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## A. Changing the Control Board:

Required Tools: Needle nose pliers, Phillips and slotted screw drivers, heat sink compound (or thermal grease) and a battery powered voltmeter.

***WARNING: To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old control board and while installing the new control board.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. You may want to label the incoming power wires to make replacement easier and to avoid installing them out of phase or out of sequence. With a *slotted screw driver*, remove the power wires from the screw lugs on the right hand side of the board.
3. Using a pair of *needle nose pliers*, pull all of the control wires off the spades on the circuit board. Be sure to pull on the connector, not the wire.

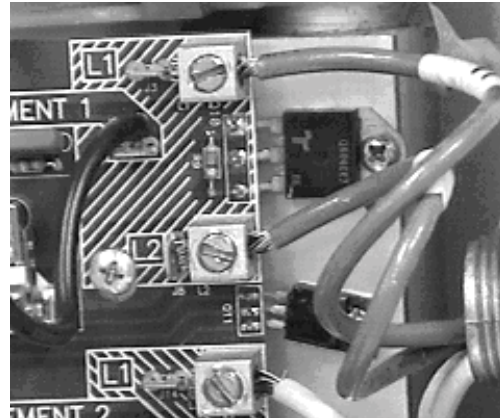


Figure: Control board power lugs (L1 & L2) and the triacs attached with Phillips head screws

4. Using a *Phillips head screw driver*, unscrew the triacs from the heat sink to the right of the board. Take care that the screws are not lost, they will be needed for the new board.
5. Using a *Phillips head screw driver*, remove the four mounting screws from the board, be ready to support the board as you remove the screws. Be careful not to get the white heat sink compound on your clothing, as it is difficult to wash out.
6. Place *heat sink compound* on the triacs being careful not to bend the leads. Be sure to get a thin coating covering the entire back of the triacs, if you don't, they will burn out as soon as you power up the heater. To maximize thermal conduction, it is advisable to clean the backs of the triacs with alcohol before applying the heat sink compound.
7. Loosely mount the board to the heater with at least two Phillip head screws. Screw the triacs down to the heat sink; be sure they are flat against the heat sink. Don't twist the head off of the screw, if you feel any resistance, back the screw out and try again.
8. After the triacs are snug, tighten down the board screws (8 in.-lbs.). Don't tighten them so much that you bend the board.

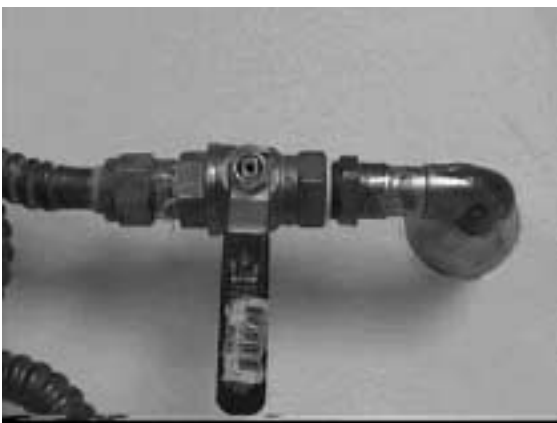
9. Replace the main power wires into the screw lugs and tighten. If the wires are stranded, make sure all strands are in the lug to avoid possible shorting of the control board.
10. Replace the control and element wires (see schematic inside the protective cover).
11. Using the Matching Procedure above, match the control to the thermistors and place the heater back in service.

## **B. Replacing a Heating Element:**

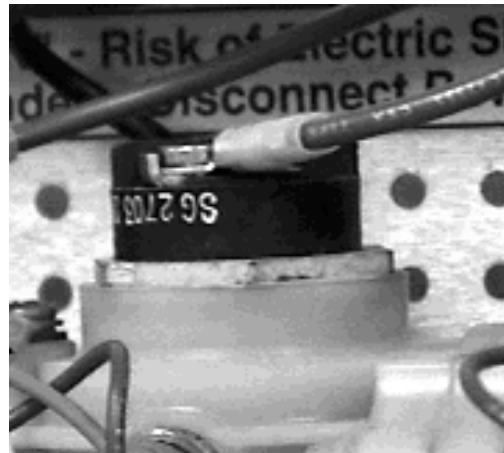
**Required Tools:** Phillips head screw driver, 1 \_ inch element wrench or adjustable wrench, bucket, rag, hair dryer, battery powered voltmeter.

