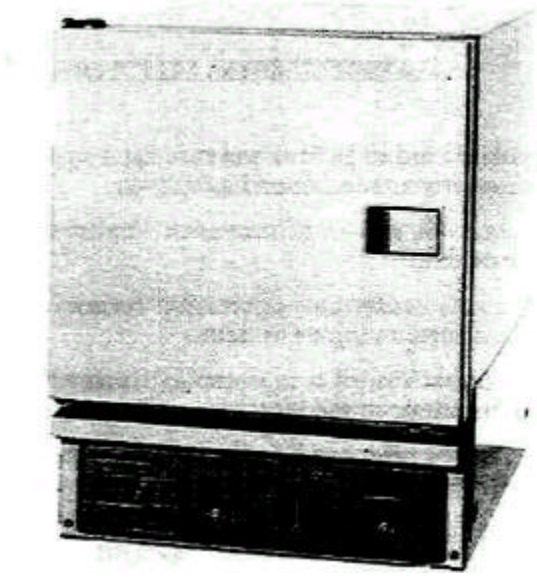
southbend

A MIDDLEBY COMPANY

TECHNICAL MANUAL

RAPID STEAM COUNTERTOP CONVECTION STEAMER

MODEL RS-4E



This manual is intended for the use of Southbend Authorized Service Agencies and their associates.

Service work should be performed only by a qualified technician who is experienced in, and knowledgeable with the operation of commercial gas, electric, steam cooking equipment.

WARNING:
Improper installation, service, or maintenance can cause property damage, injury or death.

1100 Old Honeycutt Road • Fuquay, NC 27526 • (919) 552-9161 • FAX (919) 552-9798 • (800) 348-2558

Middleby Corp. Service Hot Line (800) 238-8444

RAPID STEAM CONVECTION STEAME (Manual Section ST)

NOTICE

Warranty will be void if
(A) Service work is performed by other than a Southbend Authorized Service Agency, or
(B) Other than Genuine Southbend replacement parts are installed.

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LOCATION OF SERIAL AND IDENTIFICATION PLATES:

The serial plate with all voltage information is located on the exterior right body side at the upper rear comer. There is also a product identification plate located on the front of the unit at the upper left top comer of the door showing the model number and serial number only.

SAFETY PRECAUTIONS

The following words and symbols, found in this manual, alert you to hazards to the operator, service personnel or the equipment. The words are defined as follows:

⚠ **DANGER**	This symbol warns of imminent hazards which will result in serious injury or death.
⚠ **WARNING**	This symbol refers to a potential hazard or unsafe practice which could result in serious injury or death.
⚠ **CAUTION**	This symbol refers to a potential hazard or unsafe practice which may result in minor or moderate injury **or** product or property damage.
NOTICE	This symbol refers to information that needs special attention or must be fully understood even though not dangerous.

⚠ **WARNING**
BURN HAZARD

- **Stand back when opening doors - hot steam or hot water may escape *from* steamer.**
- **Unit, especially drain, must be cleaned daily and properly maintained. Clogged drain can create burn hazard when door is opened.**

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Road Fuquay, NC
27526 (919)552-9161
FAX (919) 552-9798
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UTILITY INFORMATION

For complete specifications consult the Owner's Manual - Part #1176560.

UTILITY INFORMATION: ELECTRIC: One electric connection required.

TOTAL CONNECTED AMPS	MAX. AMPS PER LINE	
	1 PHASE	3 PHASE
208 V 60 Hz	47	28
220 V 50/60 Hz	44	27
240 V 60 Hz	40	24
380/220 V 50 Hz	26	15
415/240 V 50 Hz	24	14
480 V 60 Hz	20	12

Circuit must tie wired for maximum amps at required voltage.

Water Quality Specifications: Water Pressure, 60 p.s.i. maximum 30 p.s.i. minimum. Install a pressure regulator if pressure exceeds 60 p.s.i. In order to minimize service problems and to meet the warranty requirements, a water treatment system (softener) is recommended when water quality exceeds the limits stated.

Total Dissolved Solids (TDS»: 60 PPM (Parts Per Million). Hardness: 2 grains or 35 PPM. Ph Factor: 7.0 to 7.5.

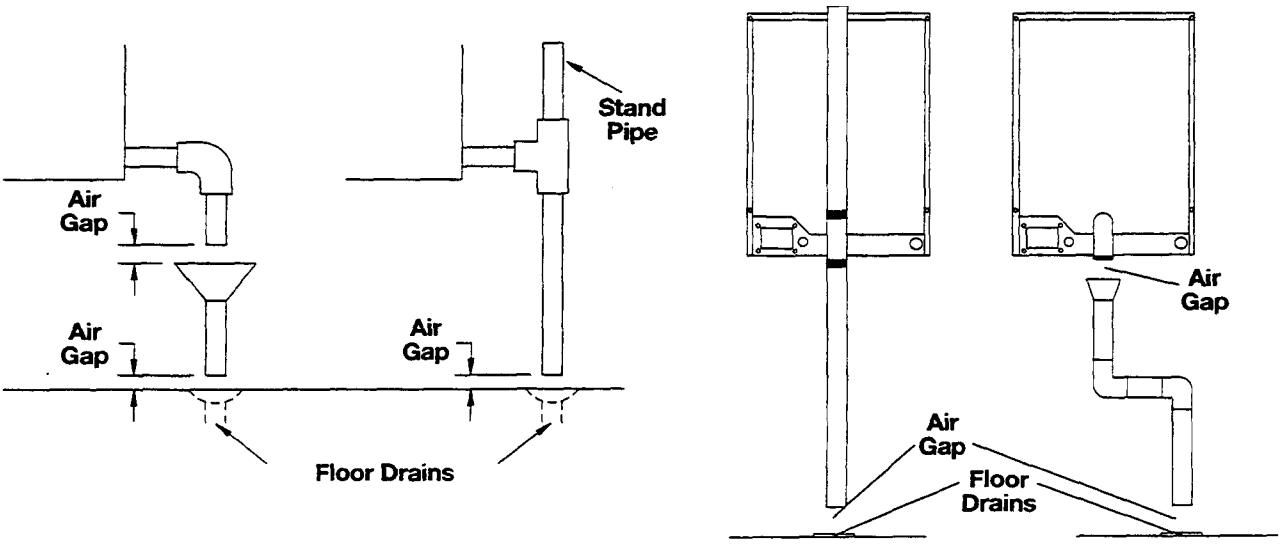
WATER USAGE AT TIMED OR MANUAL COOKING: 0.08 gallons per minute at 45 p.s.i. water pressure in cavity. 0.16 gallons per minute at 45 p.s.i. water pressure in condenser. 0.24 total gallons per minute at 45 p.s.i.

IMPORTANT: UNIT MUST BE LEVEL FOR PROPER OPERATION. WARRANTY WILL BE VOIDED FOR IMPROPER INSTALLATION.

"All units shipped 3 Phase. Field convertible to 1 Phase.

DRAIN LINE:

The drain line connection size from the unit is 1" NPT (32 mm). Position the unit near, but not on top of, an open floor drain. DO NOT directly plumb to the unit unless you also install an "open funnel" downstream of this connection in the drain system. Make the drain line from the unit to the air gap above the "open funnel" as short as possible. There should be no horizontal piping between the unit and the air gap above the "open funnel." The "open funnel" is intended to eliminate any water from entering the steamer because of a blocked drain and it also prevents any back pressure within the steamer cavity. The unit must be free-venting to the atmosphere. Any connection that allows the build-up of back pressure in the unit such as a reduction in pipe size to a line smaller than *1"* or a 90 degree angle in the line prior to the "open funnel" drain discharge point may cause personal or property damage and therefore will void the warranty. This is a pressureless, free-venting steam cooker and will not operate properly unless the drain line is short, at a steep angle, and open! See figure 3.



