

# Dealer Sales & Service Guide

## Troubleshooting

### Analog Models w/Thermostat or Timerstat

#### *Heat Siphon Not Starting*

- 1** BREAKER TRIPPED - Check Breaker Box for correct size breaker Breakers: EX; Domestic model 2.25hp (20amp) 3.25hp (40amp) 5hp (50amp) check specs for additional models
- 2** KNOB TURNED DOWN - Make sure Thermostat Knob is set to 10
- 3** TIME DELAY - Heat Siphon is equipped with 5 to 7 minute time delay, when your pump is turn off and on again Heat Siphon will not start for 5 -7 minutes after
- 4** WATER FLOW SWITCH NOT ADJUSTED - Heat Siphon is equipped with a water flow switch. Your installer is required to adjust switch at install.
- 5** LOW AIR TEMPERATURE - Heat Siphon Will not start if air temperature is 50°F or less. It will run down to lower temp, but it must go above 50°F for it to restart.
- 6** LOW WATER FLOW - Check For Correct Water Flow. (Must be 25 Gallons per minute)
  - Make sure you pool pump is fully primed, not air bubbles in basket
  - Check pool filter pressure gauge -Rule of thumb:
  - Sand filter low than 25 psi, Cartridge filter lower than 15 psi , Earth Filter lower than 18 psi
- 7** POOL FILTER PROBLEMS
  - Sand -Change sand
  - Cartridge Filter -remove cartridge -close filter lid and secure, turn system back on if Heat Siphon Starts then replace or clean filter
  - DE (Diatomacious Earth) Filter -Bump filter, backwash, re-prime earth.

#### ***Check for condensation- capture water coming from your Heat Siphon and use your test kit to check for chlorine, etc.***

- 1** NORMAL CONDENSATION - If it shows negative it is condensation - If your Heat Siphon does not have correct clearance 24" around each side, you will experience a lot of condensation Note: for best efficiency follow clearance instruction given in manual.
- 2** WATER LEAK OTHER - If it show positive AND the Heat Siphon is NOT running and leaking:
  - Check water pressure switch flow line inside heat siphon to make sure it is connected to the heat exchanger -It is on the top of the heat exchanger on units built before 2004 and on the bottom on all after 2004
  - Your thermostat well may be leaking out of bottom of heat exchanger. It is located at the back bottom cap of the heat exchanger. Usually you need to contact factory or call for service center for this repair.
  - Make sure your inlet and outlet water connection to heat siphon are secure
- 3** WATER LEAK HEAT EXCHANGER- If it show positive AND the Heat Siphon is running it may be a plumbing leak at the inlet or outlet which your dealer must repair or you may have a cracked heat exchanger SEE BELOW

# HEAT SIPHON ANSWERBOOK

## Troubleshooting

### *Winterizing/ Frozen Heat Exchanger*

***If you live in a cold climate where freezing may occur, your Heat exchanger must be winterized or the heat exchanger will crack or burst***

WARNING: IF POOL OR SPA WATER IS ALLOWED TO FREEZE IN THE HEAT EXCHANGER, IT WILL EXPAND AND MAY CRACK THE HEAT EXCHANGER HOUSING REQUIRING HEAT EXCHANGER REPLACEMENT WHICH IS NOT COVERED BY THE WARRANTY.

Your Heat Siphon can stand the coldest of winter weather with no problems. The only precaution necessary is to make sure that the heat exchanger is drained of all pool water.

**1** Blow out heat exchanger with shop vac, etc and add a small amount of pool antifreeze, add to top outlet until it comes out bottom inlet and cap off.

- If in doubt add antifreeze to the outlet (top) until it comes out of the inlet (bottom) of the unit.
- In freezing weather the plastic cabinet material does become brittle and should be protected from any impact but can withstand normal moving and handling. It is totally unnecessary that your Heat Siphon be moved from its installed location for the winter, and in fact it is recommended that you leave it intact to avoid damage during moving.

