SERVICE MANUAL

SERIAL NUMBERS 35389 AND UP

STEAM 'N' HOLD™ II

WORLD'S BEST STEAMER

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INTRODUCTION-CONNECTIONLESS 3 & 6 PAN MODELS

The AccuTemp Steam 'N' Hold steamer takes time-proven method of cooking with steam and adds the advantage of control. This is accomplished by reducing the internal atmospheric pressure of the Steam 'N' Hold cooking chamber, thereby lowering the temperature at which water begins to boil. This allows the operator to control the temperature of the steam for cooking. Controlling the steam temperature gives the operator the ability to cook the food to the desired temperature without over-cooking, resulting in a more tender, juicier, nutritious product with less shrinkage than was previously possible. Once the cooking time expires, the steamer automatically enters the "Hold" mode. In this mode, the thermostat regulates the internal temperature, but vacuum is released, returning the cooking chamber to normal atmospheric pressure. At this time, steam is no longer generated and the cooking chamber is held at the desired temperature at a relative humidity of 100%. This eliminates food from drying out by suppressing the evaporation of the products' natural moisture. As a result, most food products can be held in a ready to serve state for several hours after cooking, with no appreciable loss in taste, appearance or consistency.

SEQUENCE OF OPERATION

MAIN ON / OFF SWITCHES

Power is supplied through the power cord to the main contactor. Power comes off the back side of the contactor to the water board. While power is supplied to the water board, current is conducted thru the water sensors in the cooking chamber which must sense that water is in the unit to allow it to come on. The over-temp and water board are in series. Both must be satisfied before the unit can turn on. When the ON button is pressed it completes the circuit. The main contactor will pull in and will send power to the solid state heater relays at the same time latching the CR1 and CR2 control relays. Power is also sent to the timer and thermostat. The timer has 3 settings: HOLD, TIME and CONTINUOUS.

When in fast cook, the solid state relay(s) (SSR) will get power from both the thermostat and pressure switch. When the temperature reaches the thermostat setting the power from the thermostat will drop off and only the pressure switch will power the SSR. When in thermostat cook mode, the thermostat powers the SSR independently without help from the pressure switch.

TROUBLE SHOOTING GUIDE

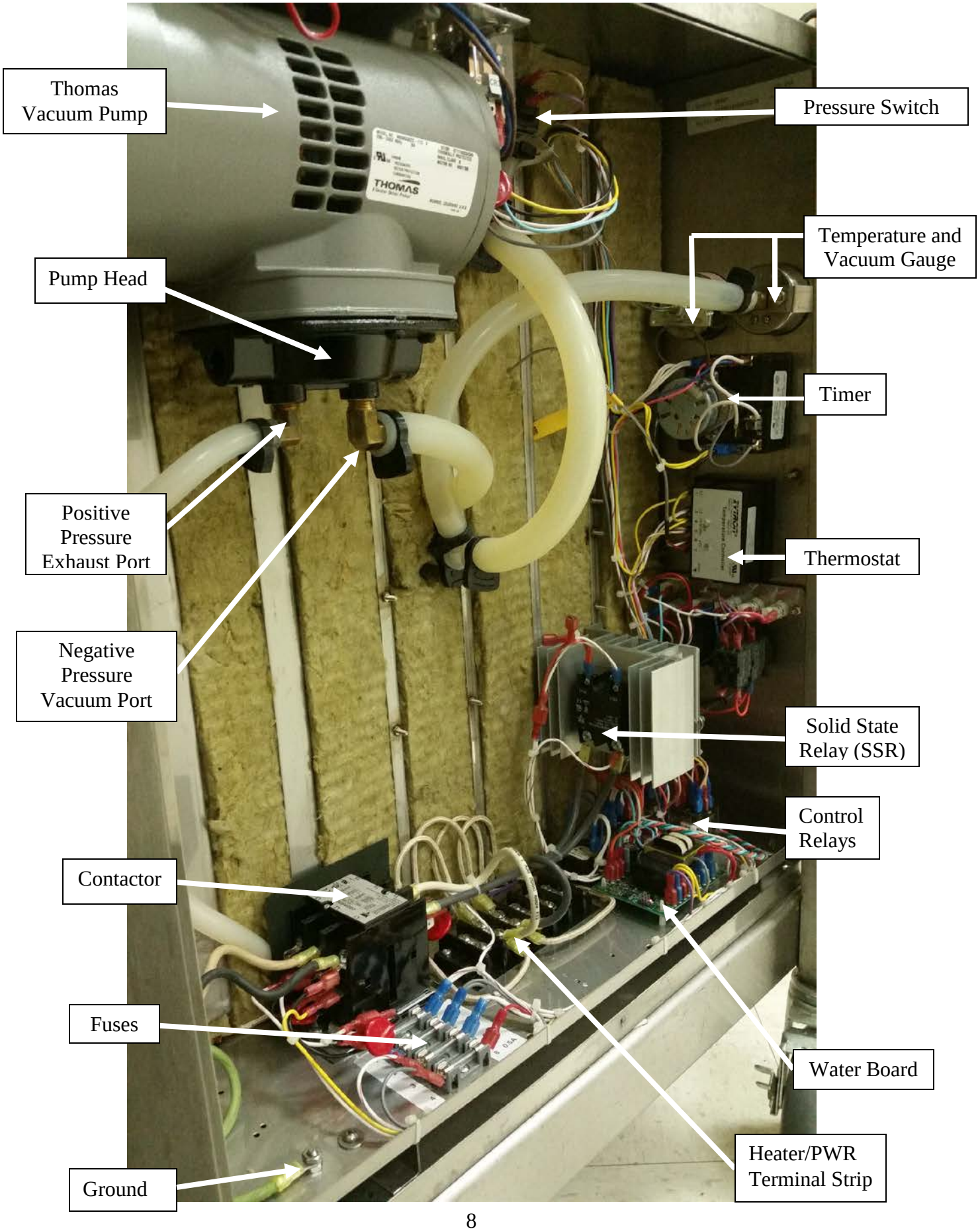
STEAMER TROUBLE SHOOTING GUIDE		
SYMPTOM	**POSSIBLE CAUSE**	**EVALUATION**
Unit will not power up	No water in the steamer	Fill unit with up to 3 gallons of water. Make sure the water level is above the sensors.
	Water Sensors	Scrub and clean with a scotch bright pad.
	Incoming power supply	Check breakers. Check the power plug to be sure it is firmly in the receptacle. Measure incoming power; call the Power Co., if necessary.
	Steamer fuses	Check and or replace
	Fuse holder	Check and or replace
	On switch and contacts	Check for continuity
	Control Relays	Check continuity of the coil. Check for power to relay coil. Visually check for contact pull in and contact condition. Check for voltage across relay terminals.
	Water Board	Check to see if the LED light on the water board is on and blinking when the unit is powered up. When water is in the unit there should be a slow flash on the water board. A fast flashing light when empty, water is low or sensors are dirty.
Unit is cooking slow	Low vacuum pressure, Vacuum pump.	Looking at the unit, remove the left hand side panel. Locate the vacuum gauge hose and disconnect the hose at the chamber end/side of the hose, leaving the gage side connected. Next, locate the vacuum pump and disconnect the hose on the right/forward side of the pump at the elbow. Now connect the vacuum gauge hose directly to the vacuum pump. The correct reading should be between 20 to 25 inches of Vacuum. Less than 20 inches indicates a faulty pump, hose or broken gauge. Check all the hoses and connections for any leaks. If the pump does not run at all, give the fan blade a push start through the grill. If the pump starts, it has a bad run capacitor. Replace as needed.

Unit is cooking slow (cont.)	Pressure switch	In the FAST cook mode, the pressure switch will take over once the steam chamber reaches the thermostat setting. As the temperature rises, the vacuum pressure falls. Once the unit reaches boiling point, the vacuum will be at zero. Cycle times when the unit is calling for heat should be around 8 to 10 seconds on and 60 to 90 seconds off. Replace the pressure switch if the cycle times are off, if you can suck air through the switch or you have constant steam blowing past the door seal.
	Heating elements	Check for resistance between the two outside double white wires on the terminal block. On 17kW units check to terminals 1 & 6, 2 & 5, and 3 & 4 on the terminal block
	Door Gasket	Inspect gasket for nicks, cuts, abrasions or discoloration. Replace as needed
	Door Alignment	Perform the Dollar Bill test on the door. Close the door on a Dollar Bill. (all four sides of the door) There should be resistance when pulling the bill out. If the bill comes out easily, turn on the unit and remove the hinge covers. Loosen all of the screws, turn the thermostat to150 degrees, enable the timer, shut the door and turn the unit on so it creates a vacuum and draws the door in and then retighten the screws.
	Door Sealing	If the door alignment process does not fix the problem, remove the inner door and place it on a flat surface and check for any warpage. Also check that the suctions cups on the inner door are sealing. If they have turned gray or white then replace. Use one of the pan rails as a straight edge. Straighten and re-bend the inner door until it is flat and re-install using the door alignment procedure.
	Quick Release Door	On the inner door, verify that the four suction cups are sealing and that the spring is functioning properly. Replace as needed.
Unit is over-temping	Solid State Relay	Check the cycle times as stated above. Check the voltage between T1 and L1. If the LED light is on, there should be 0 voltages. If the unit does not cycle, and the LED stays on, replace the relay.
	Over-temp	Ohm out the Hi-limit to see if it is good. Clean the sensors and check the water board. If the low water light comes on while the unit is heating up, refer to the Hi-limit procedure.

Unit is over-temping (cont.)	Thermocouple (type J)	Check that the thermocouple is wired correctly to the thermostat. White is positive (Terminal 6) and Red is negative (terminal 7). Reversing the terminals will result in a run-away condition. See attached chart for DC-milli volt readings.
	Thermostat	At altitudes of 2,500ft, water boils at about 207 degree's. In thermostat mode the unit starts blowing steam out the door just after heat light goes out. (It will do this because of extra heat in the element when it shuts off at about 205 degree's; drift point is at least 2 degree's). If you have the tech set thermostat at 190 degree's and put in fast cook it will run at the point customer wants to cook at
	Thermostat	Check resistance between terminals 4 & 5. AC thermostats should read line voltage.
	Pressure Switch	Switch Is normally open. Ohm out switch to verify it is opening and closing. Visually inspect the SSR(s) are cycling on and off by watching the green light power on and off once unit has reached temperature in fast cook mode.