OPERATING SEQUENCE RS-4E

The RS-4E is a counter top pressureless steamer. When the power switch is turned on, the drain solenoid is energized directly and it closes. The fast fill float is in the down position and the fast fill solenoid is energized through the "NC" contact in Relay 1. This fills the cavity well with water. This is automatic regardless of timer position, as the water rises to cover the elements it raises the low water float which energizes the Rl relay. The Rl relay when energized de-energizes the fast fill solenoid and energizes the slow fill solenoid. (Refer to Figure 1 for fast and slow fill float locations.)

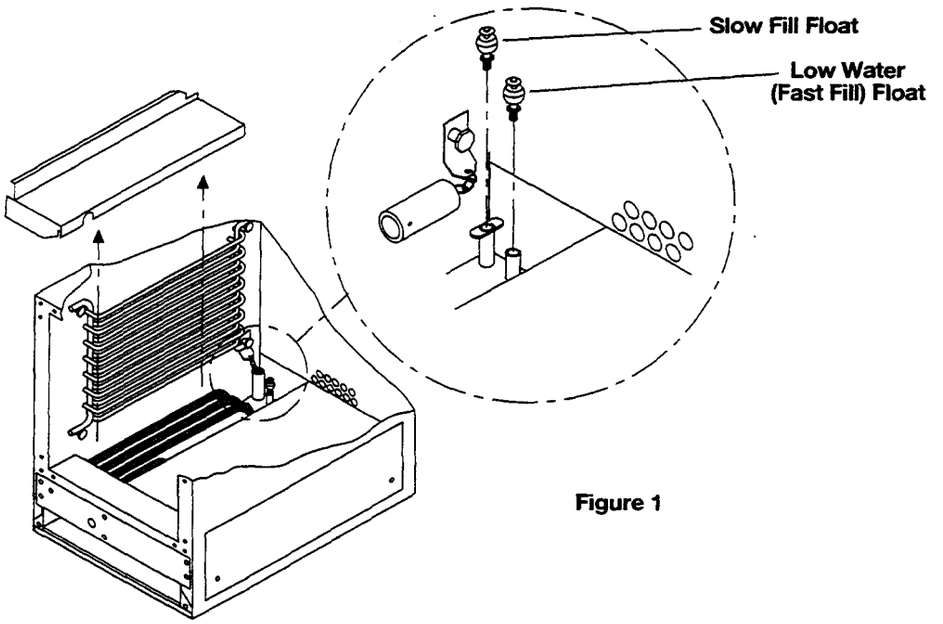


Figure 1

The R-1 Relay then sends power to the Limit Switch. Passing through the normally closed contacts and energizing the contactor and condenser spray solenoid. The contactor when energized sends power to the elements and the elements begin to heat the water.

All functions to this point are automatic when the unit is started up as long as the power switch is turned on and the door is closed.

The temperature in the cavity well will continue to rise until it is up to boiling at which time a thermostat senses the well temperature and opens up. This de-energizes the R-2 relay and turns the ready light on.

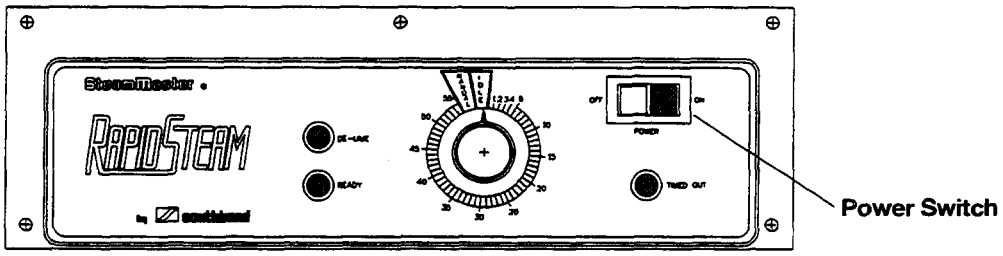
The control of the steamer is now governed by the timer. The timer has three positions. The first is Manual in which the unit runs on full power continuously.

The second position is the Timed position. In this position a cook time is dialed in and after the timer counts down to zero the timed out light will flash and the buzzer will sound and the unit will go into idle mode automatically.

The third position is the Idle position. In this position the unit will remain just below boiling temperature and ready for use. The 500 watt heating element is energized. The unit can be brought up to full power by turning timer knob to manual or setting a time.

COMPONENT DESCRIPTIONS

The following section lists the main components of the RS-4E Rapid Steam Counter Top Steamer. It will also describe these functions in the steamer operation.



The power switch is a double-pole single-throw switch that serves as the (only) "ON" - "OFF" control for the unit. Power is coming to the switch in wires 7 and 8. When the switch is turned "ON," power then is switched to wires 9 and 10 respectively and independently (7 to 9), (8 to 10). Power then travels through wire 9 to term block 1 and through wire 10 to term block 6. With a volt meter you should get 208 (or 240) volts at any of these points:

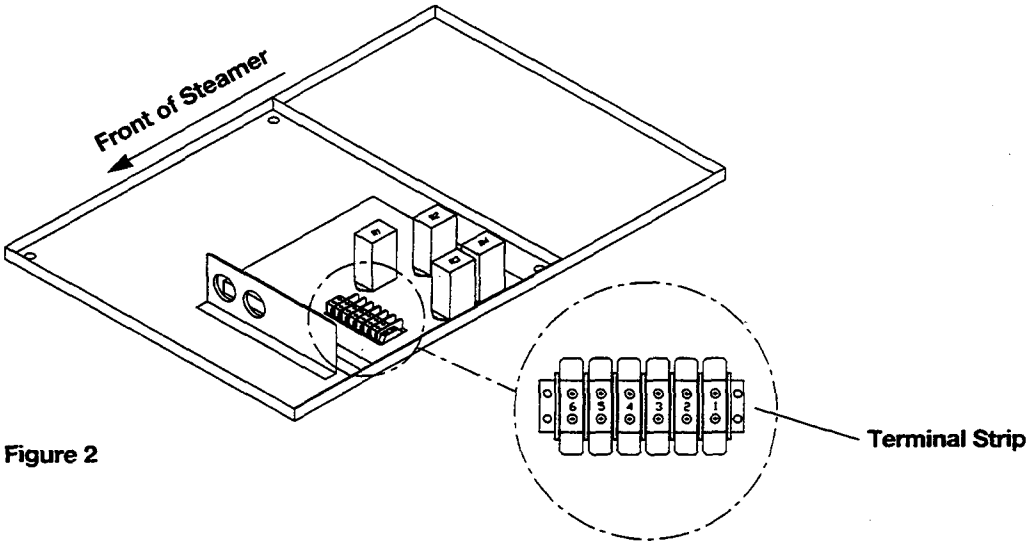


Figure 2

The terminal strip is a connection point for components. It is located behind the right hand side access panel. Refer to Figure 2. It is divided into six (6) sections each having 6 1/4" spade male terminations. Each section is essentially a function, controlling or controlled by some other component. Each of them are made "Hot" (electrically) at some point in operation. Understanding these can aid greatly in troubleshooting. Below is a description of each section and what its function is.

[1] Always hot when switch is "On" (main "Hot"). Check between [l] and [6] to verify supply voltages should be either 208 or 240 volts.