***WARNING: To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old heating element and while installing the new heating element.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.



**Figure:** Typical inlet valve (shown in a closed position)



**Figure:** Installed heating element



**Figure:** Heating elements used in Seisco water heaters, standard 1 screw flange, 12 long.

3. Using a *large Phillips screw driver*, remove the six screws from the right bottom clean out plate on the under side of the heating chamber to drain the remaining water from the heater into a *bucket*. Replace the plate after draining.
4. Using a *Phillips head screw driver*, remove the two screws holding the red and black wires to the top of the heating element.

5. Use the *element wrench* to loosen the heating element. Wrap a rag around the heating element to prevent water from dripping onto the control board. Remove the heating element and the o-ring seal from the heater.
6. Make sure the new o-ring seal is in position on the new heating element and install the assembly into the heater. Tighten the element until snug (not more than 6 ft-lbs.).
7. Replace the red and black wires back onto the top of the heating element with the two Phillip head screws.
8. Make sure the hex head drain plug screw is tight and turn on the water supply to the heater. Check for leaks and water seepage around the heating element and drain plug.
9. If any water dripped onto the control board, use a *hair dryer* to dry the board and the rest of the heater. Make sure to dry behind the board as well. The heat from the hair dryer will not harm the control board.
10. Fill up the heater with water. If there are no water leaks, turn all the power back on.

Note: If the heater sounds an alarm and a 126 diagnostic code appears, turn the power off, check for leaks again and dry the entire heater thoroughly. The alarm means that moisture was detected and the control disabled the heater.

### **C. Thermistor Replacement:**

Required Tools: **Small opened ended box wrench, deep socket wrench or crescent wrench, needle nose pliers, battery powered volt meter, bucket.**

***WARNING: To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old thermistor and while installing the new thermistor.***



**Figure:** Thermistor #4 or TH-4 shown with ohm meter probes attached to measure resistance.

The TH-IN thermistor is located under the right side of the heater directly below the inlet fill tube. TH1 and TH3 are located near the top of chambers 2 and 4. TH2 and TH4 are located near the bottom of chambers 2 and 4.

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.
3. For TH1, TH2, TH3 and TH4, remove the green wire with *needle nose pliers* and pull the red capped wire from the stud on the end of the thermistor.
4. For TH-IN (the inlet thermistor), remove the green wire with *needle nose pliers* and the red wire by loosening the hex nut with a *wrench* while holding the back nut with *pliers* or another *wrench*.
5. Next, while removing any of the thermistors with a *socket wrench* or *box wrench*, have a *bucket* ready to collect water that will drain from the hole that the thermistor occupied in the chamber.

6. Install the new thermistor making sure the new seal is positioned around the collar of the thermistor.
7. Turn the thermistor clockwise by hand. **Caution:** Only use the wrench to make the thermistor snug and only tightened to 14 in.-lbs., which is a little past finger tight. The seal will do the work to prevent leaking not the tightness.
8. Reconnect the green and red wires to the thermistor.
9. If any water dripped onto the control board, use a *hair dryer* to dry the board and the rest of the heater. Make sure to dry behind the board as well. The heat from the hair dryer will not harm the control board.
10. Fill up the heater with water. If there are no water leaks, turn the power back on.

**Note:** If the heater sounds an alarm and a 126 diagnostic code appears, turn the power off, check for leaks again and dry the entire heater thoroughly. The alarm means that moisture was detected and the control disabled the heater.

### **D. High Limit Switch Replacement:**

There are two high limit switches located near the top of chambers 1 and 3 in line across with thermistors TH1 and TH3. There are two brown wires connected to each high limit switch.



**Figure:** High limit switch, reset button shown in the middle between the two spade connectors.

Remove the two brown wires with *needle nose pliers* and use the same tools and procedure above that are described for TH1 through TH4 thermistor replacement. Again, only tighten the high limit switch to 14 in.-lbs. (same tightening torque as the thermistors)

### **E. Level Sensor Replacement:**

There are two level detector sensors (brass screws) that thread into the top of the heating chambers. They are located between cylinders 1 & 2 and cylinders 3 & 4. There is one yellow wire connected to each sensor and its other end to the top of the control board.

**Required Tools:** Phillips screw driver, battery powered volt meter, and rag.

**WARNING:** To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old level detector and while installing the new level detector.