TYPE J THERMOCOUPLE READINGS - THERMOELECTRIC VOLTAGE IN DC MILLIVOLTS

F°	0	1	2	3	4	5	6	7	8	9	10
70	1.076	1.105	1.134	1.162	1.191	1.22	1.249	1.277	1.306	1.335	1.364
80	1.364	1.392	1.421	1.45	1.479	1.508	1.537	1.566	1.594	1.623	1.652
90	1.652	1.681	1.71	1.739	1.768	1.797	1.826	1.855	1.884	1.913	1.942
100	1.942	1.972	2.001	2.03	2.059	2.088	2.117	2.146	2.175	2.205	2.234
110	2.234	2.263	2.292	2.322	2.351	2.38	2.409	2.439	2.468	2.497	2.527
120	2.527	2.556	2.585	2.615	2.644	2.673	2.703	2.732	2.762	2.791	2.821
130	2.821	2.85	2.88	2.909	2.938	2.968	2.997	3.027	3.057	3.086	3.116
140	3.116	3.145	3.175	3.204	3.234	3.264	3.293	3.323	3.353	3.382	3.412
150	3.412	3.442	3.471	3.501	3.531	3.56	3.59	3.62	3.65	3.679	3.709
160	3.709	3.739	3.769	3.798	3.828	3.858	3.888	3.918	3.948	3.977	4.007
170	4.007	4.037	4.067	4.097	4.127	4.157	4.187	4.217	4.246	4.276	4.306
180	4.306	4.336	4.366	4.396	4.426	4.456	4.486	4.516	4.546	4.576	4.606
190	4.606	4.636	4.666	4.696	4.726	4.757	4.787	4.817	4.847	4.877	4.907
200	4.907	4.937	4.967	4.997	5.028	5.058	5.088	5.118	5.148	5.178	5.209
210	5.209	5.239	5.269	5.299	5.329	5.36	5.39	5.42	5.45	5.48	5.511


Thomas Vacuum Pump
Pressure Switch
Temperature and Vacuum Gauge
Pump Head
Timer
Positive Pressure Exhaust Port
Thermostat
Negative Pressure Vacuum Port
Solid State Relay (SSR)
Control Relays
Contactor
Fuses
Water Board
Heater/PWR Terminal Strip
Ground

Front Overlay

VACUUM GAUGE. VACUUM AND TEMPURATURE ARE INDIRECTLY PORPORTIONATE. AS TEMPURATE RISES THE VACUUM WILL DECREASE WITH THE EXCEPTION OF THE UNIT BEING IN HOLD MODE

INDICATES HOLD MODE IS ACTIVE

“FAST COOK” MODE BY PASSES THE UNITS THERMOSTATE SETTING AND COOKS AT 212 DEGREES WHEN AT SEA LEVEL. VACCUM WILL DROP OFF TO ZERO WHEN UP TO TEMPURATURE

“T-STATE COOK” MODE DRAWS A VACUUM INSIDE THE COOKING CHAMBER. BY DOING THIS, THE UNIT IS ABLE TO BOIL WATER AND COOK FOOD AT A LOWER TEMP THAN IF IT WAS AT SEA LEVEL.

THERMOMETER

“HOLD MODE” WILL MAINTAIN THE UNITS T-STATE TEMPURATURE WITHOUT VACUUM

“CONTINOUS” MODE WILL ALLOW UNIT TO COOK WITH VACUUM IN BOTH TSTATE COOK AND FAST COOK WITHOUT THE TIMER EXPIRING.

THERMOSTATE TEMPURATEURE CONTROL WHILE IN “T-STATE COOK OR HOLD” MODE ONLY

INDIACTES UNIT IS HEATING

LOW WATER LIGHT

OVER TEMP LIGHT

ON/OFF SWITCH

REMOVAL AND INSTALLATION 6 PAN MODEL

REMOVAL FROM STAND

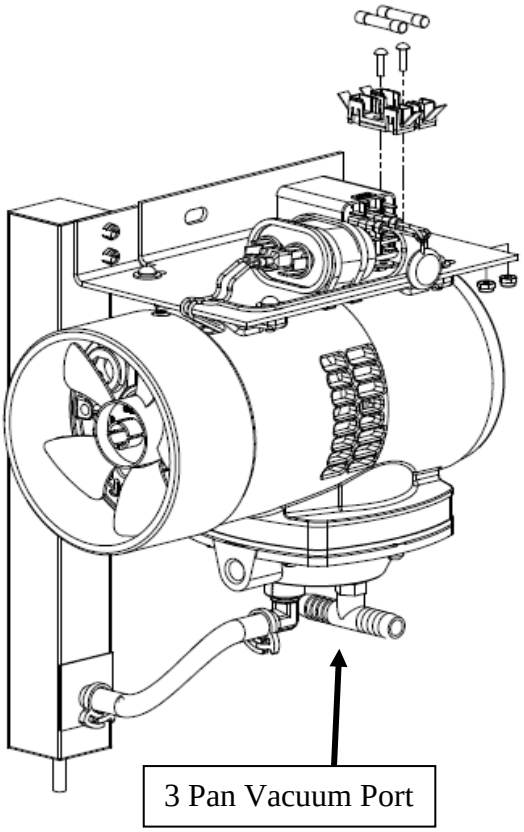
Using a 7/16” wrench, remove the 4 ¼’-20 x ½” bolts and lock washers located on the mounting brackets going into the bottom of the unit. When reinstalling, make sure the “L” brackets that hold the drip pan are facing inward.

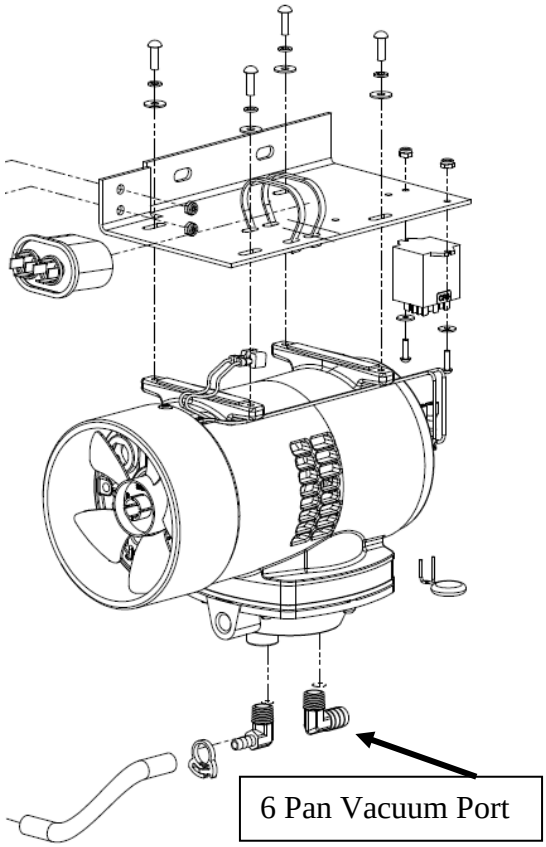
REMOVAL OF LEGS

Units with legs use the same “L” brackets used on the stand but are held on by 8 ¼”-20 X ½” bolts and lock washers. Use a 7/16” wrench to remove these to access the bottom panel.

THOMAS VACUUM PUMP

1. Unplug the unit.
2. Remove the sheet metal screws on the left side panel of the unit and remove panel.
3. Disconnect the wires to the relay and mark the locations.
4. Remove the hoses from the pump head.
5. Remove the two 7/16” nuts holding bracket to the unit.
6. Remove the two 5/16 nuts holding the bracket to the unit.
7. Remove the 4 Phillips screws washers and spacers on the bracket.
8. Remove capacitor
9. Remove pump
10. Reinstall in reverse order.





THERMOSTAT

1. Unplug the unit
2. Remove the sheet metal screws on the left side panel of the unit.
3. Remove the knob and the seal nut with a ½" nut driver on the front of the unit.
4. Disconnect the wires and mark the pin locations.
5. Reassemble in reverse order.

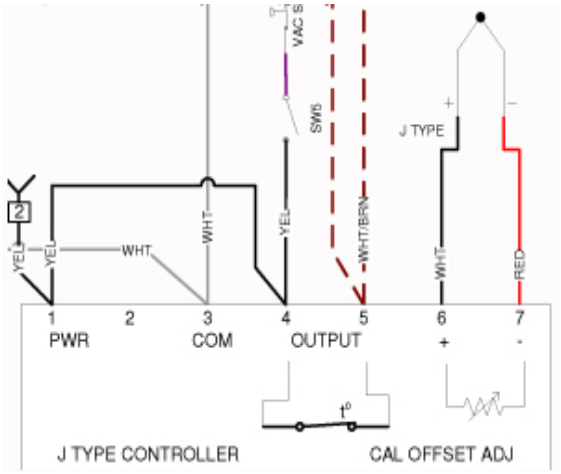
Note: All SNH II have AC thermostats with 6 pins.

TEMPERATURE PROBE

1. Unplug the unit.
2. Remove the sheet metal screws on the left side panel of the unit.
3. Remove the white wire from terminal # 6 and the red wire from terminal # 7.
4. Follow the red and white wire down to the bottom of the unit.
5. Peel the insulation aside and remove the retaining nut with a 3/8” nut driver.
6. Reassemble in reverse order.

NOTE: All SNH II have red and white wire, J Type thermocouples.

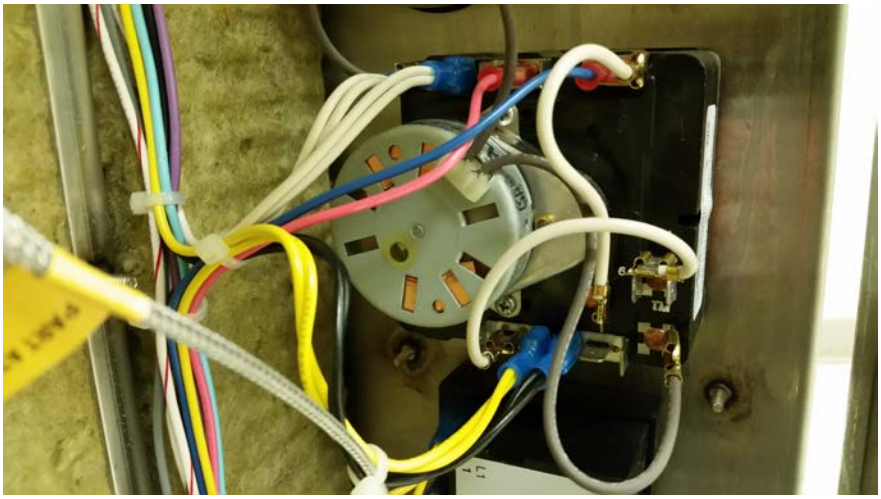
AC Thermostat



TIMER

1. Unplug the unit
2. Remove the sheet metal screws on the left side panel of the unit.
3. Remove the knob and retaining nut with a ½” nut driver on the front of the unit.
4. Disconnect the wires and mark the pin locations.
5. Reassemble in reverse order.

Note: Don’t remove jumper wires.

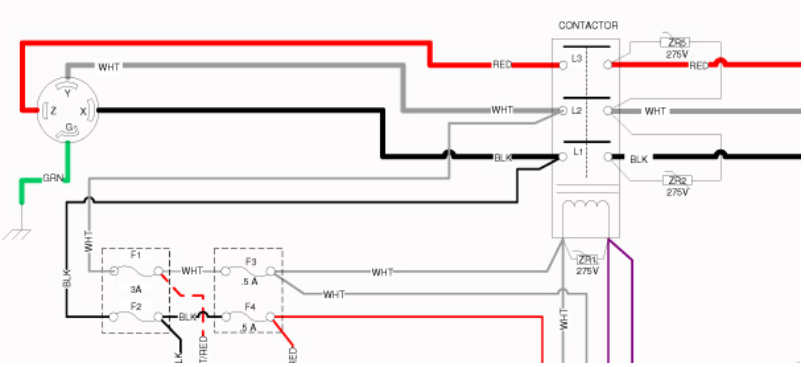


VACUUM AND TEMPERATURE GAUGES

1. Unplug the unit
2. Remove the sheet metal screws on the left side panel of the unit.
3. On the vacuum gauge, remove the hose form the inlet connection.
4. Remove the two 10/24 nuts.
5. On the temperature gauge, remove the retaining nut on the inlet connection.
6. Follow the capillary leads down to where the probe is mounted to the unit.
7. Remove the two 3/8” nuts.
8. Reassemble in reverse order.

CONTACTOR

1. Unplug the unit.
2. Remove the sheet metal screws on the left side panel of the unit.
3. Remove the red, black and white leads on both sides of the contactor.
4. Remove coil wires.
5. Remove the 6/32” nyloc nuts that secure the contactor.
6. Reassemble in reverse order.