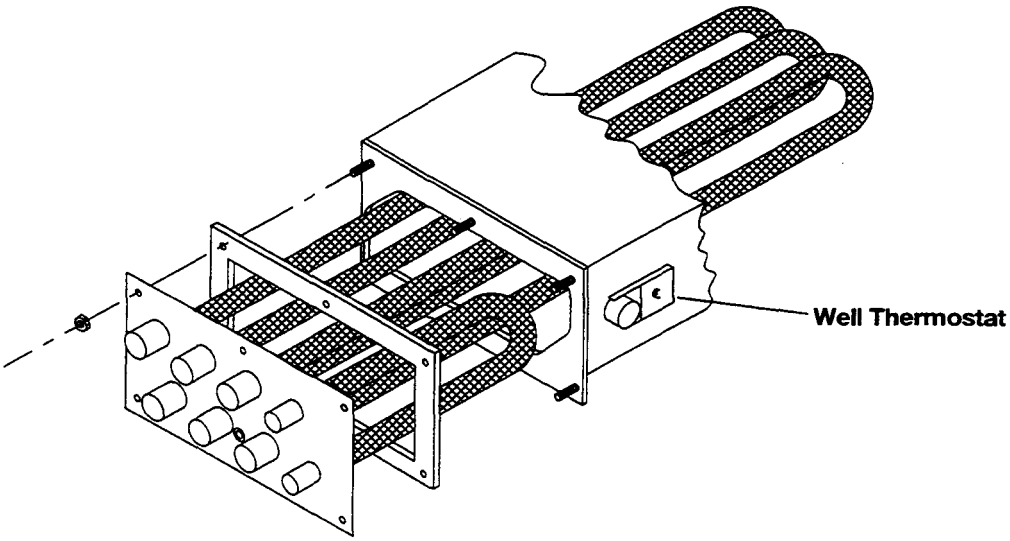
[2] Hot when R-1 is energized by low water float, and the power switch is "On" and door is closed. It also allows the contactor to energize the condensate solenoid.

[3] Hot when timer "Times Out" to "0" and the unit is in the Idle mode.

[4] Hot when timer is "Timing" or in "Manual" mode, also on initial startup when unit is cold (in idle), well T-stat will power this section through R-2 activating main elements to provide quick heatup.

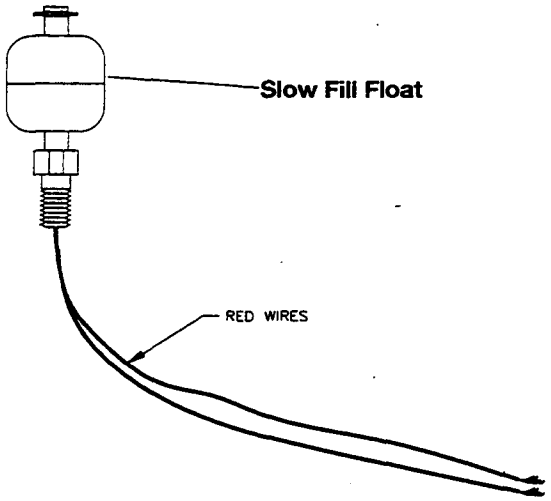
[5] "Common" or Neutral side that is switched off through [3] when door opens, to interrupt functions until door is closed. This also de-energizes the slow fill contactors and condensory solenoid.

[6] "Common" or Neutral side always powered when power switch is "On." Operating voltage will always be present between *Q* and [6].

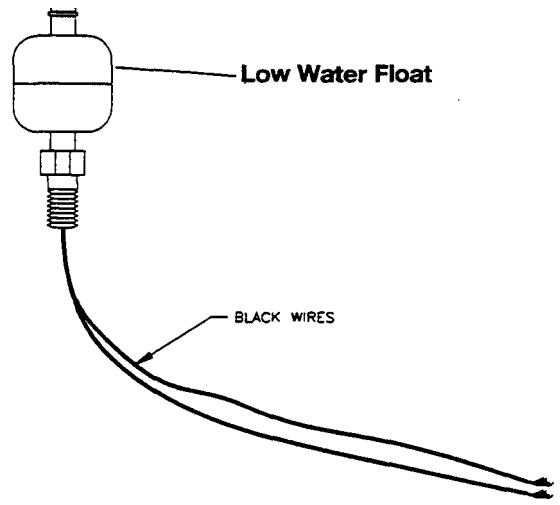


WELL THERMOSTAT

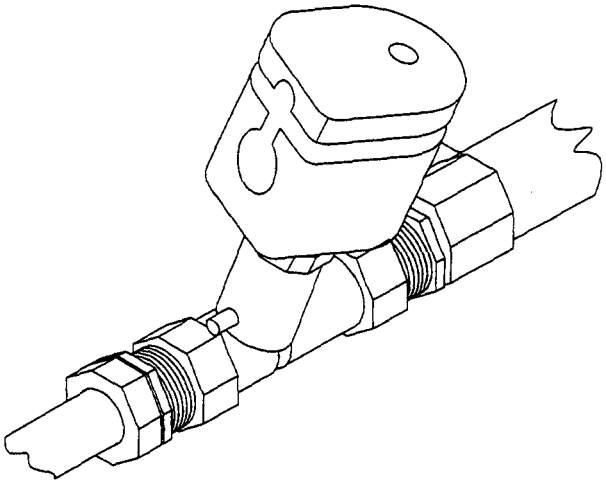
The Well Thermostat is a normally closed (Closed cold) switch mounted on the side of the well under the cavity. As the unit comes up to operating temperature this T-stat (Switch) opens which De-Energizes R-1 relay coil initiating its functions.



The Slow Fill Float is mounted inside the cavity well. This float is normally closed when it is down. It controls the slow fill solenoid, which controls the water level. It energizes the slow fill solenoid as R-1 is energized and shuts off slow fill solenoid as the water rises. This flow will cycle the slow fill solenoid on and off during normal full power operations.

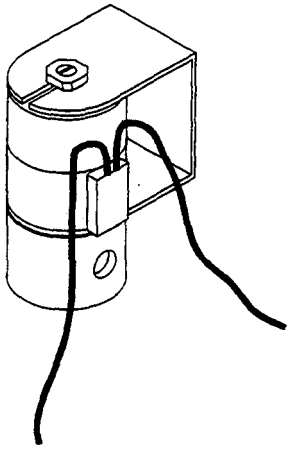


The Low Water Float is also mounted inside the cavity well. This float is a normally open switch. It is open when it is down. This float closes when the water level is above the elements. This activates the R-1 relay coil. Power is then routed through the Slow Fill Float to the Slow Fill Solenoid.



DRAIN SOLENOID

The Drain Solenoid is a normally open solenoid valve that closes when energized. (Whenever power switch is "On," power goes to term stripe [3] and[6]. Valve remains dosed always when power switch is on, allowing water to fill and remain in cavity well. It is located under cavity near rear. Turning unit off opens valve and drains well.



CONDENSOR, SLOW FILL, AND FAST FILL SOLENOIDS.

The condenser, Slow Fill and Fast Fill solenoids are all identical solenoids. All three solenoids are located immediately behind the control panel.

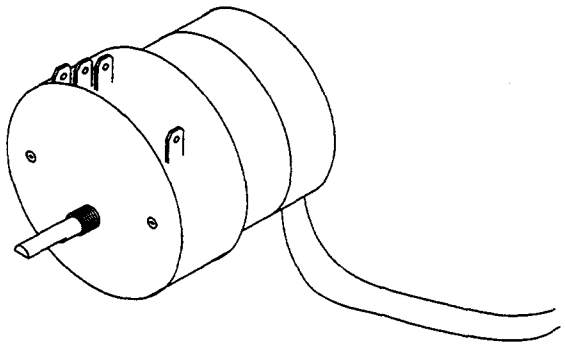
The condenser solenoid valve is a normally closed (closed when NOT energized) solenoid valve which is activated (simultaneously with main contactor coil) when ready R-1 is energized by the low water float. It is energized whenever "Full Power" running is active, "Manual" or "Timed," NOT idle mode. (Controls water flow to condenser spray nozzle), located in lower area behind control panel, in solenoid assembly.