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.
3. Remove the level detector screw with a *Phillips screw driver*. Use the *rag* to dry up any water that may drip from the hole left by the removed screw. Save the wire lug and yellow wire for the new or replacement level detector screw.
4. Install a new seal by threading it onto the new level detector screw. Install the wire lug and screw the new level detector assembly into the threaded chamber with the *Phillips*

*screw driver*. Do not over tighten, 8 inch-lbs. maximum torque. The seal will do the work.

5. Fill up the heater with water. If there are no leaks, turn the power back on.

## **F. Inlet Water Fitting Replacement:**

The    inch threaded inlet water fitting (or nipple) is located vertically on the right side of the heating chamber. It is attached to the heat sink, the inlet guide and lower inlet guide. It will be necessary to remove the control board.

**Required Tools: Large & small Phillips screw drivers, battery powered volt meter, rag, bucket, two pipe wrenches, needle nose pliers, heat sink compound and Teflon tape pipe sealer.**

***WARNING: To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old inlet fitting and while installing the new inlet fitting.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.
3. Using a *large Phillips screw driver*, remove the six screws from the right bottom clean out plate on the under side of the heating chamber to drain the remaining water from the heater into a *bucket*. Replace the plate after draining.
4. Remove the control board according to procedure **A. Changing The Control Board.**
5. Using *two pipe wrenches*, disconnect the incoming water line threaded onto the top of the inlet fitting. Use the *rag* to prevent any

water dripping or spraying, which should be very little if any.

6. Rotate the heat sink by hand far enough to the right and left to allow access and loosening of the two set-screws using a *small Phillips screw driver*. Use the holes through the right side of the metal frame to reach the set-screws with the screw driver. It is not necessary to remove the set-screws. Only back them out approximately 3/16 of an inch.
7. Pull the inlet fitting tube straight up and out.
8. Insert the new inlet tube, with o-rings in place, down through the guide and carefully press it into the heat sink. Some rotating of the inlet tube may be necessary as it is guided down.
9. After seating the inlet tube, tighten the set-screws. The tube should be free to rotate after turning the set-screws into the grooves. Do not over tighten the set-screws.
10. Wrap the *Teflon tape pipe sealer* around the threads of the inlet fitting and reconnect the incoming water line. **Do not use Plumber s Putty or Pipe Dope on the threads of the inlet and outlet fitting connections. If using CPVC or PVC primer and glue, avoid contact of these substances with the heater s inlet and outlet fittings. These substances are highly corrosive and can damage the inlet and outlet fittings. Leaks may occur as a result and cause severe damage to the heater.**
11. Turn on the water and check for leaks.
12. Re-install the control board and turn on the power to the heater.

## **G. Outlet Water Fitting Replacement:**

The    inch outlet water fitting (or nipple) is located vertically on the left side of the heating chamber. It is not necessary to remove the control board or the heater from the wall to replace the outlet fitting.

Required Tools: **Phillips screw drivers, battery powered volt meter, rag, bucket, two pipe wrenches, needle nose pliers and Teflon tape pipe sealer.**

***WARNING: To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old outlet fitting and while installing the new outlet fitting.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.
3. Using a *large Phillips screw driver*, remove the six screws from the right bottom clean out plate on the under side of the heating chamber (there is only one clean out plate on a two chamber heater) to drain the remaining water from the heater into a *bucket*. Replace the plate after draining.
4. Using *two pipe wrenches*, disconnect the outlet water line threaded onto the top of the outlet fitting. Use the *rag* to prevent any water dripping or spraying, which should be very little if any.
5. Remove the two set-screws at the top of the outlet tube that hold the outlet water fitting in place.
6. Slide the outlet fitting up and out of the unit.
7. After sliding the new outlet tube in place, tighten the set-screws. The tube should be free to rotate after turning the set-screws into the grooves. Do not over tighten the set-screws.
8. Wrap the *Teflon tape pipe sealer* around the threads of the outlet fitting and reconnect the

outlet water line. **Do not use Plumber s Putty or Pipe Dope on the threads of the inlet and outlet fitting connections. If using CPVC or PVC primer and glue, avoid contact of these substances with the heater s inlet and outlet fittings. These substances are highly corrosive and can damage the inlet and outlet fittings. Leaks may occur as a result and cause severe damage to the heater.**

9. Before turning on the water, make sure the control board is covered and protected from any possible water leak or spray. Turn on the water and check for leaks.
10. If there are no leaks, remove the covering or protector from the control board and turn on the power to the heater.