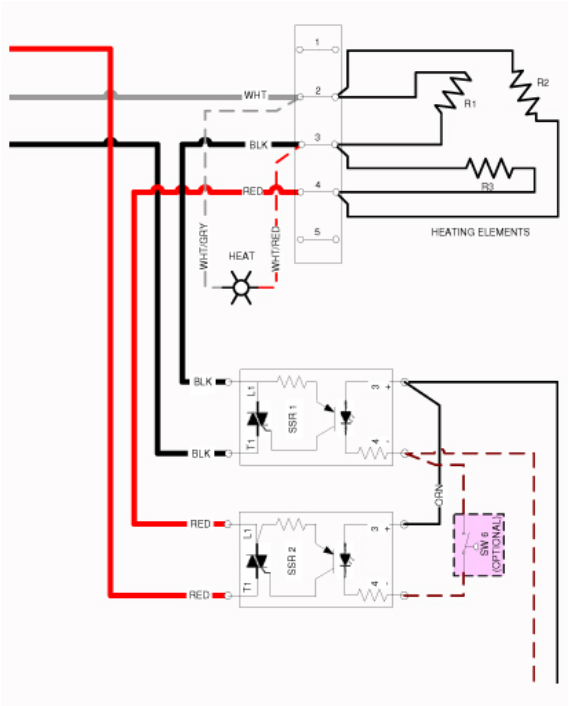


VACUUM HOSES AND TEES

1. Unplug the unit.
2. Remove the sheet metal screws on the left side panel of the unit.
3. Check all hoses and Tees for cracks or leakage.
4. Remove clamps and replace.

SOLID STATE RELAYS (SSR)

1. Unplug the unit.
2. Remove the sheet metal screws on the left side panel of the unit.
3. Remove the wires attached to the relay and mark their locations.
4. Remove the two mounting screws.
5. Reassemble in reverse order.

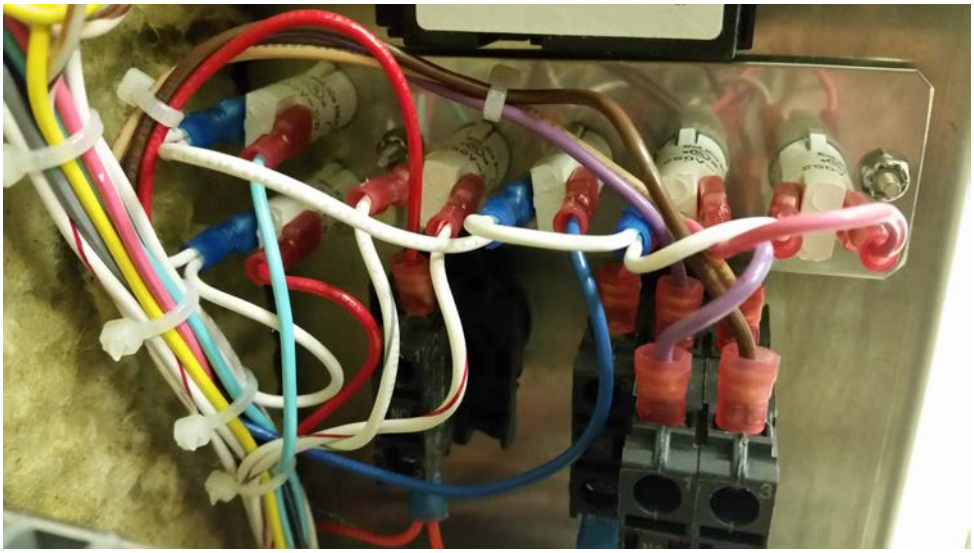


GUTTERS

1. Remove the sheet metal screws on the bottom front of the unit. Two on the right and two on the left.
2. There are right and left oriented gutters. The right gutter will have a hole *5/8” from the left side and the left gutter will have a 5/8” from the right side. Gutters need to angle down towards the drip pan.

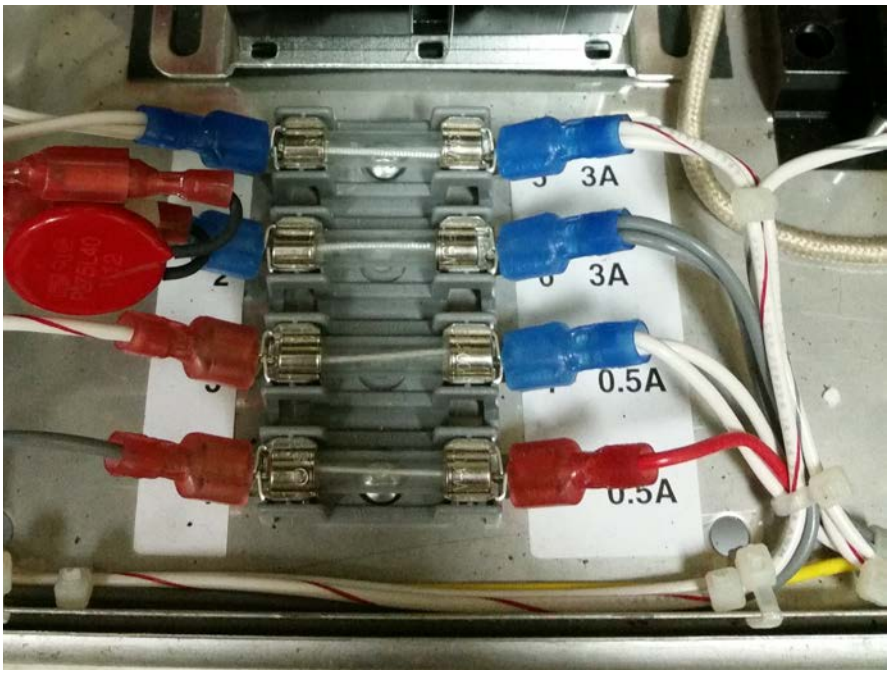
LAMPS

1. Remove the cover panel to gain access to components.
2. Remove the mounting nuts and connections to the lamp. Remove lamp.
3. Reinstall in reverse order.



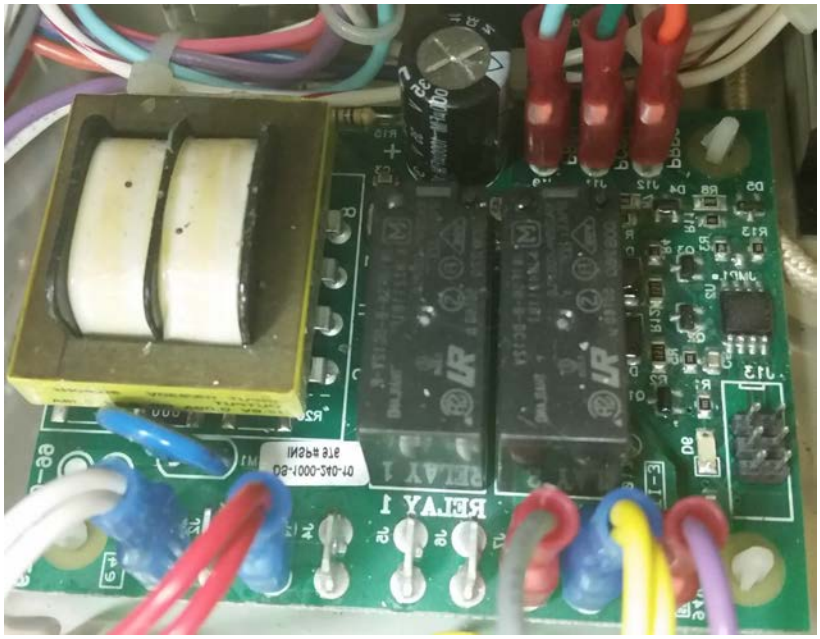
FUSES

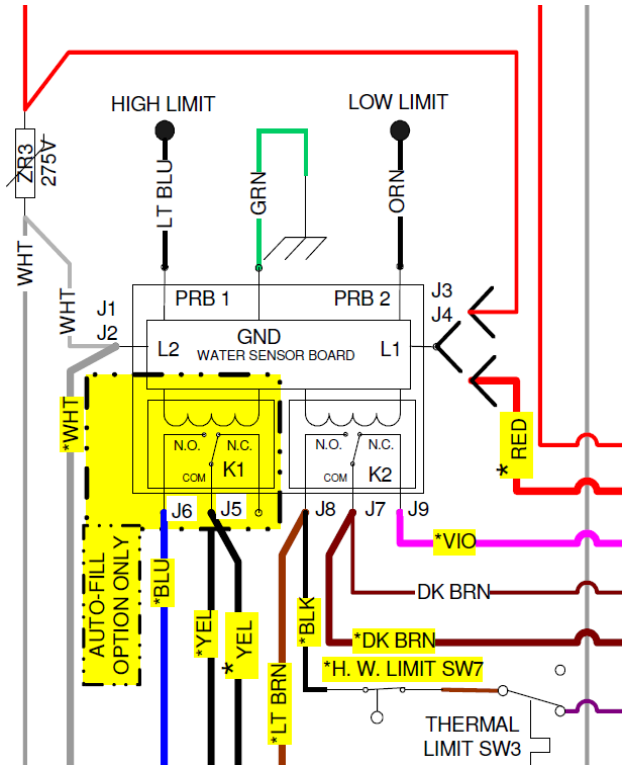
1. Unplug the unit
2. Remove the sheet metal screws on the left side panel of the unit.
3. Pry the fuses out of the fuse block with a pocket screw driver.



WATER SENSOR CONTROL BOARD

1. Unplug the unit
2. Remove the sheet metal screws on the left side panel of the unit
3. Disconnect the wires and mark the pin locations.
4. Remove the nylon mounting pins.
5. Reassemble in reverse order.





WATER SENSORS

1. Unplug the unit.
2. Remove the sheet metal screws on the left side panel of the unit.
3. Open the door and drain all the water from the chamber.
4. Remove the 8/32” hex nut from the back side of the sensor with an 11/32” wrench and remove the sensor lead.
5. Use a ¾” wrench to remove the nut on the sensor.
6. Push the sensor thru the hole from the backside.
7. Reassemble in reverse order.

Note: Do not exceed 15 inch pounds when tightening the sensor mounting nut.

CORD AND PLUG ASSY

1. Unplug the unit.
2. Remove the sheet metal screws on the left side panel of the unit.
3. Disconnect the red, black and white leads form the contactor.
4. Remove the strain relief retaining nut on the inside of the unit and pull the cord out.
5. Reassemble in reverse order.

T-STATE/ FAST COOK/ HOLD SWITCH

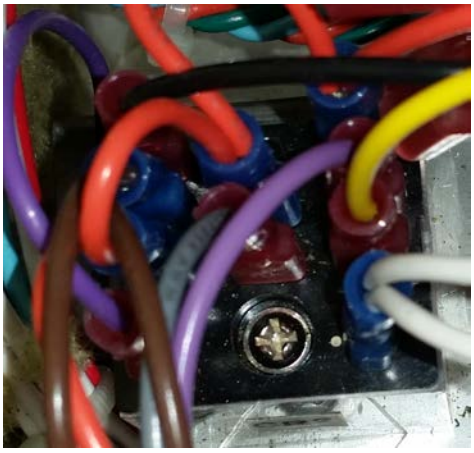
1. Unplug the unit
2. Remove the sheet metal screws on the left side panel of the unit.
3. On the inside of the unit, push the tension spring on the locking ring and then pull the switch out from the front.
4. Reassemble in reverse order