SLOW FULL SOLENOID

The Slow Full Solenoid is a normally closed (closed when NOT energized) solenoid valve that is activated by slow fill float when R-1 is energized (sufficient water). It cycles off and on as float rises and falls, maintaining water level in well.

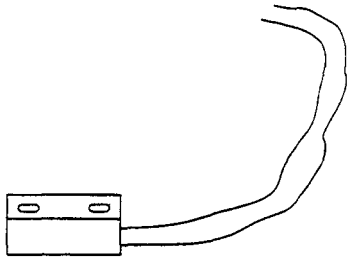
FAST FILL SOLENOID

The Fast Fill Solenoid is a normally closed (closed when not energized) solenoid valve providing a high volume quick fill action energized when power switch is turned on. Remaining on only when R-1 is not yet activated. When water level trips R-1 fast fill ceases, slow fill begins.



TIMER

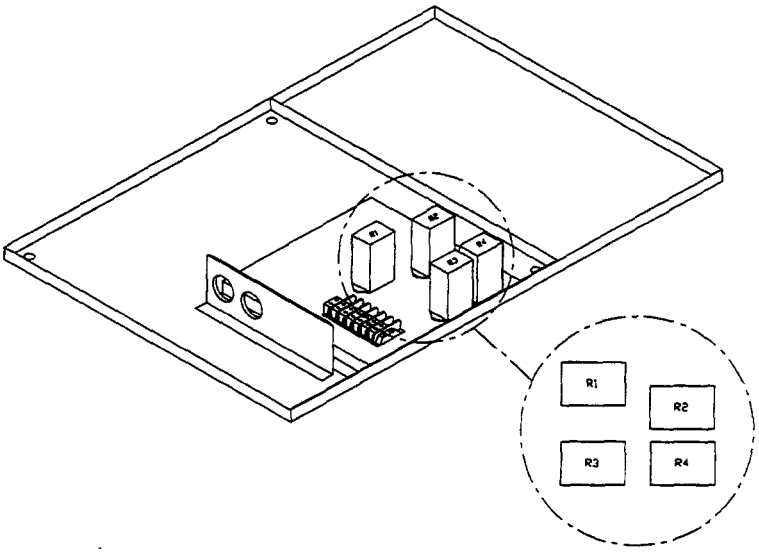
The Timer is essentially a motorized time switch, but also has a "Manual" and "Idle" position. It is the function selector, allowing the user to set a "Timed" run, leave unit in "Idle" or leave unit in "Manual," running full-power continuously. In Idle, the unit is kept up to temperature ready for full power use, while conserving both water and electricity.



DOOR SWITCH

The Door Switch is a normally open magnetic activated switch energizing the R-3 relay coil when the door is closed. Magnet is mounted inside door at bottom near center.

Door Switch is located immediately behind front frame under cavity, mounted on panel.



R-1RELAY

The R-1 Relay is a double pole double throw relay energized by the low water float when the water level in the well rises above the elements.

BELOW this trip point the fast fill solenoid is energized (door must be closed). ABOVE this trip point, TWO SEPARATE actions are initiated.

1. Power now travels to term block [2] on to limit thermostat, then onward to contactor coil and condensate solenoid simultaneously.
2. Power now travels to the idle element (which will now run continuously) and the slow fill float which will then cycle slow fill solenoid off and on to maintain water level.

Once R-1 relay is activated on startup, it remains energized continuously as long as unit is running.

R-2RELAY

The R-2 Relay is the well-thermostat controlled relay. It is identical to R-1, R-3 and R-4 (DPDT). When the unit is started cold the well thermostat is in a "Closed" state, which energizes R-2 Ready Coil. In this "Cold" condition R-2 provides "Full Power" (Main Elements) startup when in the "Idle" position on the timer.

When unit comes up to operating temperature, the well thermostat opens, de-energizing R-2 Relay Coil. This transfers power to the other set of R-2 contacts and activates two (2) separate actions.

1 The "Ready" light is illuminated (and will remain so as long as unit is on).
2 The Buzzer and "Timed Out" light will now BE ALLOWED to activate IF and WHEN a time is set on timer and ALLOWED TO TIME OUT.

R-3 RELAY

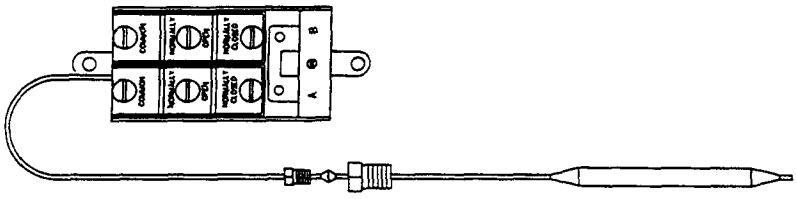
R-3 Relay is the door-switch controlled relay. It is identical to R-1, R-2 and R-4, (DPDT). Its function is to allow certain activities to take place ONLY when the door is closed. They are:

1. Fast fill
2. Timer count down
3. Slow fill
4. Main contactor coil
5. Condenser spray
6. Buzzer
7. Timed out light

The R-3 also ACTIVATES R-4 relay when the door is opened after timing down to "O." R-4 then "latches" itself energized which leaves "Timed Out" light and buzzer de-activated in idle mode. Re-settine a new timmer oneration releases the "Latch" of R-4.

R-4 RELAY

R-4 Relay is the "Latching" relay. It is identical to R-1, R-2 and R-3 (DPDT). Its purpose is to allow the operator to respond to the continuous buzzer after timing down to "0" by simply opening the door. R-3 energizes R-4 when the door is opened. R-4 then "Latches," holding itself energized. Closing the door again leaves the unit in timed out idle without the buzzer or timed out light staying on. When a new time is selected on the timer or the "Manual" mode is chosen, the "Latch" on R-4 is released allowing the buzzer and timed out light to again operate when the timer times down to "0."



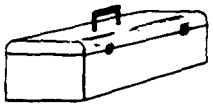
LIMIT SWITCHES A & B

The Limit Switch is a bulb and capillary type limiting device which has two SPDT switches (independent) which "trip" at two different temperatures which are factory set and not adjustable. Switch "A" is normally open and under normal operation will not be activated.

A capillary bulb is attached to the side of one element tube. Sensing the operating temperature of the element. As lime or calcium deposits begin coating the exterior of the elements, the heat energy is NOT transmitted into the water, thereby causing the elements to operate at a higher temperature. When limit Switch "A" senses this temperature rise and trips, it powers the "De-Lime" light, signaling the operator to perform cleaning and de-scaling maintenance. The unit will continue to run, although not as efficiently.

Switch "B" is normally closed and set to trip at a higher temperature than Switch "A." Switch "B" is the final "Dry-Fire" or "Hi-Limit" protection. It shuts off the Main Contactor coil in the event of significant temperature rise.

If scale conditions are extremely bad and element temperature rises significantly, this switch (B) will now trip. It will also trip in the event the Low Water Float should happen to stick "Up" and a "Dry-Fire" condition takes place.



TROUBLESHOOTING GUIDE

The following Troubleshooting Guide is designed to aid in troubleshooting components on the RS-4E RapidSteam Steamer. Before starting service on the RS-4E verify the steamer has the proper power supply, water supply and drain connections. The access column below tells you the access area that allows the easiest access to components. The abbreviations used are as follows.