## **H. Inlet Guide Seal Replacement:**

The inlet guide seal is located on the inlet guide that fits over the upper inlet water tube. It will be necessary to remove the heater from the wall and the control board, in order to replace the seal and the inlet guide itself.

Required Tools: **Large & small Phillips screw drivers, battery powered volt meter, rag, bucket, two pipe wrenches, needle nose pliers, heat sink compound and Teflon tape pipe sealer.**

***WARNING: To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old inlet guide seal and while installing the new seal.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.

3. Using a *large Phillips screw driver*, remove the six screws from the right bottom clean out plate on the under side of the heating chamber to drain the remaining water from the heater into a *bucket*. Replace the plate after draining.
4. Remove the control board according to procedure **A. Changing The Control Board.**
5. Using *two pipe wrenches*, disconnect the incoming and outgoing water lines threaded onto the top of the inlet and outlet fittings. Use the *rag* to prevent any water dripping or spraying, which should be very little if any.
6. Back out the AC power wires through the right side of the metal base pan.
7. Remove the entire heater assembly from the wall by removing the 4 mounting screws.
8. Remove the four Phillips head screws in the back of the assembly that hold the heating chamber to the metal base pan.
9. Remove the 2 small screws that hold the inlet guide to the top right of the chamber assembly.
10. Slide the inlet guide up the inlet tube to expose the seal. Be careful not to pull the pipe outward as it may damage the lower inlet port.
11. Note: If it is necessary at this point to remove the inlet guide for replacement, then loosen the 2 screws in the heat sink and remove the inlet tube to separate the inlet guide.
12. Replace the seal and re-assemble in the reverse order
13. Wrap the *Teflon tape pipe sealer* around the threads of the inlet and outlet fittings before reconnecting the incoming outgoing water lines. **Do not use Plumber s Putty or Pipe Dope on the threads of the inlet and outlet fitting connections. If using CPVC or PVC primer and glue, avoid contact of these**

**substances with the heater s inlet and outlet fittings. These substances are highly corrosive and can damage the inlet and outlet fittings. Leaks may occur as a result and cause severe damage to the heater.**

14. Turn on the water and check for leaks.
15. Re-install the control board and turn on the power to the heater. Make sure that all of the circuits are on to power the heater.

### **I. Heat Sink Replacement:**

The heat sink is a metallic bar (aluminum or copper) located to the right of the heating chamber and it covers part of the inlet tube. It will be necessary to remove the control board as it is attached to the heat sink.

**Required Tools: Large & small Phillips screw drivers, battery powered volt meter, rag, bucket, two pipe wrenches, needle nose pliers, heat sink compound and Teflon tape pipe sealer.**

***WARNING: To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old heat sink and while installing the new heat sink.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.
3. Using a *large Phillips screw driver*, remove the six screws from the right bottom clean out plate on the under side of the heating chamber (there is only one clean out plate on a two chamber heater) to drain the remaining water from the heater into a *bucket*. Replace the plate after draining.

4. Remove the control board according to procedure **A. Changing The Control Board.**
5. Using *two pipe wrenches*, disconnect the incoming water line threaded onto the top of the inlet fitting. Use the *rag* to prevent any water dripping or spraying, which should be very little if any.
6. Remove the two screws from the top of the heat sink and the two screws from the bottom. This will require rotating the heat sink to gain access to the screws. Also, there are holes through the right side of the metal casing to allow the screw driver to fit through.
7. Slide the top inlet tube up and out of the heat sink. There are two o-ring seals on the inlet tube.
8. Slide the heat sink up and off the lower inlet adapter tube and remove the heat sink. At this point, if necessary, the lower inlet adapter tube can be removed for replacement.
9. Replace the heat sink and re-assemble in the reverse order
10. Wrap the *Teflon tape pipe sealer* around the threads of the inlet fitting and reconnect the incoming water line. **Do not use Plumber s Putty or Pipe Dope on the threads of the inlet and outlet fitting connections. If using CPVC or PVC primer and glue, avoid contact of these substances with the inlet and outlet fittings on the heater. These substances are highly corrosive and can damage the inlet and outlet fittings. Leaks may occur as a result and cause severe damage to the heater.**
11. Turn on the water and check for leaks.
12. Re-install the control board and turn on the power to the heater. Make sure that all of the circuits are on to power the heater.