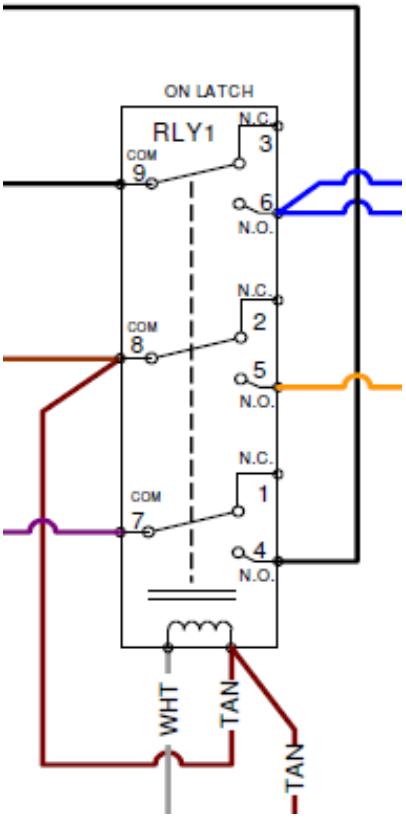
DRAIN VALVE

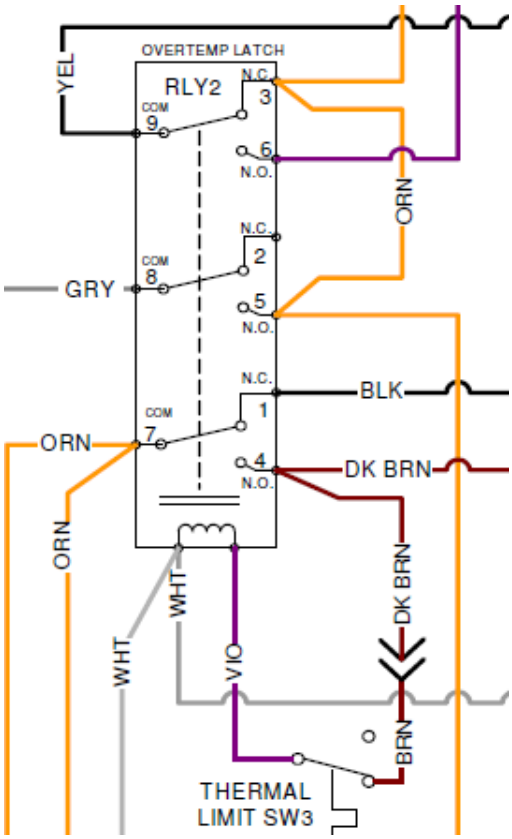
1. Unplug the unit.
2. Drain all of the water from the chamber.
3. Turn the unit upside down and remove the legs and bottom panel.
4. Use a strap wrench to remove the valve.
5. Reassemble in reverse order.

CONTROL RELAYS

1. Unplug the unit**.**
2. Remove the sheet metal screws on the left side panel of the unit.
3. Disconnect the wires and mark the pin connections.
4. Remove the 6/32” nyloc nuts.
5. Reassemble in reverse order




ON LATCH
RLY1
COM
9
N.C.
3
N.O.
6
COM
8
N.C.
2
N.O.
5
COM
7
N.C.
1
N.O.
4
WHT
TAN
TAN


OVERTEMP LATCH
RLY2
YEL
COM
9
N.C.
3
N.O.
6
ORN
GRY
COM
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N.C.
2
N.O.
5
BLK
COM
7
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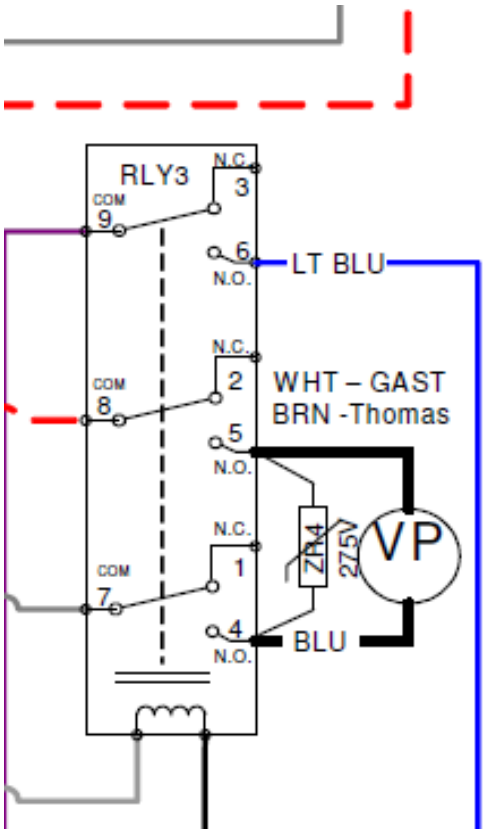
DK BRN
ORN
WHT
WHT
VIO
DK BRN
BRN
THERMAL
LIMIT SW3


RLY3
COM
9
N.C.
3
N.O.
6
LT BLU
COM
8
N.C.
2
WHT – GAST
BRN -Thomas
N.O.
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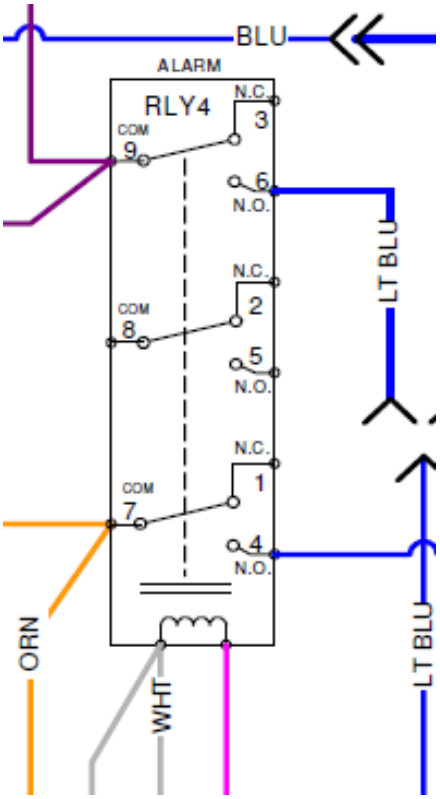
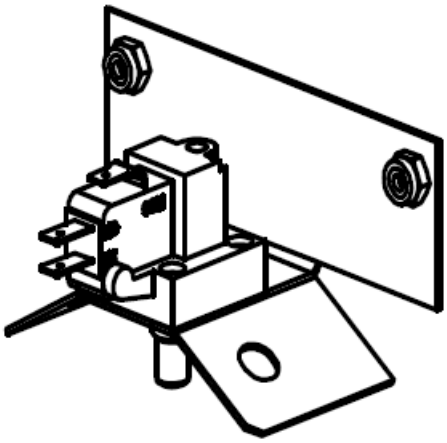
ZR4
275V
VP
COM
7
N.C.
1
N.O.
4
BLU


BLU
ALARM
RLY4
COM
9
N.C.
3
N.O.
6
LT BLU
COM
8
N.C.
2
N.O.
5
COM
7
N.C.
1
N.O.
4
ORN
WHT
LT BLU

PRESSURE SWITCH

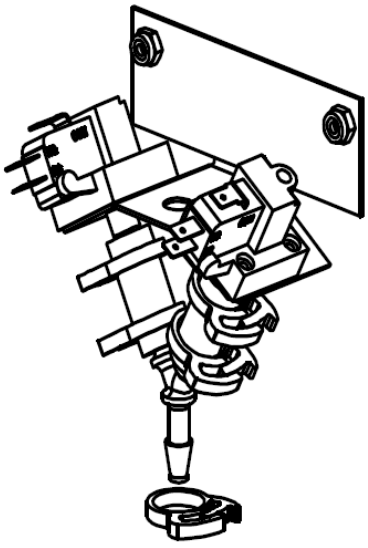
1. Unplug the unit.
2. Remove the sheet metal screws on the left side panel of the unit.
3. Remove the wires from the top and bottom leads of the switch.



DUAL PRESSURE SWITCH (14kw units and above)

1. Unplug the unit.
2. Remove the sheet metal screws on the left side panel of the unit.
3. Remove the wires from the top and bottom leads off of the switches.
4. Remove the brass elbow attached to the “J” tube going into the chamber. Make sure it is not plugged up.
5. Use Teflon tape on the barrel of the new switch and reinstall.

Note: The 5” W/C pressure switch is rated at 1/3 HP and the 60” WC switch is rated at ½ HP.



DOOR REMOVAL

1. Leave the door shut.
2. Remove the hinge covers.
3. Remove the Phillips head screws going into the cabinet and remove door.

NOTE: The bevel side of the spacer plate faces the unit. Take very close note to the offset of the hinge pin when removing the hinge completely.

FLOATING INNER DOOR REMOVAL

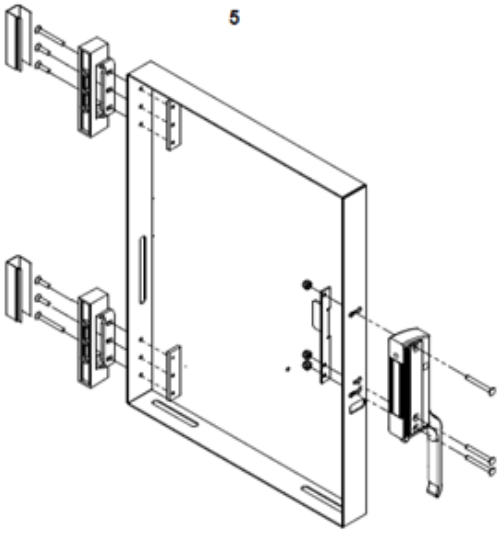
1. Remove the top screw in the top hinge and the bottom screw in the bottom hinge on the door side of the hinge. Removing all screws may results in door alignment issues.
2. Remove inner door out. Angle the rod that is inserted in the spring on the bottom side of the handle out last.

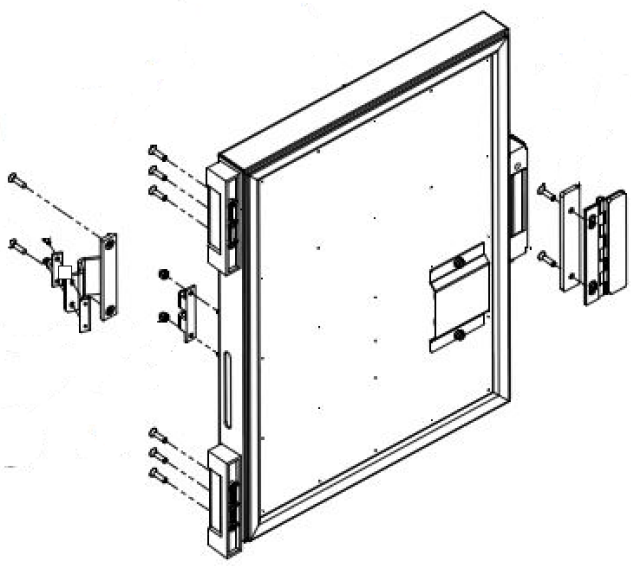
GASKET REPLACEMENT

1. Remove the inner door as stated above.
2. Make sure the gasket is untangled, then starting at a corner; stretch the gasket to the opposite corner. Repeat this sequence on the other corners until all four corners are seated. Push the gasket along the edges to firmly seat onto the inner door.

DOOR LATCH REPLACEMENT

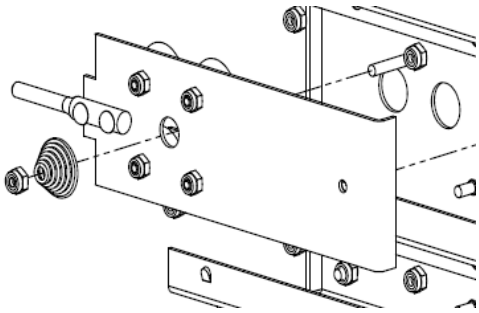
1. Remove the inner door as stated above.
2. Use a Phillips screw driver and a 3/8” nut driver to remove the handle from the outer door
3. Reinstall the new handle.