RR - Rear of steamer RT - Right access panel CAV. - Interior cavity LT - Left access panel
CP - Control Panel

Symptom		Cause	Check Access
Power Switch is turned on but unit does not operate.	1.	Breaker tripped or no power into unit.	1.1 Check to see that Breaker is on.
			1.2 Check for proper supply RR voltage at terminal block -rear of unit. Voltage should match rated voltage on unit Serial Plate.
	2.	Defective Power Switch	2.1 Verify voltage into and out of CP switch in "On" position. Verify voltage between term strip [1] and [6].
	3.	Loose wire connection	3.1 Disconnect power to unit. CP Remove control panel and RT right side panel and inspect for wire terminals loose or wires disconnected.
Unit is on but does not fill on startup.	1.	Faulty or mis-adjusted Door Switch or faulty R-3 Relay. (R-3 not being energized)	1.1 Remove Right Side Panel. RT Verify R-3 activates when door closes.
			1.2 If R-3 does not activate check RT voltage across coil. • Voltage across coil - door switch OK, relay is bad. • No voltage across coil -door switch is not being activated by door or door switch is bad.
	2.	Faulty Fast-Fill solenoid. (R-3 is being energized.)	2.1 Check for voltage across RT solenoid coil. (TB [5] and "NC" contact on R-1 Relay) • Voltage across coil - no action, solenoid is bad. • No voltage — re-trace circuit and R-3 related items.
	3.	Faulty Drain solenoid. (Well will not hold water)	3.1 Listen for water filling, unit RT may fill partially, even if drain solenoid has failed.
			3.2 Check voltage across drain solenoid coil. (TB [j] and [6]) RT

Symptom		Cause		Ckeck	Access
Does not fill in "Timed Out"/Idle position at startup "Ready" light is on immediately at cold startup	4.	Faulty R-2 Relay or Well T-Stat (R-2 energized cold by well T-start powers fast fill in "Idle" startup.) [R-2 is only energized when unit is cold.]	4.1	Remove Right Side Panel. R-2 should activate immediately when power switch is turned on. (Door closed)	RT
			4.2	If R-2 does not activate check voltage across coil. • Voltage across coil - Relay is bad. • No voltage across coil — well T-stat is bad.	RT
Unit runs but slow fills continuous. *Cooking compartment is flooding.* *Too much water in well* *Normal running should hear water fill cycling off and on.*	*1.*	Slow Fill Float stuck in "Down" position.	1.1	Check Slow Fill Float for free movement on stem and inside baffle tube.	CAV
Fast filling and contactor cycles on/off. *Slow fill water is not maintaining sufficient level.*	1.	Faulty "Slow Fill" float	1.1	Remove right side panel. Shut power off. Disconnect Slow Fill Float leads (red). Check continuity of switch as you raise and lower float. (Higher and to the left, INSIDE protective tube baffle) Do this test while the float is still HOT from operation of unit. Sometimes a float switch will test "OK" COLD.	RT
	2.0	Faulty slow fill solenoid	2.1	If float switch tests good check voltage across slow fill solenoid coil (TB [5] and float switch) • No voltage - check R-3 related functions as it can affect slow fill circuit. • Voltage present - no filling action: solenoid is bad or plugged. Replace.	RT
	3.0	Low water pressure	3.1	Check for minimum 30 p.s.i.	

Symptom		Cause	Check	Access
"De-Lime" light comes on. *Unit still runs ok.*	*1.*	Elements are coated with deposits buildup, or limit T-stat out of calibration.	1.1 Check elements. • Clean elements - limit thermostat bulb damaged or T-stat needs calibration. If T-stat bulb (on element) is not crushed or damaged, see limit thermostat cali bration procedure. • Coated/covered elements - clean elements following Southbend recommended cleaning procedure.	CAV
"De-Lime" light comes on. *Unit has shut down.* *Elements not on.*	*1.*	Elements severely coated with deposits buildup.	1.1 Clean elements following Southbend recommended cleaning procedure. Repeat if necessary until elements, well, and floats are entirely clean.	CAV
Unit operates normally, heats up OK, but "Ready" light does not come on.	*1.*	T-stat loose (not sensing well temp). (T-stat opens to de-energize R-2, no contact then powers ready light.)	1.1 Check that bracket securing T-stat is tight and that bottom of T-stat is flat against side of well.	RT CP
	2.	Loose or broken wires on T-stat or R-2 relay.	2.1 Check wires that go from terminal block to T-stat and R-2 relay.	RT CP
	3.	Light burned out.	3.1 Check voltage across Ready Light after unit is heated to operating temperature (5 minutes).	CP
Unit operates but is slow.	1.	Incorrect (low) voltage.	1.1 Check voltage at rear terminal block to see if it matches that on unit serial plate.	RR
	2.	Faulty contactor.	2.1 Check that each power input lead has amperage draw comparable to rating on serial plate	RR
Unit will not operate in idle mode.	1.	Timer switch contacts failure.	1.1 Check for (208-240) voltage between terminal strip sections *[3]* and [6].	RT

Symptom		Cause	Check	Access
Unit will not operate in Manual Mode or Timing Mode	1.	Timer Switch contacts.	1.1 Check for operating voltage (208-240) between TB[4] and [6].	RT
Unit operates in "Timing" mode but timer does not count down.	1.	Timer Motor faulty.	*1.1* Check for voltage across Timer Motor leads when dial is set to a time anywhere in the "0" to "55" scale.	CP
Unit "Fast Fills" continuous, contactor never energizes elements.	1.	"Low Water" float stuck down.	1.1 Check that Float (lower and to the right) moves freely up and down on stem.	CAV
	2.	Faulty Low Water Float (switch contacts never "Close"). .	2.1 Remove Right side panel. Check to see that R-1 energizes when water level raises float.	RT
		or		
		Faulty R-1 Relay.	2.2 If R-1 does NOT energize check voltage across coil. • No voltage - Float switch is bad. • Voltage present/no action - R-1 relay is bad. Replace.	RT
Unit operates normally. Then shuts off. No lights illuminated on panel.	1.	Supply breaker tripped.	1.1 If Breaker is tripped, leave power off, remove control panel and Right and Left side panels and check for loose wires or connections or pinched/damaged wires.	
	2.	Loss of water supply.	2.1 Check that water supply has not been shut off or that facility water supply is still OK.	

PERFORMANCE STANDARD:
The RS-4E should come up to operating temperature and the Ready Light will come on after approximately 4 minutes, from cold start.

PERFORMANCE CHECK:
The following items should be checked before or within the first 30 days of operation by a Southbend Authorized Service Agency, and on a routine maintenance schedule thereafter.

1. Verify equipment is level.
2. Verify proper electrical characteristics — Voltage, cycle, phase.
3. Check ventilation.
4. Check electrical connections — external and internal.
5. Check door for proper alignment, seal, and adjustment.
6. Check timers and switches for proper installation and operation.
7. Verify proper water pressure and line size.
8. Verify proper drain set up. Must be free venting-
9. Explain importance of keeping elements and floats free of scale. Cover maintenance as explained in Owners Manual.

REMOVAL AND REPLACEMENT INSTRUCTIONS

FLOATS

1. Remove control panel, left and right side panels.
2. Disconnect wire leads of faulty float (or cut wires *off).*
3. Using *1/2"* open end wrench, remove float from inside well. Wires or terminals will have to be cut off to remove. Terminals will NOT fit through float mounting.
4. Install new float by feeding wires through mounting, pulling through from below. Tighten float with *1/2"* open end wrench.
5. Attach new terminals to wire ends. Plug into original locations.

SOLENOID VALVES/FLOW CONTROL

Positively identify and prove that a solenoid is defective before attempting replacement.