## **J. Lower Inlet Adapter Replacement:**

The inlet guide seal is located on the inlet guide that fits over the upper inlet water tube. It will be necessary to remove the heater from the wall and the control board from the chamber, in order to replace the seal and the inlet guide itself.

**Required Tools:** **Large & small Phillips screw drivers, battery powered volt meter, rag, bucket, two pipe wrenches, needle nose pliers, heat sink compound and Teflon tape pipe sealer.**

***WARNING: To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old inlet adapter and while installing the new adapter.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.
3. Using a *large Phillips screw driver*, remove the six screws from the right bottom clean out plate on the under side of the heating chamber to drain the remaining water from the heater into a *bucket*. Replace the plate after draining.
4. Remove the control board according to procedure **A. Changing The Control Board.**
5. Using *two pipe wrenches*, disconnect the incoming and outgoing water lines threaded onto the top of the inlet and outlet fittings. Use the *rag* to prevent any water dripping or spraying, which should be very little if any.
6. Back out the AC power wires through the right side of the metal base pan.



7. Remove the entire heater assembly from the wall by removing the 4 mounting screws.
8. Remove the four Phillips head screws in the back of the assembly that hold the heating chamber to the metal base pan.
9. Remove the two screws that hold the lower inlet guide to the lower right of the chamber assembly.
10. Remove the two screws at the bottom of the heat sink and slide the lower inlet tube and lower inlet adapter down and remove.
11. Separate the adapter from the tube by removing the two screws from the lower inlet adapter. At this point, if necessary, replace the lower inlet seal.
12. Re-assemble in the reverse order.
13. Wrap the *Teflon tape pipe sealer* around the threads of the inlet and outlet fittings before reconnecting the incoming outgoing water lines. **Do not use Plumber s Putty or Pipe Dope on the threads of the inlet and outlet fitting connections. If using CPVC or PVC primer and glue, avoid contact of these substances with the inlet and outlet fittings on the heater. These substances are highly corrosive and can damage the inlet and outlet fittings. Leaks may occur as a result and cause severe damage to the heater.**
14. Turn on the water and check for leaks.
15. Re-install the control board and turn on the power to the heater. Make sure that all of the circuits are on to power the heater.

### **K. Outlet Tube Seal Replacement:**

The outlet tube seal is located between the outlet tube connection and the left side of the heating chamber. It will be necessary to remove the heater from the wall.

**Required Tools: Large & small Phillips screw drivers, battery powered volt meter, rag,**

**bucket, two pipe wrenches, needle nose pliers and Teflon tape pipe sealer.**

***WARNING: To avoid electrical shock, make sure that the all of the power is off to the heater before attempting to remove the old outlet tube seal and while installing the new seal.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.
3. Using a *large Phillips screw driver*, remove the six screws from the right bottom clean out plate on the under side of the heating chamber to drain the remaining water from the heater into a *bucket*. Replace the plate after draining.
4. Using *two pipe wrenches*, disconnect the inlet and outlet water lines threaded onto the top of the inlet and outlet fittings. Use the *rag* to prevent any water dripping or spraying, which should be very little if any.
5. Back out the AC power wires through the right side of the metal base pan.
6. Remove the entire heater assembly from the wall by removing the 4 mounting screws.
7. Remove the four Phillips head screws in the back of the assembly that hold the heating chamber to the metal base pan.
8. Remove the four screws that hold the outlet tube to the left side of the chamber assembly, exposing the seal for replacement if necessary.
9. Re-assemble in the reverse order.

1. Wrap the *Teflon tape pipe sealer* around the threads of the inlet and outlet fittings before reconnecting the inlet and outlet water lines. **Do not use Plumber s Putty or Pipe Dope on the threads of the inlet and outlet fitting connections. If using CPVC or PVC primer and glue, avoid contact of these substances with the inlet and outlet fittings on the heater. These substances are highly corrosive and can damage the inlet and outlet fittings. Leaks may occur as a result and cause severe damage to the heater.**
10. Turn on the water and check for leaks.
11. Turn on the power to the heater. Make sure that all of the circuits are on to power the heater.

### **L. Lower Plate / Seal Replacement:**

The lower clean-out plate(s) are located on the bottom of the chambers, secured by six Phillip head screws.