**2** Make sure your inlet and outlet water connection to heat siphon are secure

### *Heat Siphon Running not heating*

**1** Are you are starting up for first time? Heat Siphon will have to run 24 to 48 hours straight to reached desired temperature

- Heat up using a heat pump is not quick like a gas heater. Gas heaters oversize so you can heat up quick and you shut down and let water slowly cool and start the process over. (To costly to maintain) Heat Siphon your run for 24 to 48 hours you can constantly maintain your desired temperature at all times efficiently

**2** Check air coming off top of Heat Siphon -It should feel colder than outside air -at least 5 degree colder. If the air out is cooler this is telling you Heat Siphon operation is OK, longer run times are required

- Do you have a solar cover on your pool? It may be to cold at night for heat siphon to maintain desired temperature.
- Air temperature below 50°F overnight- Heat Siphon will shut down and without a blanket you will experience heat loss.
- Air temperature below 50°F during an extended period Heat Siphon may not have adequate run-time hours to increase or maintain pool temperature especially without a solar blanket
- Make sure plumbing connections are correct. From pump to bottom connection of Heat Siphon and to pool from Top of Heat Siphon. If these are reversed your Heat Siphon will cycle on and off as it reaches within 3 to 5 degrees of your set point since the thermostat is looking at the "already heated" water coming out of the unit instead of the pool water temperature coming from the pool.

**3** If Air in is same temperature as air out:

- Call Factory or have an certified electrician check to make sure compressor plug is secure
- Call Factory or have an certified electrician check compressor run capacitor

# Dealer Sales & Service Guide

## Troubleshooting

### *Heat Siphon making noise, but fan not turning*

- 1 Call Factory or have an certified electrician check fan capacitor or fan motor.
  - Note: fan motor should be lubricated after a few years in operation

### *Heat Siphon making a noise running, fan is turning*

- 1 If it is raining, the sound may be due to water hitting fan blade
- 2 Call Factory or have an electrician check contactor, transformer, time delay or fan motor
- 3 THREE PHASE Scroll Compressor MODELS ONLY - switch any two hot leads as the compressor may be running backward. Usually it will also be abnormally noisy if running backward.

### *Heat Siphon Cycling off and on*

- 1 Check Water Flow. If this is a new start up. Your installer is required to adjust switch if no start at install.
  - Once Water flow switch is adjusted properly, it should never be adjusted again, unless pump change or water plumbing configuration changed to increase or decrease flow.
  - Make sure all bypass valves are in correct position
- 2 If you have experience power surges recently, this may be caused by the time delay inside control panel. It will need replaced, call for service or have a certified electrician replace

### *Heat Siphon Tripping Breaker*

- 1 Verify proper water flow. Make sure pump basket, filter and skimmers are clean. This would cause the Heat Siphon to go off on high refrigerant pressure switch trip due to overheating the heat exchanger. This would cause possible excessive amp draw which may trip your breaker
- 2 Have a certified electrician verify breaker is OK.
- 3 Call Factory or have an certified electrician check run capacitor and contactor
- 4 Call Factory or have an certified electrician check to make sure compressor plug is secure

### *Heat Siphon Heating Erratically*

Heat Siphon run times are essential in maintaining your desired water temperature, insure that you have long enough run times. If your not sure, go online and request a HSA which will give you an estimated run time per month.

- 1 Visit [www.heatsiphon.com\2freecostanalysis.html](http://www.heatsiphon.com\2freecostanalysis.html)
- 2 Make sure thermostat knob is not being changed to cause this problem. Turning up an down is not required and will not allow your Heat Siphon to run long enough to maintain the set point. *Set it and forget it.*
- 3 Your thermostat probe may be out of the thermostat well. Location is bottom of heat exchanger Usually you need to contact factory or call for service for this repair.
- 4 Check to see if your thermostat knob is not stripped and is turning normally

# HEAT SIPHON ANSWERBOOK

## Troubleshooting

### *Heat Siphon Not Shutting OFF*

#### **SHUT HEAT SIPHON OFF AT BREAKER AND CALL FOR SERVICE**

**One of the Following is probably causing this problem and must be corrected immediately:**

- Contactor becoming welded shut.
- Call Factory or have a certified electrician replace contactor and time delay
- Water pressure switch not adjusted correctly. Once Water flow switch is adjusted properly, it should never be adjusted again, unless pump change or water plumbing configuration changed to increase or decrease flow.

## Digital Display Models (D, DX and Z Series)

### *Heat Siphon Not Starting*

**1** Digital display showing Heat Set and Pool Set temperatures, but Heat Siphon wont start. Check Breaker for correct size and is not tripped - Breakers: EX; Domestic model 2.25hp (20amp) 3.25hp (40amp) 5hp (50amp) check specs for additional models

**2** Make sure Digital display is lit. Heat Siphon Player has a built in Flow count down. You will see *flo* then count down number (**10 to 0**) on screen until Heat Siphon verifies correct flow has been established for at least 10 seconds. Every time your pump is turned off and on again the 10 second flow countdown is restarted.