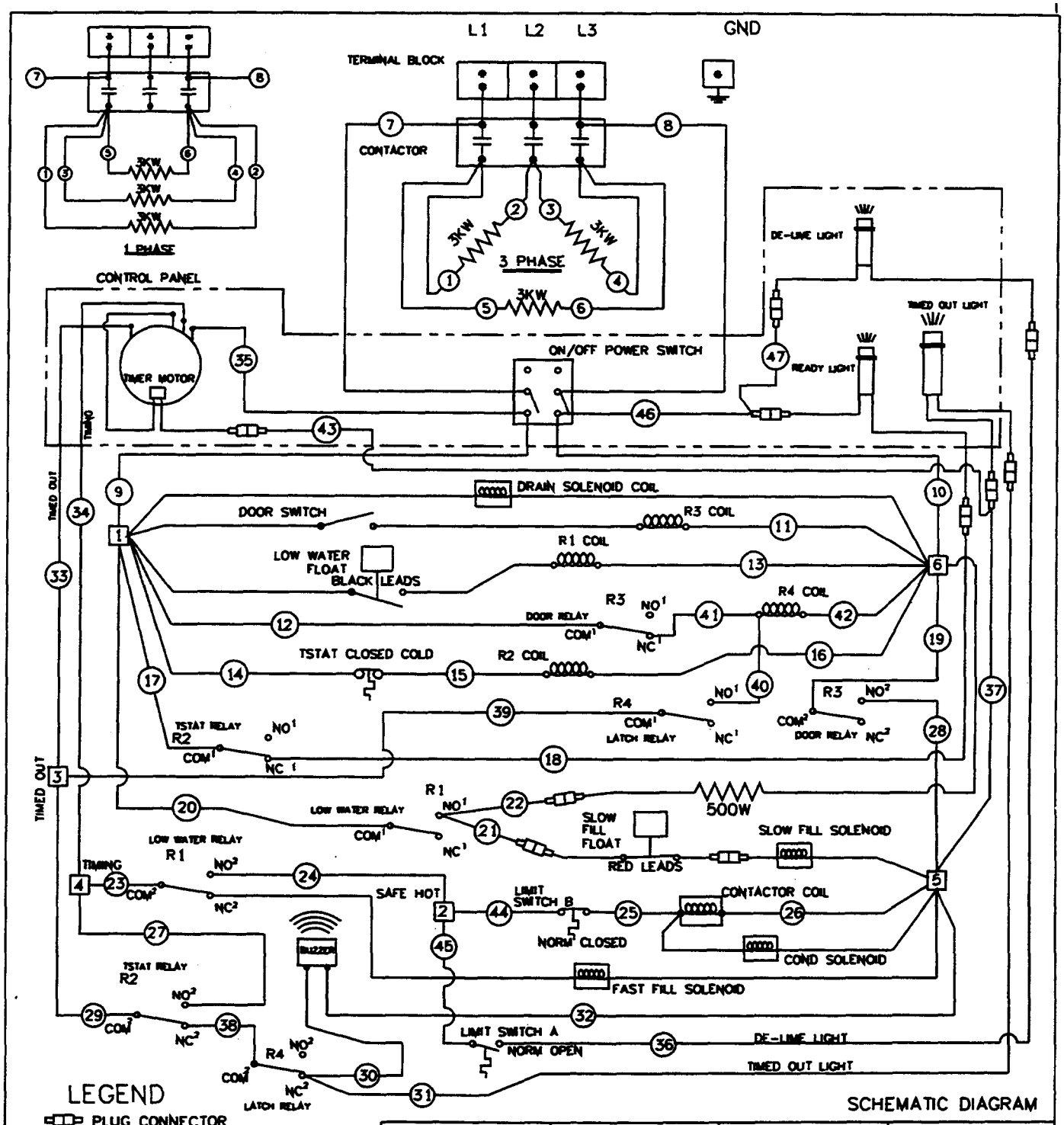
1. Remove control panel and left side panel.
2. Temporarily remove the limit thermostat and bracket from its location on the element retainer stops.
3. Disconnect the three (3) copper tubing connections from the solenoid assembly.
4. Remove the securing screw holding the solenoids in place (small bracket in front of solenoid assembly).
5. Solenoid assembly can be pushed back, turned and then pulled forward/sideways to remove.
6. Leads will need to be disconnected from origins, to remove assembly.
7. Remove and replace defective solenoid or flow control. Note arrangement, some care is required to re-assembly. Note direction arrow on flow regulator (points towards rear of unit). TIGHTEN CONNECTIONS.
8. Re-install assembly into brackets.
9. Re-attach leads carefully. Refer to wiring diagram.
10. Re-attach copper tubing connections.
11. Install limit thermostat and bracket.
12. Install control panel and left side panel.

RELAYS

1. Remove control panel and right side panel.
2. Remove defective relay. Note wire/terminal locations.
3. Install new relay.
4. Replace control panel and right side panel.

CONTACTOR

1. Remove control panel and right side panel.
2. Disconnect wires and leads from contactor.
3. Remove contactor ((2) screws, diagonal).
4. Re-install control panel and right side panel.