**Required Tools:** Large Phillips screw driver, battery powered volt meter, and bucket.

***WARNING: To avoid electrical shock, make sure that all of the power is off to the heater before attempting to remove the old outlet tube seal and while installing the new seal.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.
3. Using a *large Phillips screw driver*, remove the six screws from the bottom clean out plate(s) on the under side of the heating chambers to drain the remaining water from the heater into a *bucket*.

4. Replace the plate and / or seal.
5. Re-assemble in reverse order.
6. Turn on the water and check for leaks.
7. Turn on the power to the heater.

### **M. Four Chamber Seal Replacement:**

Before beginning, it would be advisable to check the four bolts that hold the two chamber halves together before attempting the replacement of the seal. If these bolts can be tightened to stop a leak, major replacement costs may be avoided. Also, the replacement of the inter chamber seal is seldom the correct approach, because it is more labor intensive and may be less cost effective than replacing the entire chamber body.

It will be necessary to remove the entire heater from the wall and the control board from the chamber assembly.

**Required Tools:** Large & small Phillips screw drivers, battery powered volt meter, rag, bucket, two pipe wrenches, needle nose pliers, heat sink compound and Teflon tape pipe sealer.

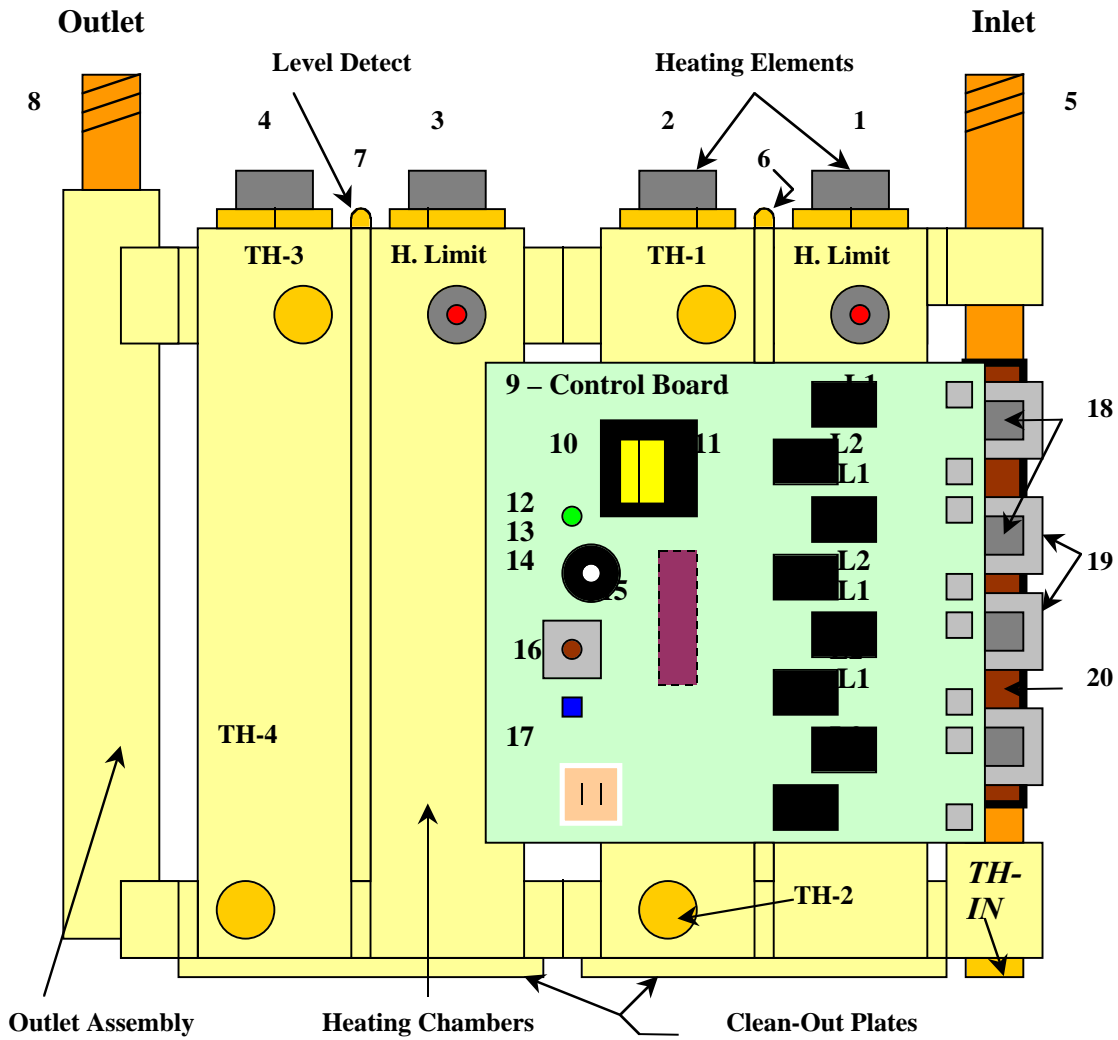
***WARNING: To avoid electrical shock, make sure that the all of the power is off to the heater before attempting to remove the old chamber seal and while installing the new seal.***