**3** Heat Siphon also has a built in 5 minute restart delay, when your pump is turn off and on again Heat Siphon display will be in a count down mode

**4** Heat Siphon is equipped with a water flow switch that turns it on when pool pump is turned on and shuts it off when the pool pump is turned off. Your installer is required to adjust switch at installation.

**5** Heat Siphon Will not start if air temperature is 50° F or less. It will run down to lower temp, but it must go above 50° F for it to restart.

**6** Check For Correct Water Flow. The Display will read *lo flo*.(Must be at least 25 Gallons per minute)

**7** Check pool filter pressure gauge

- Rule of thumb
- Sand filter low than 25 psi - if higher change sand
- Cartridge filter lower than 15 psi - To Check - remove cartridge & close filter lid and secure, turn system back on if Heat Siphon Starts then replace or clean filter
- DE (Diatomaceous Earth) Filter lower than 18 psi - if higher bump filter, backwash, re-prime earth

**8** Make sure you pool pump is fully primed, not air bubbles in basket

**9** Check For Correct Water Flow. The Display will read Cy H or Hi P .if there is not enough flow (Must be 25 Gallons per minute)

# Dealer Sales & Service Guide

## Troubleshooting

### *Heat Siphon Leaking Water*

***Check for condensation- capture water coming from your Heat Siphon and use your test kit to check for chlorine, etc.***

**1** NORMAL CONDENSATION - If it shows negative it is condensation - If your Heat Siphon does not have correct clearance 24" around each side, you will experience a lot of condensation Note: for best efficiency follow clearance instruction given in manual.

**2** WATER LEAK OTHER - If it show positive AND the Heat Siphon is NOT running and leaking:

- Check water pressure switch flow line inside heat siphon to make sure it is connected to the heat exchanger -It is on the top of the heat exchanger on units built before 2004 and on the bottom on all after 2004
- Your thermostat well may be leaking out of bottom of heat exchanger. It is located at the back bottom cap of the heat exchanger. Usually you need to contact factory or call for service center for this repair.

**3** WATER LEAK HEAT EXCHANGER- If it show positive AND the Heat Siphon is running and leaking

- Plumbing leak at the inlet or outlet which your dealer must repair or
- You may have a cracked heat exchanger SEE BELOW

### *Winterizing/ Frozen Heat Exchanger*

***If you live in a cold climate where freezing may occur, your Heat exchanger must be winterized or the heat exchanger will crack or burst***

WARNING: IF POOL OR SPA WATER IS ALLOWED TO FREEZE IN THE HEAT EXCHANGER, IT WILL EXPAND AND MAY CRACK THE HEAT EXCHANGER HOUSING REQUIRING HEAT EXCHANGER REPLACEMENT WHICH IS NOT COVERED BY THE WARRANTY.

Your Heat Siphon can stand the coldest of winter weather with no problems. The only precaution necessary is to make sure that the heat exchanger is drained of all pool water.

**1** Blow out heat exchanger with shop vac,etc and add a small amount of pool antifreeze, add to top outlet until it comes out bottom inlet and cap off.

- If in doubt add antifreeze to the outlet (top) until it comes out of the inlet (bottom) of the unit.
- In freezing weather the plastic cabinet material does become brittle and should be protected from any impact but can withstand normal moving and handling. It is totally unnecessary that your Heat Siphon be moved from its installed location for the winter, and in fact it is recommended that you leave it intact to avoid damage during moving.

### *Heat Siphon Running Not Heating*

**1** INITIAL STARTUP - Are you are starting up for first time? Heat Siphon will have to run 24 to 48 hours straight to reached desired temperature

- Heat up using a heat pump is not quick like a gas heater. Gas heaters oversize so you can heat up quick and you shut down and let water slowly cool and start the process over, because many pool owner feel that gas heater fuel costs are too high to maintain a constant temperature. With Heat Siphon you run for 24 to 48 hours initially then you can constantly maintain your desired temperature at all times for half or less than gas.