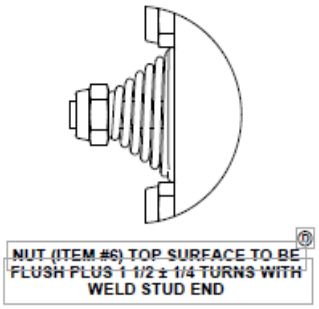


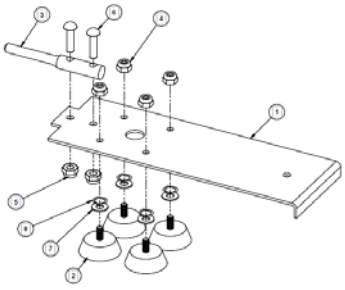


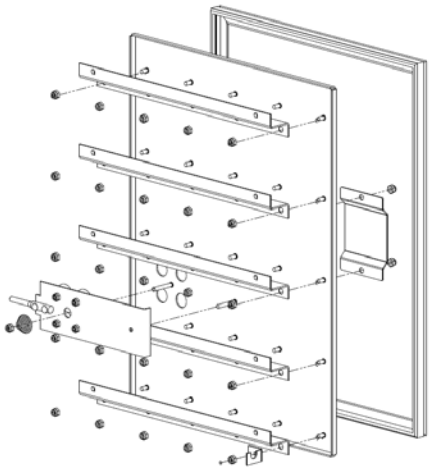
INNER DOOR VALVE CUP REPLACEMENT

1. Remove inner door as stated above.
2. Locate the valve plate assembly and remove the 10/24 nyloc nut and discard. Remove cone spring.
3. Remove the valve plate assembly from the inner door.
4. Remove the (4) 8-32 nyloc nuts holding the seals and discard both.
5. On each valve, first place a flat washer and then a “wave” washer on the threaded stem of the seal.
6. Place each seal assembly back into the valve plate and fasten with the 8/32 nyloc nuts. Tighten down until the space between the seal and the valve plate is about the thickness of the flat washer. Make sure each seal is free to pivot and rotate.
7. Reinstall the valve plate and cone spring. Tighten the nyloc nut so that one or two threads protrude through the nylon material
8. Reinstall inner door.









CAST HEATER REMOVAL & INSTALLATION

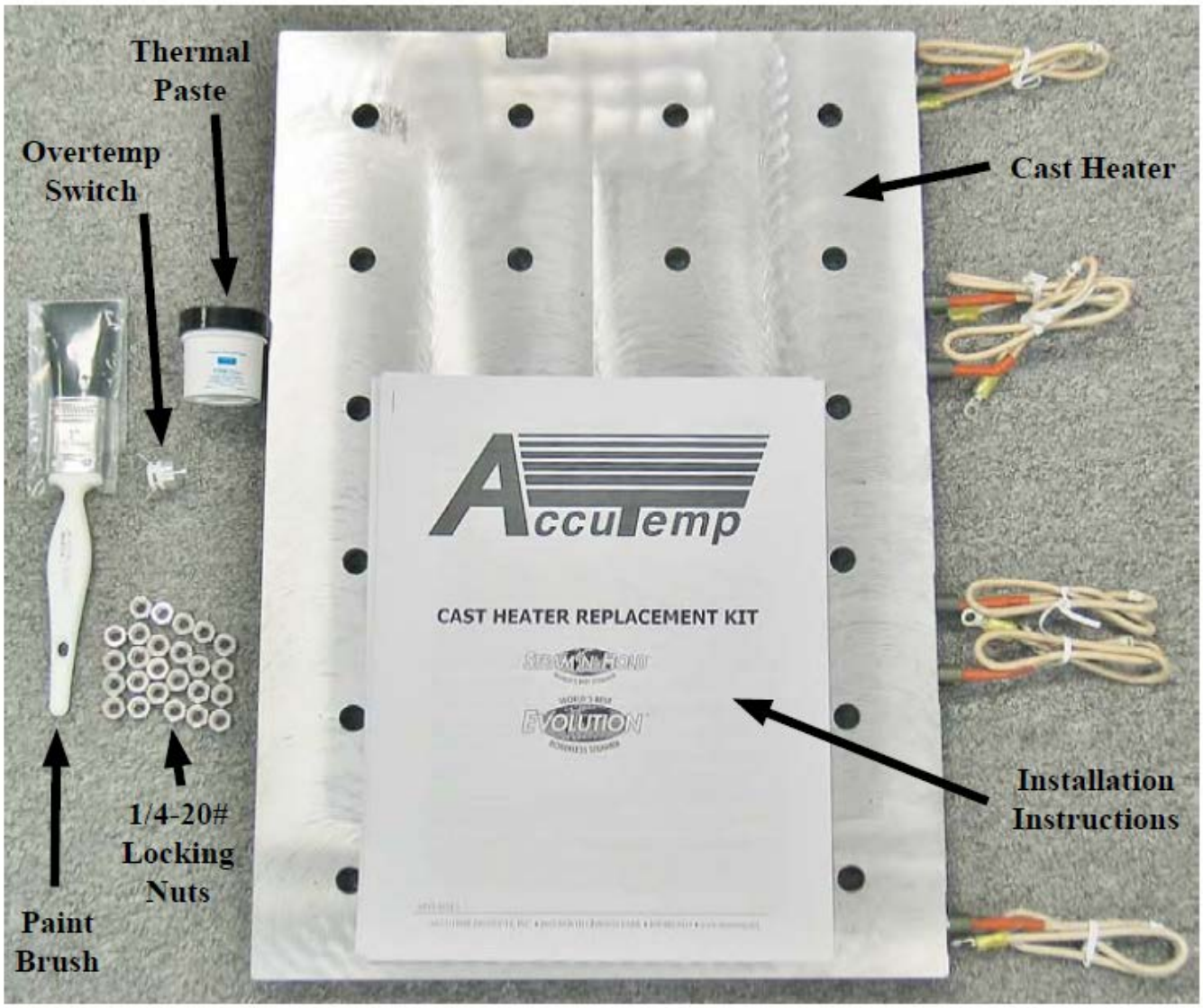
NOTE

The 1/4-20# Nut Special Locking Nut, Can Only Be Used Once.

Ensure That A New Cast Heater Replacement Kit Is Ordered and Received; Prior to Removing or Installing the Cast Heater.

Part #: AT1A-3530-X * (See Page 4)

** Order the Cast Heater Replacement Kit for the Correct Heater Wattage Required.*



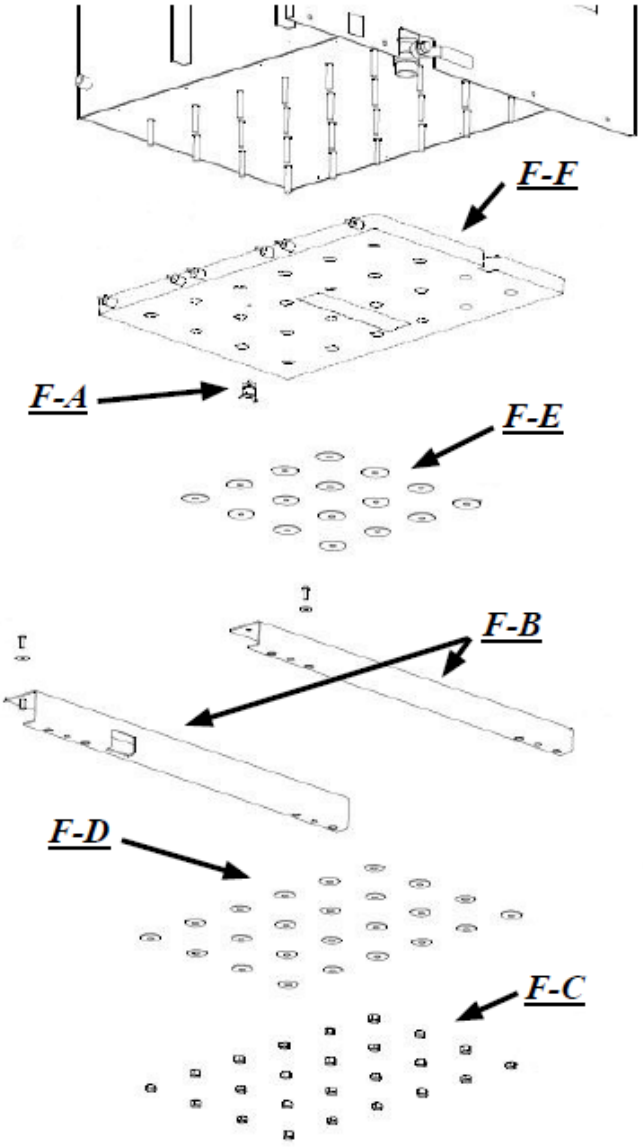
CAST HEATER REMOVAL & INSTALLATION

REMEMBER:

- **AN ADDITIONAL PERSON IS REQUIRED, WHEN CONDUCTING MAINTENANCE INVOLVING TURNING THE UNIT OVER.**
- **IF HEATER WIRES HAVE NON-BRAIDED INSULATION, THE HEATER IS NOT A CAST HEATER. CONTACT ACCUTEMP SERVICE AT 800-480-0415.**
- **USE THE INCLUDED CAST HEATER REPLACEMENT KIT INSTRUCTION BOOKLET IN CONJUNCTION WITH THE REMOVAL & INSTALLATION PROCEDURES IN THIS MANUAL.**

CAST HEATER

1. Unplug the unit and drain all the water out of the steamer.
2. Remove Left-Side by removing the Sheet Metal Screws holding it in place.
3. Disconnect the 6, braided-insulation, Heater Wires from their Terminal Board Connections. (*Note the heater wires' numbers to their location terminals.*)
4. Using an additional person, turn the unit upside-down and remove its legs. (*Unbolt unit from stand and then turn unit upside-down if applicable.*)
5. Remove the Bottom Cover by removing the Sheet Metal Screws holding it in place. (*Remove Drain Pan Rails if applicable.*)
6. Remove insulation as needed to access the Cast Heater. (*Note the insulation's location to ensure proper fitting when re-installed.*)
7. Disconnect the wires to the Overtemp Switch (*note the wire color to its location pin*).
8. Unscrew the Overtemp Switch, and remove it from the bottom of the Cast Heater. ***F-A***
9. Remove any insulation and thread lock material from the heater studs using a scouring pad.



CAST HEATER REMOVAL & INSTALLATION

NOTE

If Heater Studs are Discovered Broken While Removing the Cast Heater
OR
If a Heater Stud Breaks-Off While Removing or Installing the Cast Heater

Call AccuTemp Service Dept (800) 480-0415.

CAST HEATER (CON'T)

10. Using *Fig G*, loosen all 24 nuts by starting with Nut #24 and working down to #1.
11. Remove all 24; Locking Nuts (***F-C***), Lock Washers (***F-D***) & Flat Washers (***F-E***) from the Cast Heater. (*Discard the used Locking Nuts; keep and clean the Lock & Flat Washers.*)
12. Remove both Heater Mounting Brackets from the top of the heater by letting them hang, by the wires, over the electrical compartment. ***F-B***
13. Remove the Cast Heater. ***F-F*** (*Might have to lift heater by its heater wires, or use a flat-head screwdriver to pry up the Cast Heater from the Thermal Compound.*)
14. Re-install in reverse order. SEE NEXT PAGE FOR INSTALLATION NOTES.