1. Turn off all the power to the heater. Confirm the power is off with a *voltmeter*, even if the status light (or LED) on the control board is off. There may be multiple breakers powering your model heater.
2. Open a hot water faucet nearby. While the water is running, turn off the water supply to the heater. This will help siphon some of the water out of the heater.
3. Using a *large Phillips screw driver*, remove the six screws from the bottom clean out plates on the under side of the heating

chambers to drain the remaining water from the heater into a *bucket*.

4. Remove the control board according to procedure **A. Changing The Control Board**.
5. Using *two pipe wrenches*, disconnect the incoming water line threaded onto the top of the inlet fitting. Use the *rag* to prevent any water dripping or spraying, which should be very little if any.
6. Back out the AC power wires through the right side of the metal base pan.
7. Remove the entire heater assembly from the wall by removing the 4 mounting screws.
8. Remove the four Phillips head screws in the back of the assembly that hold the heating chamber to the metal base pan.
9. Remove the four bolts that hold the two chamber assemblies together and replace the inter seals.
10. At this point, if necessary, replace the right or the left chamber half. Make sure to use the removal procedures for the inlet tubes, guides, seals and adapters to reuse if replacing the right side chamber assembly. Remove the outlet tube and seal if replacing the left side chamber assembly.
11. Re-assemble in the reverse order.
12. Wrap the *Teflon tape pipe sealer* around the threads of the inlet and outlet fittings before reconnecting to the inlet and outlet water lines. **Do not use Plumber s Putty or Pipe Dope on the threads of the inlet and outlet fitting connections. If using CPVC or PVC primer and glue, avoid contact of these substances with the inlet and outlet fittings on the heater. These substances are highly corrosive and can damage the inlet and outlet fittings. Leaks may occur as a result and cause severe damage to the heater.**
13. Turn on the water and check for leaks.
14. Turn on the power to the heater.