LEGEND

- PLUG CONNECTOR
- TERMINAL BLOCK CONNECTIONS
- WIRE NUMBERS

JAM 1-94

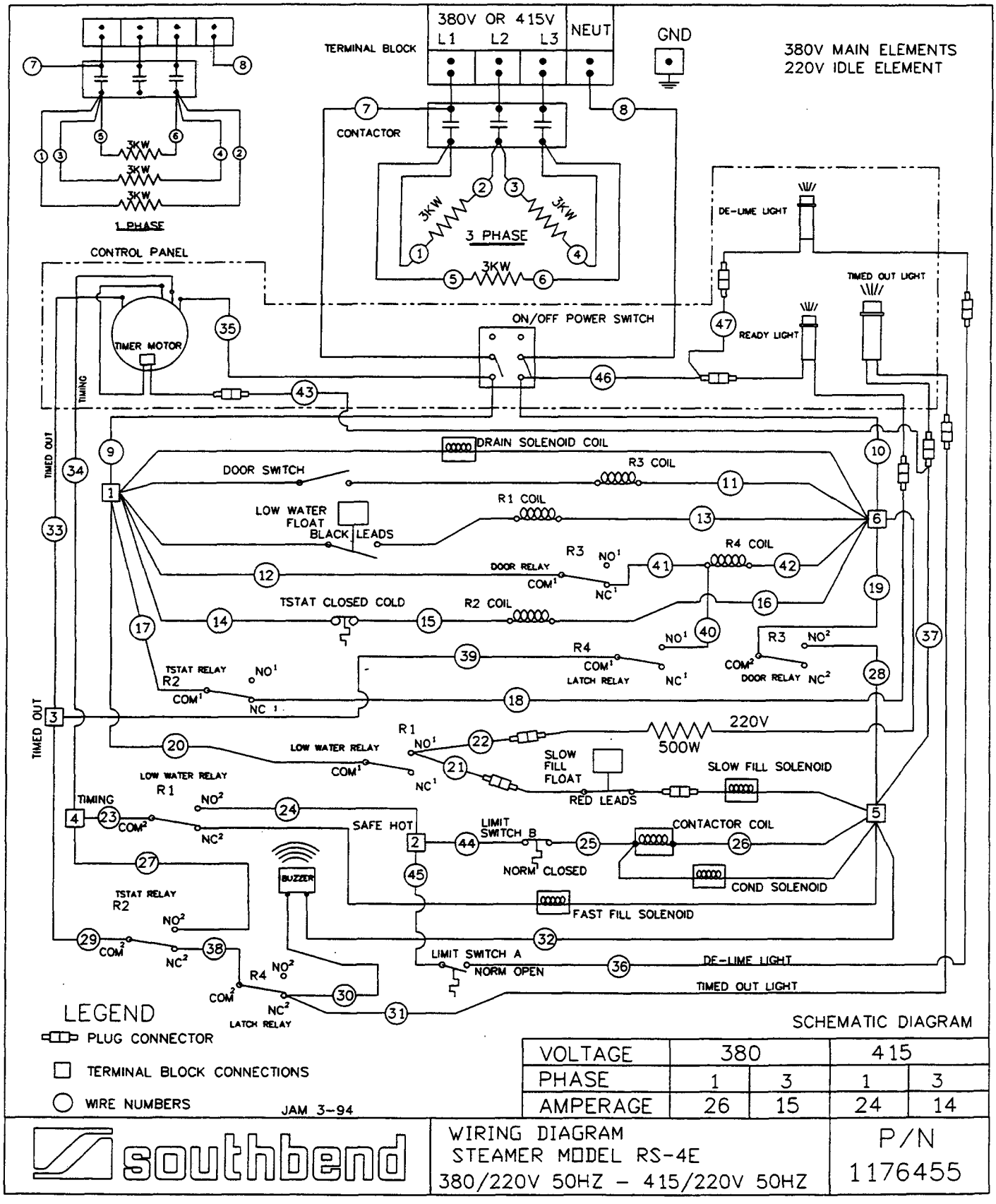
SCHEMATIC DIAGRAM

VOLTAGE	208		240		220	
PHASE	1	3	1	3	1	3
AMPERAGE	47	28	40	24	44	27

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WIRING DIAGRAM
STEAMER MODEL RS-4E
208-240V 60HZ / 220V 50HZ

P/N
1176454

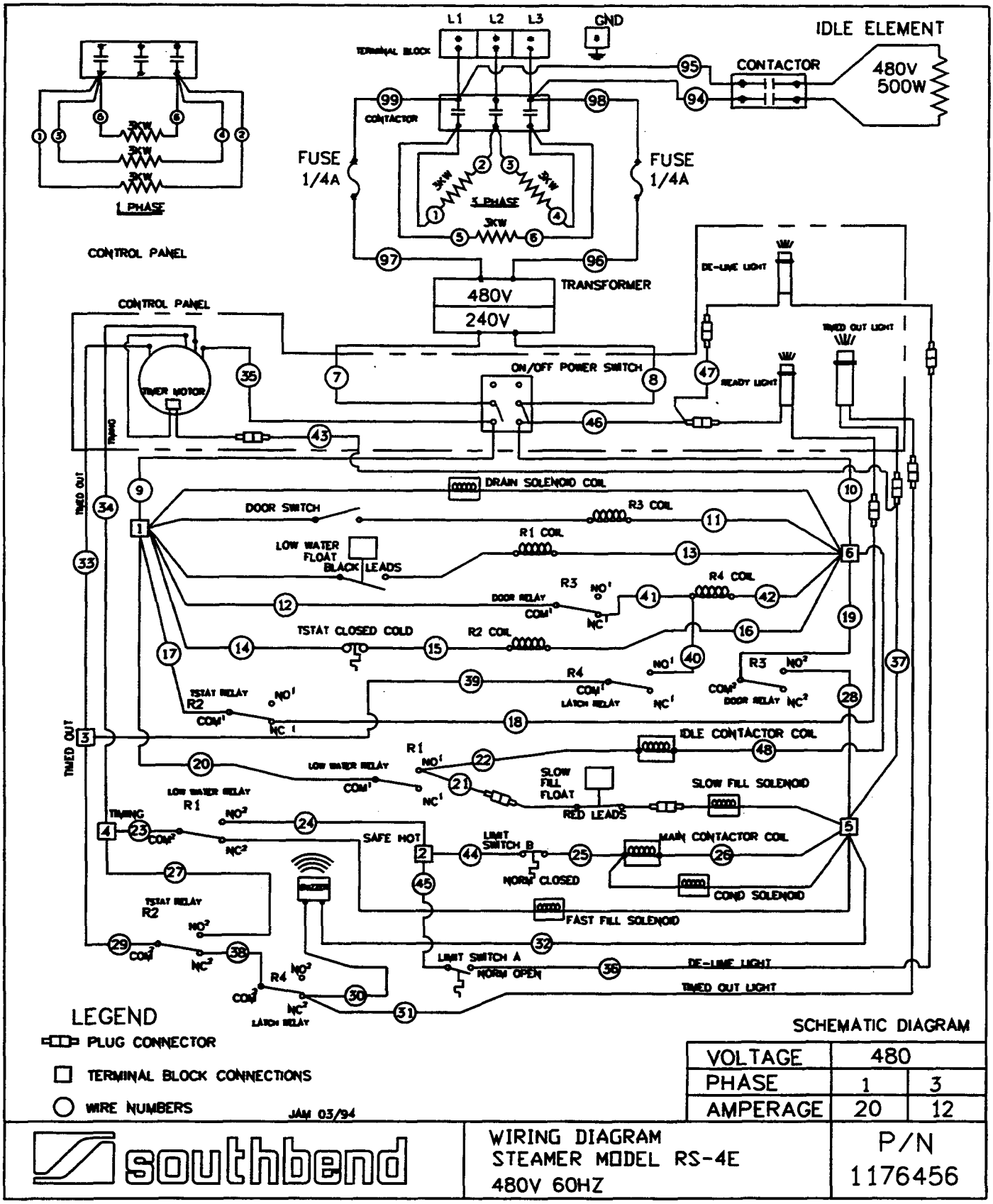


VOLTAGE	380		415	
PHASE	1	3	1	3
AMPERAGE	26	15	24	14

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WIRING DIAGRAM
STEAMER MODEL RS-4E
380/220V 50HZ – 415/220V 50HZ

P/N
1176455


L1 L2 L3
GND
IDLE ELEMENT
CONTACTOR
480V
500W
FUSE
1/4A
FUSE
1/4A
3KW
1 PHASE
3 PHASE
CONTROL PANEL
480V
240V
TRANSFORMER
DE-LIME LIGHT
TIMED OUT LIGHT
READY LIGHT
ON/OFF POWER SWITCH
TIMER MOTOR
DRAIN SOLENOID COIL
DOOR SWITCH
R3 COIL
R1 COIL
LOW WATER FLOAT
BLACK LEADS
R4 COIL
DOOR RELAY
TSTAT CLOSED COLD
R2 COIL
TSTAT RELAY
R4
LATCH RELAY
IDLE CONTACTOR COIL
LOW WATER RELAY
SLOW FILL FLOAT
RED LEADS
SLOW FILL SOLENOID
TIMING
SAFE HOT
LIMIT SWITCH B
NORM CLOSED
MAIN CONTACTOR COIL
COND SOLENOID
FAST FILL SOLENOID
LIMIT SWITCH A
NORM OPEN
TIMED OUT
LEGEND
PLUG CONNECTOR
TERMINAL BLOCK CONNECTIONS
WIRE NUMBERS
JAM 03/94
SCHEMATIC DIAGRAM
VOLTAGE 480
PHASE 1 3
AMPERAGE 20 12
southbend
WIRING DIAGRAM
STEAMER MODEL RS-4E
480V 60HZ
P/N
1176456

PARTS

Genuine Parts Protect *YOU* All-Ways !

NOTICE:
INSTALLATION OF OTHER THAN GENUINE SOUTHBEND PARTS WILL VOID THE WARRANTY OF THIS EQUIPMENT.

The serial plate is located on the right upper rear comer. There is also an Identification Plate mounted to the front of the door the left top comer that will supply model and serial number.

Replacement parts may be ordered either through a Southbend Authorized Parts Distributor or a Southbend Authorized Service Agency.

When ordering parts, please supply the Model Number, Serial Number, Part Number, Description, plus Finish, Type of Electrical Characteristics as applicable.