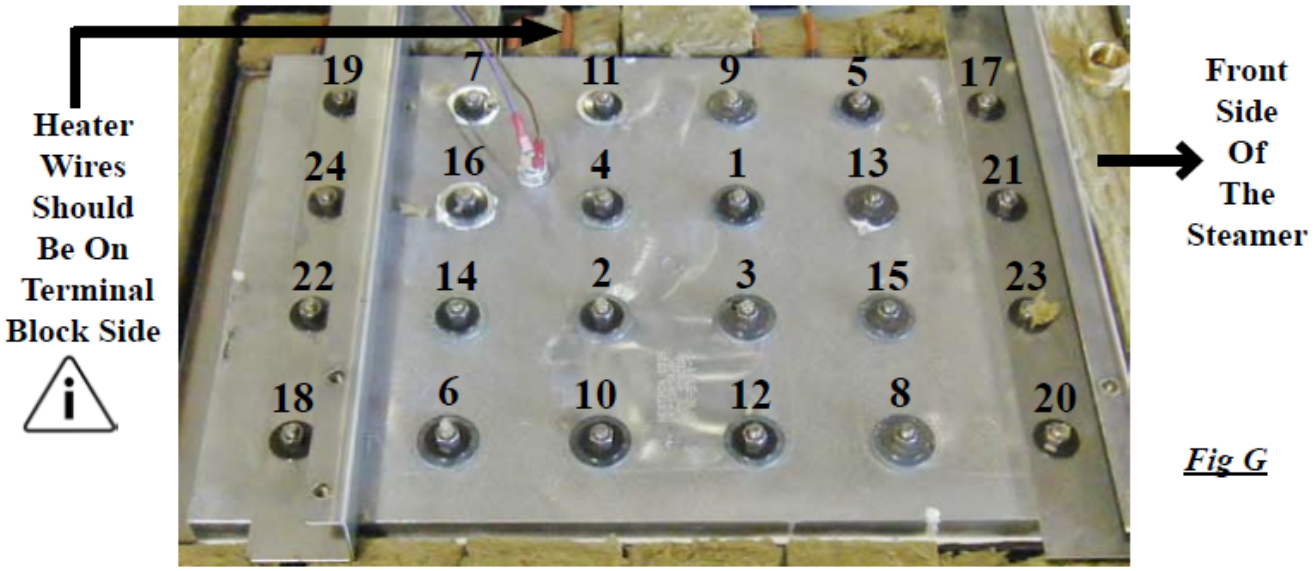


Fig G

Only using a brass or stainless-steel brush; scrape, remove, and clean-off any remaining Thread Sealant and Thermal Compound residue from the bottom of the steamer, even around the studs.

CAST HEATER INSTALLATION NOTES & CAUTIONS

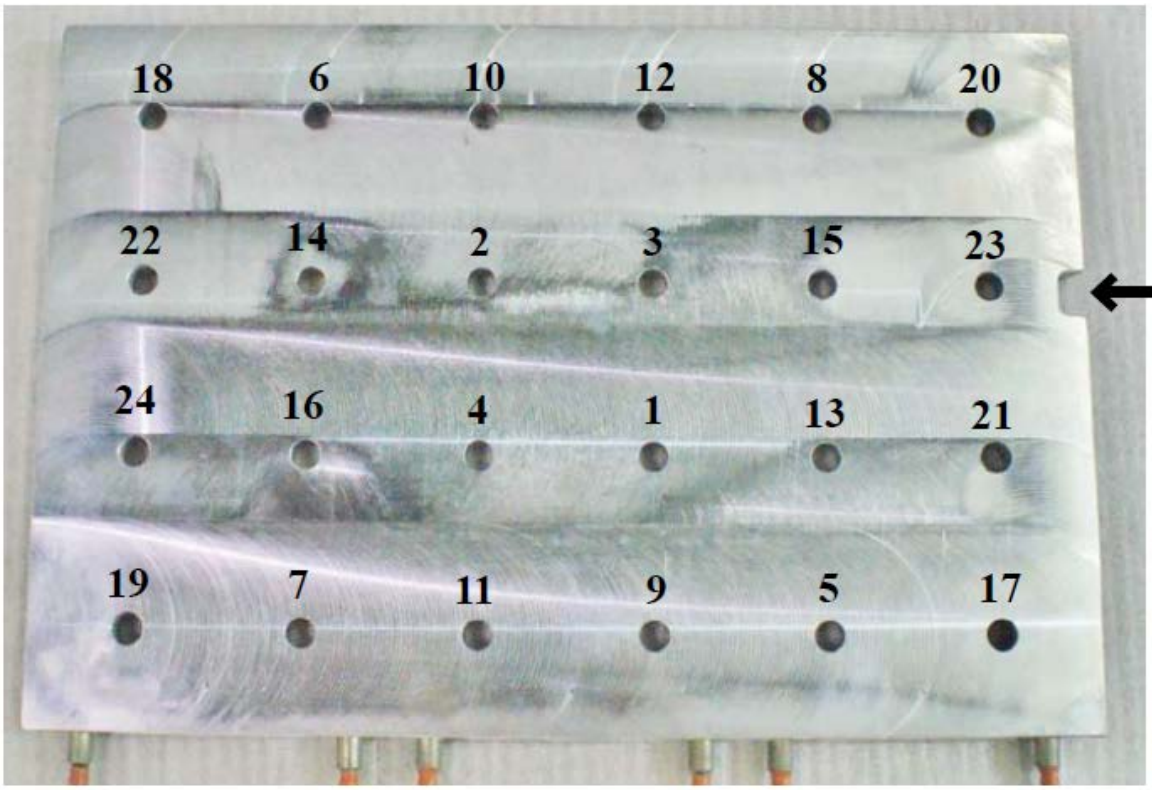
NOTE

CAST HEATER'S SHINY SIDE FACES THE BOTTOM OF THE STEAMER!

Using a Paint Brush, Apply Thermal Paste to the Shiny Side of the Cast Heater.

Bellevelle Washers should look like mini-volcanos when placed on heater stud.

The HEX Locking Nut Needs to be Torqued Between 23 - 27 IN-LBS.
Tighten Starting with Nut #1 and Follow the Numbered Layout Pattern to Nut #24.
Tighten Twice in This Pattern.



Notch Cut-Out Goes Towards the Front Side of the Steamer

CAUTION

<u>DO NOT</u> OVER TORQUE THE LOCKING NUTS.

Over Torquing The Zinc Nuts Can Cause the Studs to Break-Off. This Will Cause Heating Issues; and the Steamer Will Not Operate Correctly or Safely.

INTRODUCTION & SEQUENCE OF EVENTS
AUTOFILL – 3 & 6 PAN MODELS

- Simple connection to water source via a garden hose style connection.
- Electronic water level control for normal operation.
- A master control valve
- Multiple level safety controls, electronic and mechanical float.
- Operates on city water supply and water pressures (40-60psi)
- Easy to clean and care for.

Theory of operation

The Steamer is connected to the facility water supply via a washing machine or garden hose type supply line from a water spigot or from a nearby sink faucet.

First time fill

1. With the water supply turned on, press the "**ON"** button. The Steamer will power up with the pump operating.
2. The water fill valve will turn on, via the K5 relay on the water sense PCB. The status LED on the water sensing PCB will flash rapidly about 2-3 times a second.
3. Water Fill/Sensor PCB mounted K2 relay (low water level sensing) is bypassed to allow for first time filling of the reservoir.
4. The thermostat will be turned off, via Water Fill/Sensor PCB mounted K1 relay and CR4 bypass relay, for the first fill to prevent damage to the heater elements.
5. Water will rise to the low level probe and reset the low level circuit of the water control board and reset relay CR4.
6. When the water level reaches the High Level Probe, a 30 second delay is initiated to allow for wave action and rapid boiling inside to subside. *Wave action and rapid boiling would cause a lower than desired amount of water to be injected in the reservoir by tripping the control too soon.*
7. When the 30 seconds and water level have been satisfied, the water level control board shuts off the water level control relay and the by pass relay. The status LED will change to a slower flash rate of about 1 time per second.
8. The heater is turned on and normal operation begins.

Normal operation (the Steamer water reservoir has water in it).

1. On a full reservoir, the Steamer will heat up as normal for normal operation.
2. As the water is used up and the water level drops below the High-Level Probe, the water valve is turned on with no delay period.
3. After the water has reached the high water level probe and stays in constant contact, a thirty-second timing sequence is started. (*This is done to prevent short cycling of the water valve increasing the life and the reliability of the water level control valve.)*
4. When the thirty seconds have been satisfied, the water level control board shuts off the water level control K2 relay.
5. This process is repeated until the Steamer is shut off

TROUBLE SHOOTING GUIDE

1. No water pressure.
- On a first time fill the unit will not fill up with water and the Steamer will not turn the heaters on to prevent damage.
- Check water pressure
- Check for dirty inlet screen.
- Check for dirty probes.
- Check for power to control board
- Check for operation of the control valves

2. During operation of the Steamer, after successful initial water fill.
- The steamer shuts down after the water level drops below the low water sensor and a 10 second delay has passed for wave and boiling action
- Check the conditions listed above for reasons of non-operation

3. Water level sensing fails
- If the water level control valve becomes stuck on, a mechanical float will shut down the whole Steamer and the water supply by turning off the master water control valve.

4. If the water level sensing control board becomes faulty the mechanical float will shut down the Steamer.

5. If the float has been removed
- The Steamer will not start up until the float is re-installed.
- Cleaning the chamber is still easy by just lifting out the mechanical float and wiping down as normal each night.

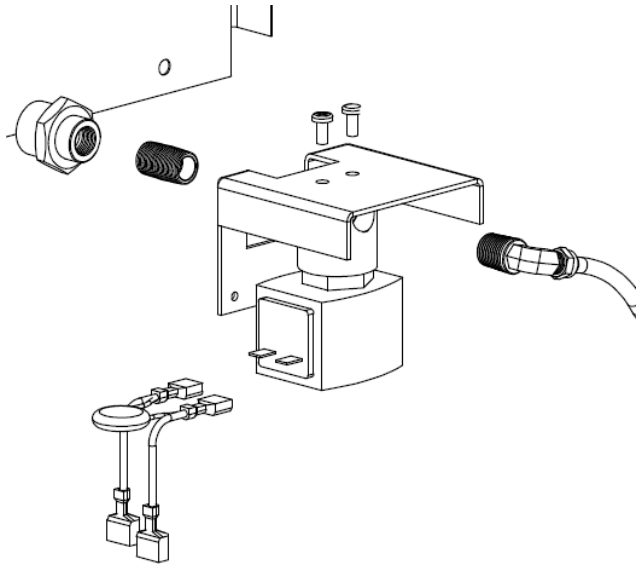
REMOVAL AND INSTALLATION

WATER FILL / SENSOR CONTROL BOARD

1. Unplug the unit
2. Remove the sheet metal screws on the left side panel of the unit
3. Disconnect the wires and mark the pin locations.
4. Remove the nylon mounting pins.
5. Reassemble in reverse order.

AUTO-FILL VALVE

1. Unplug the Unit & drain any remaining water from the steam chamber.
2. Close the supply water valve and disconnect the supply water hose coming into the steamer.
3. Remove the Left-Side Panel by removing the Sheet metal screws holding it in place.
4. Disconnect the wires from the Auto-Fill Valve
5. Disconnect the Auto-Fill Valve Hose Fitting.
6. On the back of the steamer, remove the 4 mounting screws securing the Auto-Fill Valve bracket on the inside of the steamer.
7. Remove the Auto-Fill Valve.
8. Re-install in reverse order. Ensure Sealant is Re-applied to all pipe threading.