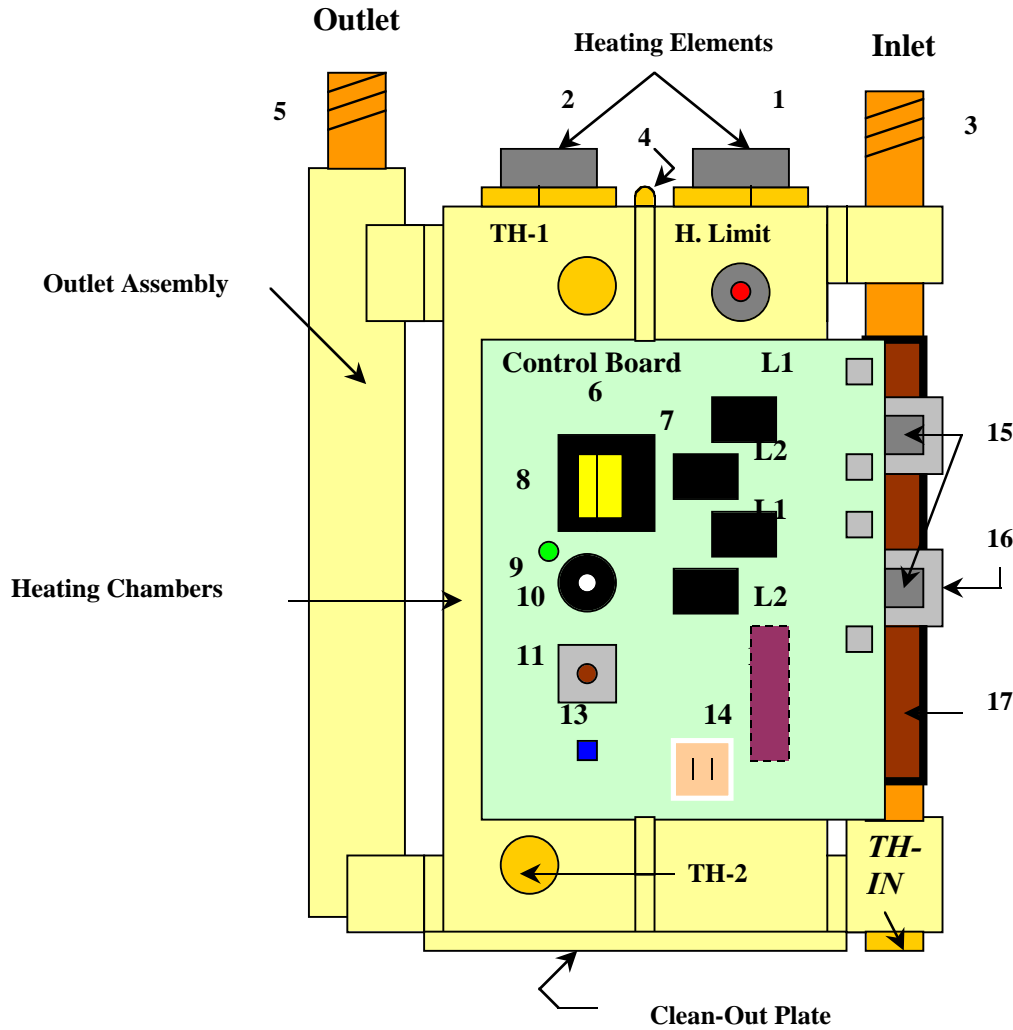
# N. SEISCO® - Four Chamber Models (RA-18, 22 & 28) Internal Workings and Parts Identification



<b>LEGEND</b>	
1	– Heating Element #1
2	– Heating Element #2
3	– Heating Element #3
4	– Heating Element #4
5	– Inlet Water Tube, _ ”
6	– Water-Level Detect Screw
7	– Water-Level Detect Screw
8	– Outlet Water Tube, _ ”
9	– Printed Circuit Board
10	– Transformer
11	– Heating Element Relays (8 ea.)
12	– LED Light Indicator
13	– Audible Speaker
14	– Output Temperature Control

<b>LEGEND</b>	
15	– Microprocessor Control Chip
16	– Blue Button; Manual Audible Activation
17	– Terminal Spades for Leak Detect Wires
18	– Triacs (4 each)
19	– Triac Mounting Blocks to Heat Sink (4 ea.)
20	– Copper Heat Sink Tube
L1	– Power Connection Lugs (208 – 240 VAC)
L2	– Power Connection Lugs (208 – 240 VAC)
H. Limit	: High-Temperature Limit Switches (2)
TH-IN	: Inlet Temperature Sensor
TH-1	: Chamber Temperature Sensor #1
TH-2	: Chamber Temperature Sensor #2
TH-3	: Chamber Temperature Sensor #3
TH-4	: Chamber Temperature Sensor #4

# N. SEISCO® - Two Chamber Models (RA-9, 11, 14) Internal Workings and Parts Identification



<b>LEGEND</b>	
1	– Heating Element #1
2	– Heating Element #2
3	– Inlet Water Tube, _”
4	– Water-Level Detect Screw
5	– Outlet Water Tube, _”
6	– Printed Circuit Board
7	– Heating Element Relays (4)
8	– Transformer
9	– LED Light Indicator
10	– Audible Speaker
11	– Output Temperature Control
12	– Microprocessor Control Chip
13	– Blue Button; Manual Audible Activation

<b>LEGEND</b>	
14	– Terminal Spades for Leak Detect Wires
15	– Triacs (2)
16	– Triac Mounting Blocks to Heat Sink (2)
17	– Copper Heat Sink Tube
L1	– Power Connection Lugs (208 – 240 VAC)
L2	– Power Connection Lugs (208 – 240 VAC)
H. Limit	: High Temperature Limit Switch
TH-IN	: Inlet Temperature Sensor
TH-1	: Chamber Temperature Sensor #1
TH-2	: Chamber Temperature Sensor #2