# HEAT SIPHON ANSWERBOOK

## Troubleshooting

*Check air coming off top of Heat Siphon -It should feel at least 5°F colder than outside air. If so, this tells you Heat Siphon operation is OK but longer run times are required and one of the following may be the culprit. IF AIR IN IS SAME TEMPERATURE AS AIR OUT GO TO STEP 5*

**2** HEAT SIPHON TOO SMALL - Digital Display showing cAnt HEAT - (can't heat) This is a result of your Heat Siphon running in excess of 24 hours with NO TEMPERATURE GAIN or a TEMPERATURE LOSS. This will be due to one of the following:

- You are adding a large amount of water to pool causing water temperature to drop
- Your pool is too large for the Heat Siphon model installed - Visit <http://www.heatsiphon.com/2006website/6.html> and fill out the free analysis sizing form
- Air temperature is too cool and the pool is experiencing too much heat loss, add a solar blanket

**3** LONGER PUMP/ HEATER RUNTIME REQ'D - Do you have a solar cover on your pool? It may be too cold at night for heat siphon to maintain desired temperature. Air temperature below 50°F during an extended period Heat Siphon may not have adequate runtime hours to increase or maintain pool temperature especially without a solar blanket

- Air temperature below 50°F overnight - Heat Siphon display will show *Lo Air* and will shut down until the air temperature goes back above 50°F
- Air temperature below 50°F for an extended period will disable Heat Siphon limiting runtime hours below what is needed to maintain pool temperature especially without a solar blanket

**4** Make sure plumbing connections are correct. From your pump goes to the bottom connection of Heat Siphon and to pool comes from the Top outlet.

- If INLET & OUTLET PIPING is REVERSED your Heat Siphon will cycle on and off as it reaches within 3 to 5 degrees of your set point
- REASON - the thermostat is "looking at" the "already heated" water coming out of the unit instead of the real pool water temperature coming from the pool so it will shut off until fresh cold pool water is sensed and it will turn back on after the 5 minute time delay.

**5** If Air in is same temperature as air out, a digital model's display will usually show *Lo P* error or Cyl Lo error (three Lo P errors within any 30 minute period)

- Call Factory or have an certified electrician check to make sure compressor plug is secure
- Call Factory or have an certified electrician check compressor run capacitor

### ***Heat Siphon Making Noise, but Fan Not Turning***

- Call Factory or have an certified electrician check fan capacitor or fan motor.
- Note: fan motor should be lubricated after a few years in operation

### ***Heat Siphon Making Noise Running, Fan is Turning***

- 1** If it is raining, the sound may be due to water hitting fan blade
- 2** If not, Call Factory or have an electrician check contactor, transformer, time delay or fan motor

### ***Heat Siphon Cycling off and on***

- 1** Check Water Flow. If this is a new start up. Your installer is required to adjust switch if no start at install.

# Dealer Sales & Service Guide

## Troubleshooting

- Once Water flow switch is adjusted properly, it should never be adjusted again, unless pump is changed or water plumbing configuration changed to increase or decrease flow.
  - Make sure all bypass valves are in correct position
- 2** If you have experience power surges recently, this may be caused by erratic behavior in the Player - reset by cycling the breaker off for a minute then back on. If the display is unintelligible or erratic behavior continues it will need replaced, call for service or have a certified electrician replaced.
  - 3** If error codes are being displayed see the section below on DIGITAL ERROR CODES

### *Heat Siphon Tripping Breaker*

- 1** Verify proper water flow. Make sure pump basket, filter and skimmers are clean. This would cause the Heat Siphon to go off on high refrigerant pressure switch trip due to overheating the heat exchanger. This would cause possible excessive amp draw which may trip your breaker
- 2** Have a certified electrician verify breaker is OK.
- 3** Call Factory or have an certified electrician check run capacitor and contactor
- 4** Call Factory or have an certified electrician check to make sure compressor plug is secure

### *Heat Siphon Heating Erratically*

Heat Siphon run times are essential in maintaining your desired water temperature, insure that you have long enough run times. If your not sure, go online and request a HSA which will give you an estimated run time per month.

- 1** Visit <http://www.heatsiphon.com/2006website/6.html> and fill out the free analysis sizing form
- 2** Make sure thermostat knob is not being changed to cause this problem. Set it and forget it. Turning up an down is not required.
- 3** Your thermostat probe may be out of the thermostat well. Location is bottom of heat exchanger Usually you need to contact factory or call for service for this repair.
- 4** Check to see if your thermostat knob is not stripped and is turning normally

### *Heat Siphon Not Shutting OFF*

#### **SHUT HEAT SIPHON OFF AT BREAKER AND CALL FOR SERVICE**

**One of the Following is probably causing this problem and must be corrected immediately:**

- Contactor becoming welded shut.
- Call Factory or have a certified electrician replace contactor and time delay
- Water pressure switch not adjusted correctly. Once Water flow switch is adjusted properly, it should never be adjusted again, unless pump change or water plumbing configuration changed to increase or decrease flow.