OVERFILL SENSOR SWITCH

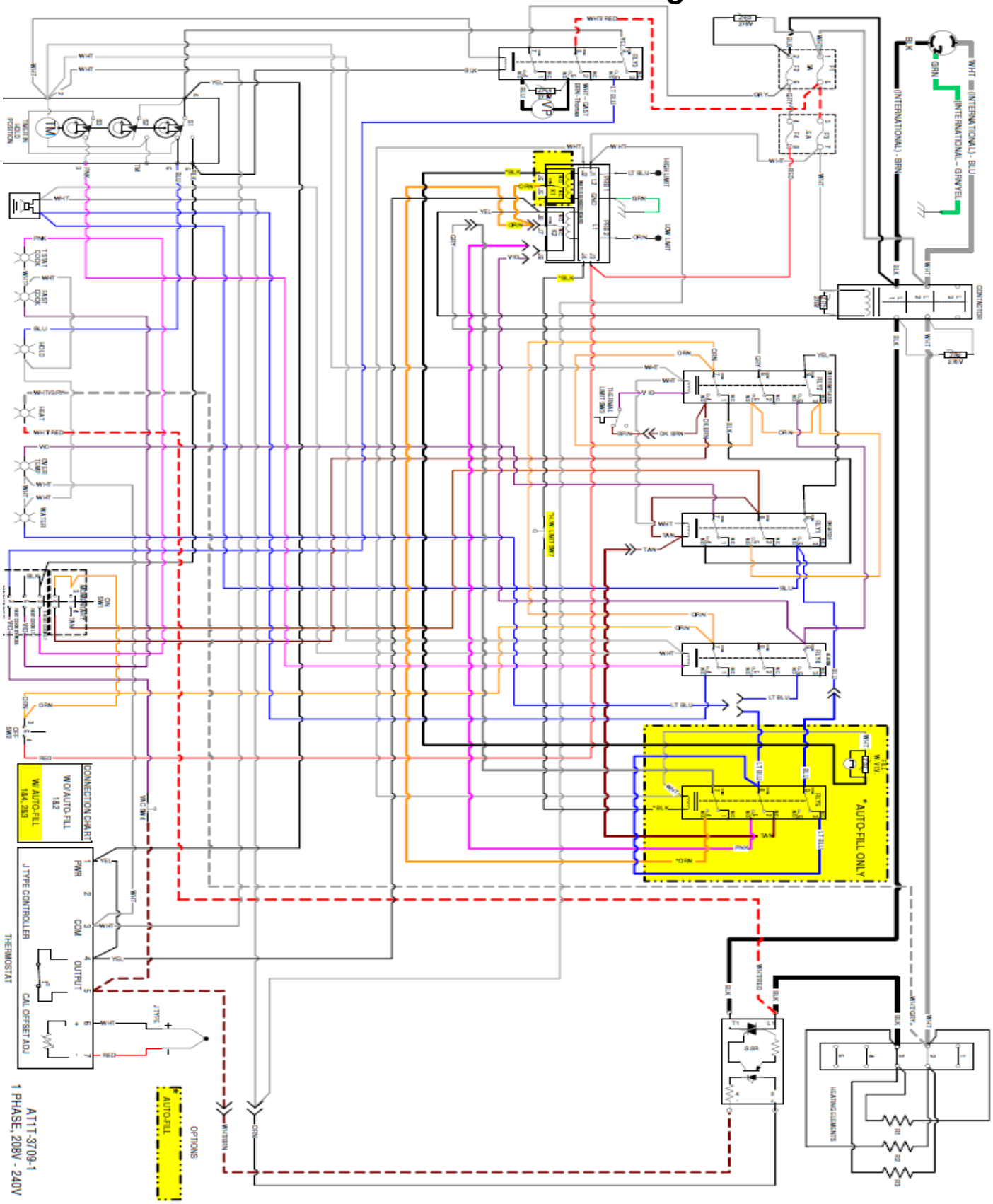
1. Unplug the unit
2. Remove the left side panel.
3. Remove leads J7 & J8 from the water board
4. Turn the unit up side down.
5. Remove the brass nut for the weep hole drain line.
6. Remove the legs and bottom panel.
7. Remove the retaining screw from the switch mounting tab and remove the switch.
8. Reinstall in reverse order.

Note: Make sure the wires are not close to the heater element.

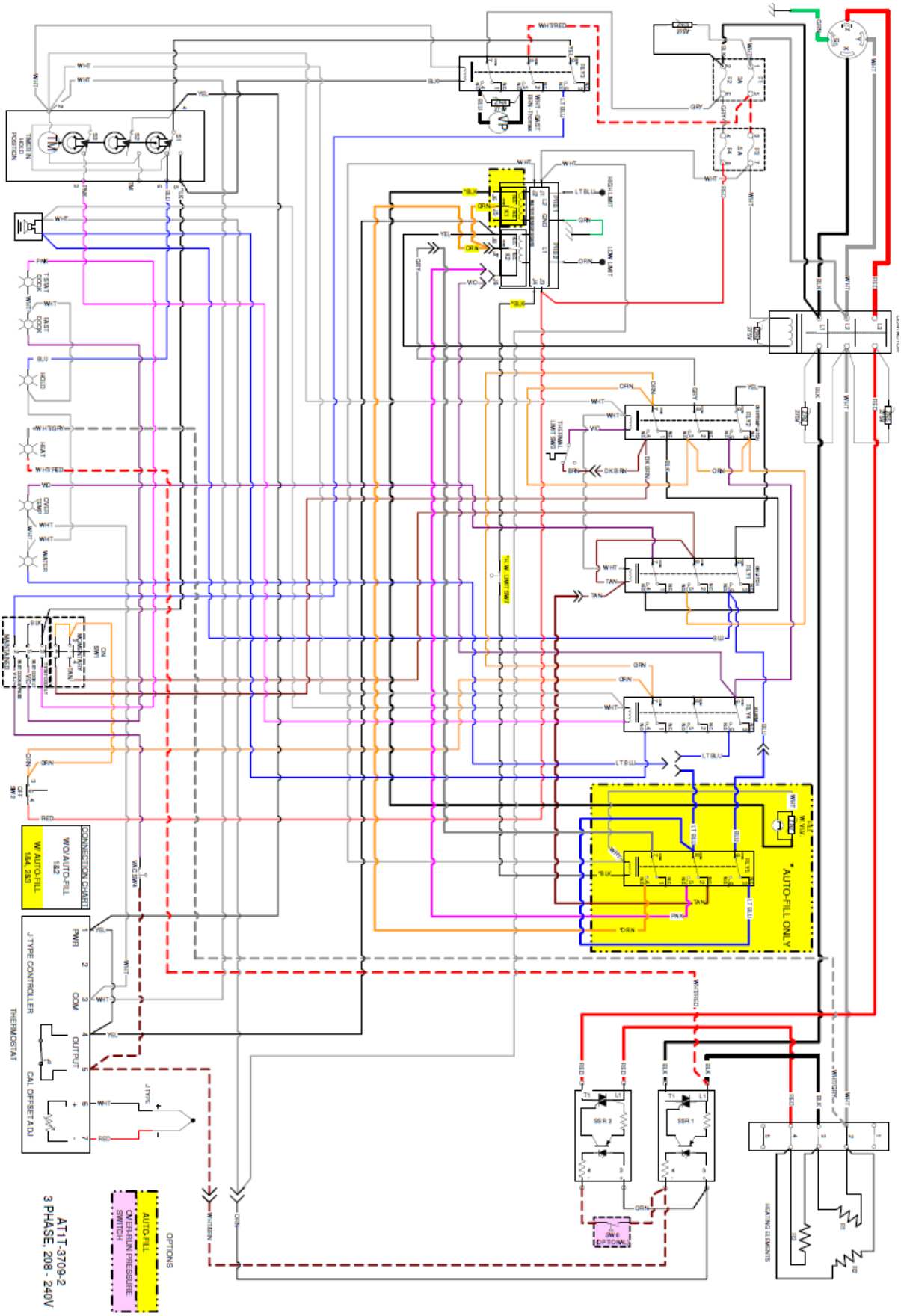
DRAIN SYSTEM

1. Remove the drain pan which is inserted in the pan rails on the bottom of the unit.
2. Remove the hose clamps from the drain hose connections.

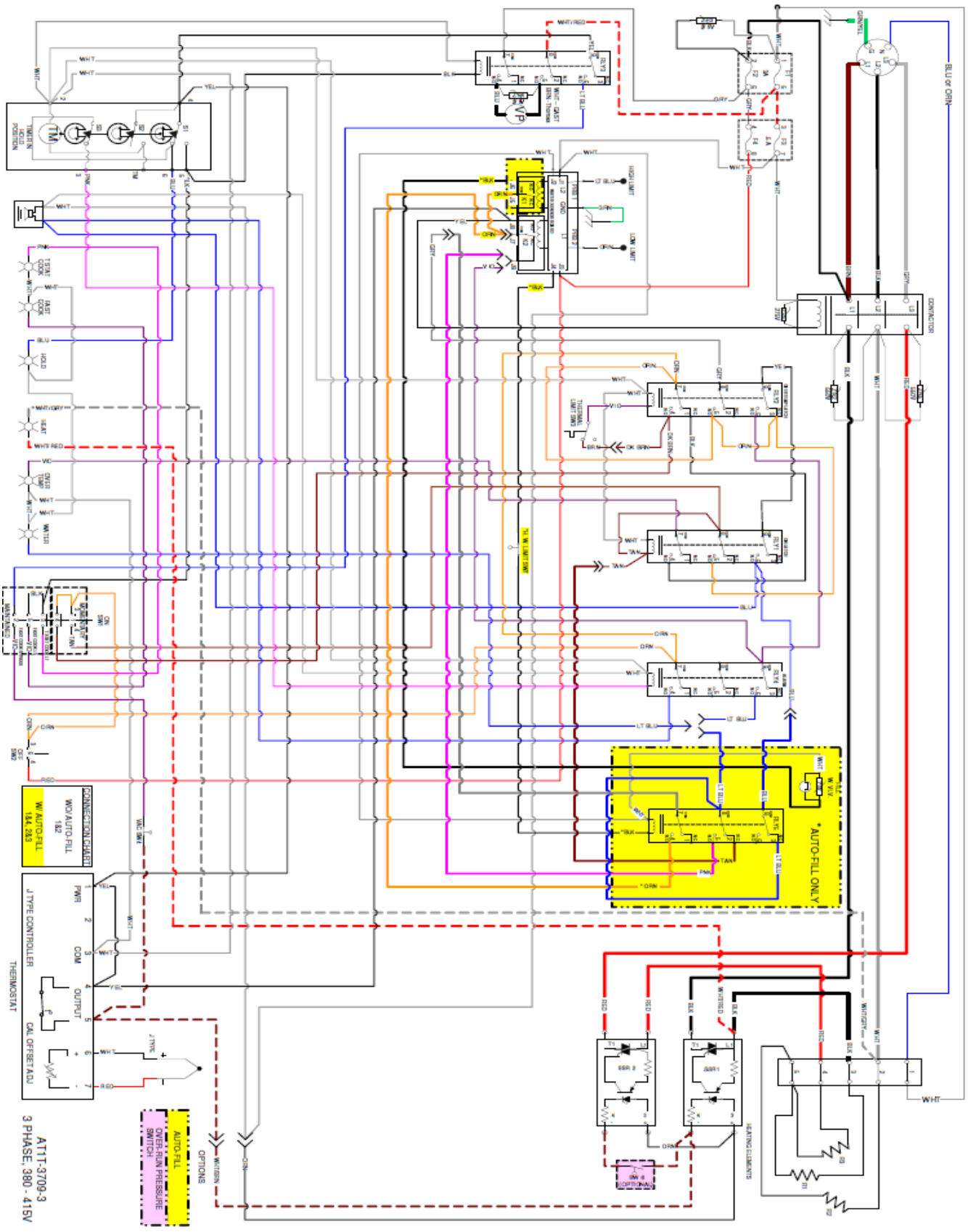
SCHEMATIC – 6 PAN – 208V & 240V - Single Phase



