by dirty filters. ALWAYS CLEAN YOUR FILTER BEFORE ATTEMPTING TO CLEAN THE INJECTOR.

IMPORTANT: Should this condition occur, it is recommended that the spa owner have a complete water analysis performed. Additionally, in areas with hard water, Watkins recommends this cleaning be performed just prior to draining and refilling the spa.

NOTE: This cleaning process should be performed by the spa owner prior to performing a service call.

WARNING:

Nitric Acid Present
Can Cause Severe Burns
Follow Maintenance & Cleaning Instructions Before Service
IMPORTANT
Prior to attempting any type of injector cleaning, determine which type of cleaning is required. Refer to the following for assistance.

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LOW OZONE FLOW INSTRUCTIONS

Tools Required
Phillips screwdriver
16 oz (473 ml) of white vinegar
Cup or small bucket to hold vinegar

1. Disconnect power to the spa.

2. Remove door screws and remove door.

3. Locate the Ozonator in the equipment compartment (See Figure 1 on following page) and unplug the ozonator from the control box.
   NOTE: Figure 1 is for illustration purposes only. The actual location of the components within your equipment compartment will vary.

4. Locate the norprene tubing that connects the bottom of the Ozonator and the injector (See Figure 1 on following page).

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5. Put 16 ounces (473 ml) of white vinegar in a cup or bucket. Place the cup or bucket on the equipment compartment floor. See Figure 2 on following page. NOTE: White Vinegar will not damage any of the spa components.

6. Remove the norprene tubing from the bottom of the ozonator. If a liquid substance is present, carefully remove the norprene tubing making sure not to come in contact with the liquid (see warning above). See Figure 2 on following page.

7. Place the end of the norprene tubing in the cup or bucket of vinegar. Be certain the end of the norprene tubing sits at the bottom of the cup or bucket of vinegar (see Figure 2).
8. Reconnect power to the spa.

9. Run the spa until all the vinegar has been run through the injector.

10. Disconnect power to the spa.

11. Remove the empty cup or bucket from the equipment compartment. Reinstall the norprene tubing into the bottom of the ozonator. Plug the ozonator into the control box.

12. Reinstall the equipment compartment door.

13. Reconnect power to the spa.

IMPORTANT: If this maintenance procedure does not result in proper ozone flow, continue to the next section to physically clean the injector.
NO OZONE FLOW INSTRUCTIONS
Tools Required
Phillips screwdriver
Towel
Cup of vinegar
Cotton swabs
Large bucket of water

IMPORTANT: Performing the physical cleaning of the injector requires that the spa is on at all times. Disconnecting power to the spa will cause water to leak into the equipment compartment when the injector’s plastic nut is removed.

1. Remove the doors screws and door.
2. Unplug the ozonator from the control box.
3. Locate the injector.
4. Locate the norprene tubing connected to the injector (See Figure 3 on following page).

IMPORTANT: The spa must be running at this point. If the spa is not running, the following steps will cause water to leak from the injector into the equipment compartment. Use the towel to clean up any water that is spilled.
5. Carefully unthread the plastic nut on the injector, if a liquid substance is present, making sure not to come in contact with the liquid (see warning above) (See Figure 3). Carefully place any liquid substance into a large bucket of water, then dispose of the liquid.

6. When the plastic nut is off the injector, move it and the norprene tubing to the side, out of the way (See Figure 3).
7. Dip a cotton swab in the white vinegar and swab the inside of the injector’s opening (See Figure 4).

8. Continue doing this until the injector starts making a sucking or whistling sound. Additionally, you will see bubbles entering the spa from the heater return/floor drain.

9. Reinstall the plastic nut.

10. Now perform the “Low Ozone Flow” instructions to remove any remaining mineral buildup.

If this maintenance procedure does not result in proper ozone flow, the upper check valve (Figure 3) will require replacement. Contact your dealer to order a replacement part, or to arrange for a service call.