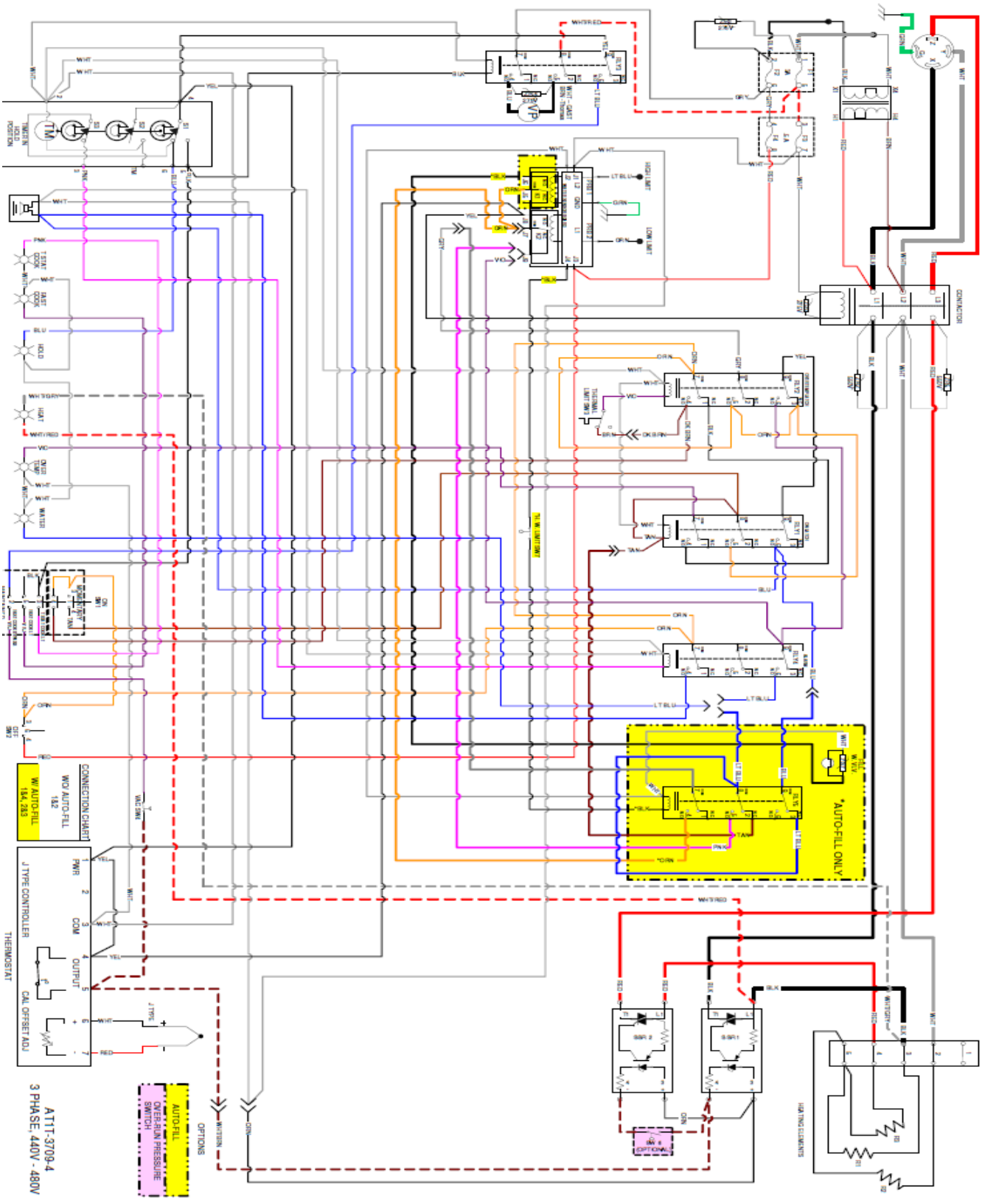
SCHEMATIC – 6 PAN – 208V – 3 PHASE



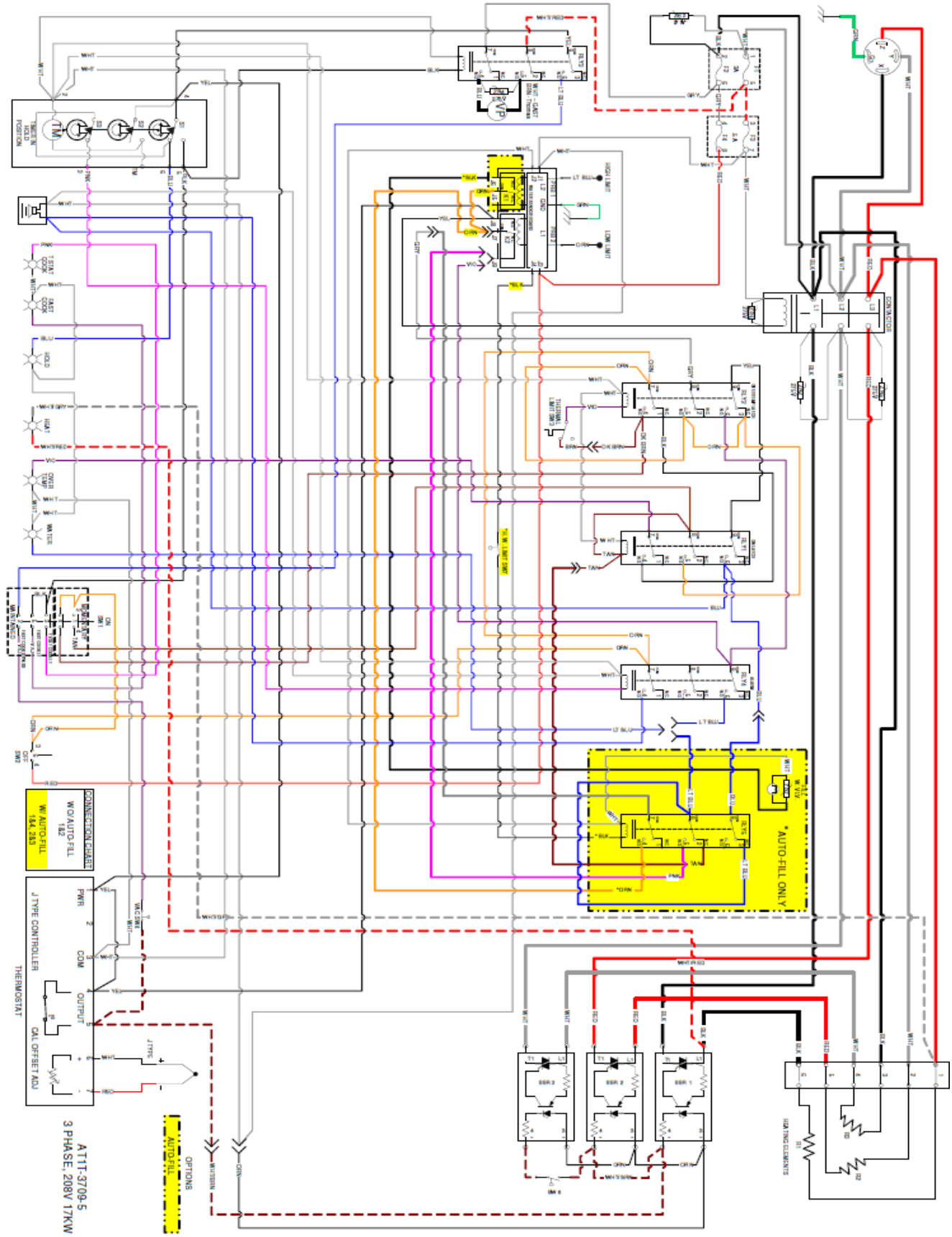
SCHEMATIC – 6 PAN – 380V-415V- 3 PHASE



SCHEMATIC – 6 PAN – 440V-480V – 3 PHASE



SCHEMATIC – 6 PAN – 208V – 3 PHASE – 17kW



Parts List

Part number Description

AT0E-3384-1 Connector, Strain Relief 3/4 NPT Liquid Tight
AT0E-3654-3 Alarm, Piezo Electric
AT0E-3661-1 Thermocouple
AT0F-3371-1 Nut, Rotary Shaft Seal
AT0F-3401-1 Special Locking Nut, 1/4-20
AT0H-1455-2 Thermostat/Timer Repl. Knob-soft grip
AT0H-2614-1 Vacuum Gauge 2”
AT0H-2829-1 Thomas Pump EPDM Diaphragm
AT0H-3040-1 Rubber Foot Tip (Cooker)
AT0H-3412-2 Thermal Paste, Wakefield
AT0H-3544-1 Lens, 2” gauge
AT0H-3641-1 Washer, 1 1/4x1 Reducing
AT0H-3828-1 Thomas Pump Teflon Diaphragm Liner
AT0P-2628-1 Elbow, 90 Fitting 1/4 NTPM to 1/4Hose Barb
AT0P-2628-2 Elbow, 90 Fitting 1/4 NTPM to 1/2 Hose Barb
AT0P-2714-1 Hose Clamp 1/4” ID
AT0P-2714-5 Hose Clamp 1/2” ID
AT0P-2714-7 Hose Clamp .500 O.D. Hose
AT0P-2987-2 Nylon Tee - Barbed 1/2x1/2x1/2
AT0P-3509-1 Water Valve Control, Autofill only
AT0P-3616-1 90 Degree Hose Barb 1/2 X 1/4
AT0P-3833-32000 Hose, Silicone (1/4”) per foot
AT0P-3833-63000 Hose, Silicone (1/2”) per foot
AT1A-2426-7 S3 Inner Door Assy, RH
AT1A-2426-8 S3 Inner Door Assy, Left - 3 pan
AT1A-2426-5 S6 Inner Door Assy. RH
AT1A-2426-6 S6 Inner Door Assy. LH
AT1A-2427-1 Valve Bracket Assy.
AT1A-2912-1 S6 Door Assembly, RH
AT1A-2912-2 S3 Door Assembly, RH
AT1A-2912-3 S6 Door Assembly, LH
AT1A-3030-1 Leg Assembly Kit, (steamer)
AT1A-3303-1 Thermometer, Assembly 2”
AT1A-3447-1 Quick Release Door handle
AT1A-3530-1 Cast Heater Kit; 208v 6kw, 230/7.3, 240/8, 380/6.7, 400/7.4, 415/8, 440/9, 480/10.7
AT1A-3530-2 Cast Heater Kit; 240k/6kw
AT1A-3530-3 Cast Heater Kit; 208v/8kw, 240/10.7, 380/9, 400/10, 415/10.7, 480/14
AT1A-3530-4 Cast Heater Kit; 208v/12.0kw, 240/16, 380/13, 400/14.8, 415/16, 440/18

Parts List

Part number Description

AT1A-3530-6 Cast Heater Kit; 208v 10.0kw 9
AT1A-3530-7 Cast Heater Kit; 208v 17.0kw
AT1A-3601-1 S6 Wire Rack Assembly LH
AT1A-3601-2 S3 Wire Rack Assembly
AT1A-3601-3 S6 Wire Rack Assembly RH
AT1A-3853-1 S6 Welded Assembly, Steam Director
AT1A-3853-2 S3 Welded Assembly, Steam Director
AT1E-2647-3 Pressure Switch-All KW
AT1E-2647-4 Pressure Switch - 14KW & Higher
AT1E-2652-1 Probe Water Sensor
AT1E-2653-3 Overtemp switch, Cast heater-watts up to 12 KW
AT1E-2653-4 Overtemp - 14KW and Higher
AT1E-2703-1 Vacuum Pump, Thomas
AT1G-2633-1 Gasket, Door S6
AT1G-2633-2 Gasket, Door S3
AT1H-2046-1 QRD, Spring Compression
AT1H-2058-3 Door Hinge (Brass) each
AT1L-3658-3 Overlay Operation Instructions
AT1L-3658-4 Overlay, Operating Instructions
AT1L-3708-1 Overlay, Control Panel Steamer - External Thermostat, 90 Minute Timer
AT1L-3708-2 Overlay, Control Panel Steamer - External Thermostat, 180 Minute Timer
AT1L-3708-3 Overlay, Control Panel Steamer - Internal Thermostat, 90 Minute Timer
AT1L-3708-4 Overlay, Control Panel Steamer - Internal Thermostat, 180 Minute Timer
AT1M-2573-3 Drip Edge
AT1M-2689-1 Plate, Hinge Backer
AT1M-3045-1 QRD Valve Cover
AT1M-3046-1 Latch Mounting Plate
AT1M-3046-2 QRD Latch Backer Plate -LH
AT1P-2239-1 Ball Valve (drain)
ATR-CAP Capacitor
ATR-THA2 Thomas Head
ATR-VP2RA Thomas Rod & Diaphragm Assy
ATR-VPLV Vacuum Pump, Leaf Valve
RAT1K-1830 QRD Valve Plate Seal Kit