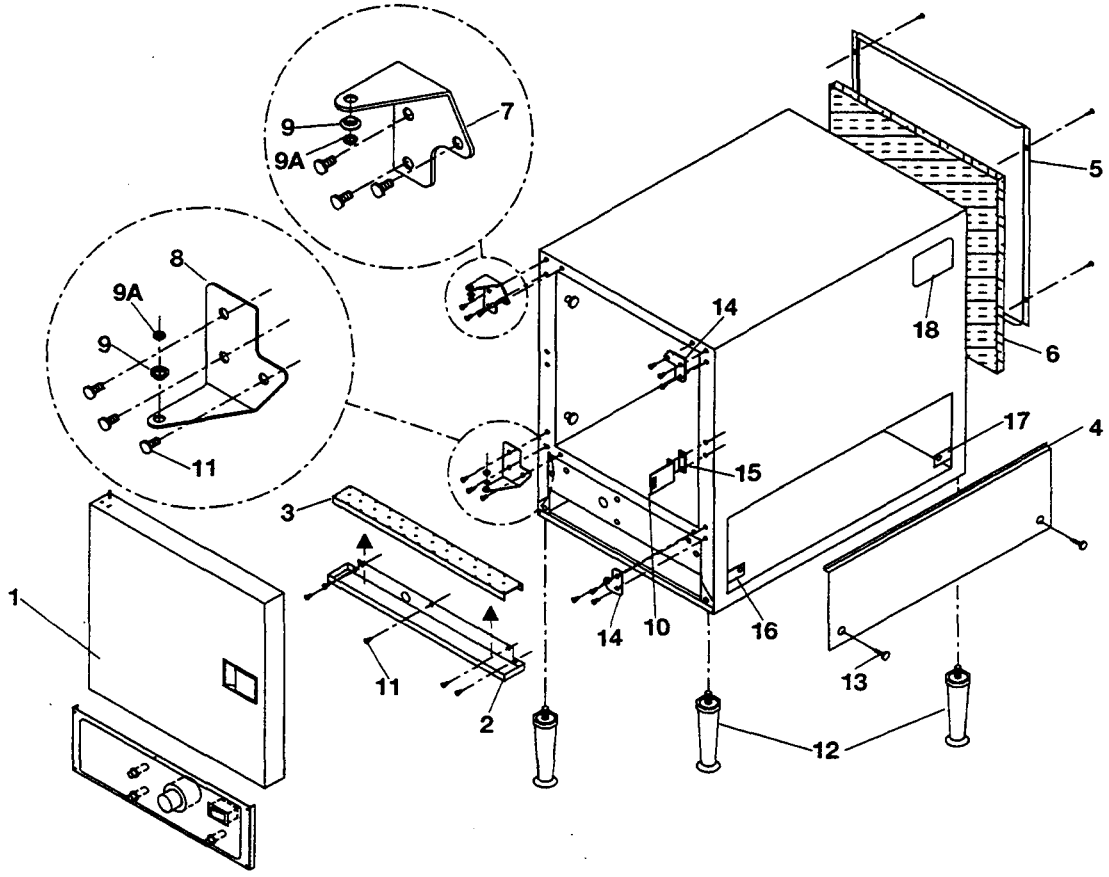
For parts not listed, consult a Southbend Authorized Parts Distributor or Southbend Authorized Service Agency. If necessary, please consult Southbend Parts Department for assistance.

FOR MODEL NUMBER - RS-4E Rapid Steam

REPLACEMENT PARTS INDEX	see pages
Legs and Outer Body Parts	21
Door Panel Assembly	22
Steamer Cavity Interior Parts	23
Heating Element and Thermostat	24
Terminal Block (Rear of Steamer)	24
Water Solenoid Assembly	25
Internal Control Components	26
Control Panel Components	28

MISCELLANEOUS PARTS NOT SHOWN IN DRAWINGS

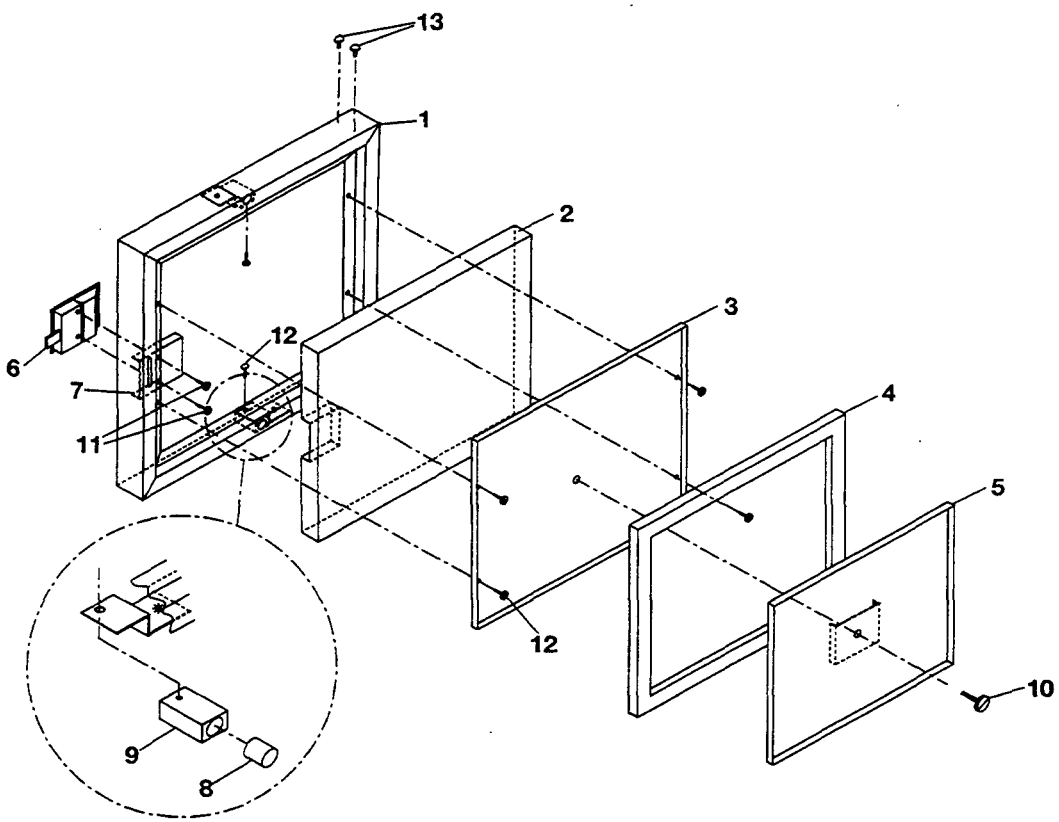
PART NO.	DESCRIPTION
1176561	Cleaning Instructions RS-4E
1176560	Owners Manual
4460002	Technical Service Manual
PM-162	Cleaning Pad
4450020	SteamMaster Descaler - 24 Pack
4450021	SteamMaster Descaler - Master Pack (Contains 8 of the 4450020)



ITEM	PART NO.	DESCRIPTION
1	1176405	Door Assembly (complete)
2	1176401	Drip Tray
3	1176391	Shield
4	1176376	Side Panel
5	1176311	Rear Cover
6	1176407	Insulation
7+	1332048-1	Door Hinge - LH
8+	1332048-2	Door Hinge-RH
9	PH-423	Bronze Bushing (for Door Hinge)
9A*	PH-292	Nylon Washer (Fits Between Door and Hinge)
10	1173198	Door Striker
11*	1172964	10-241/2 Stainless Steel Hex Screw (Hold door striker on)
12	1163561	Leg
13	1146390	10-24x1
14	1332076	Blank For Door Hinge
15	1332003	Door Shim
16	1176403	Front Panel Bracket
17	1176404	Rear Panel Bracket
18		Serial Plate Location

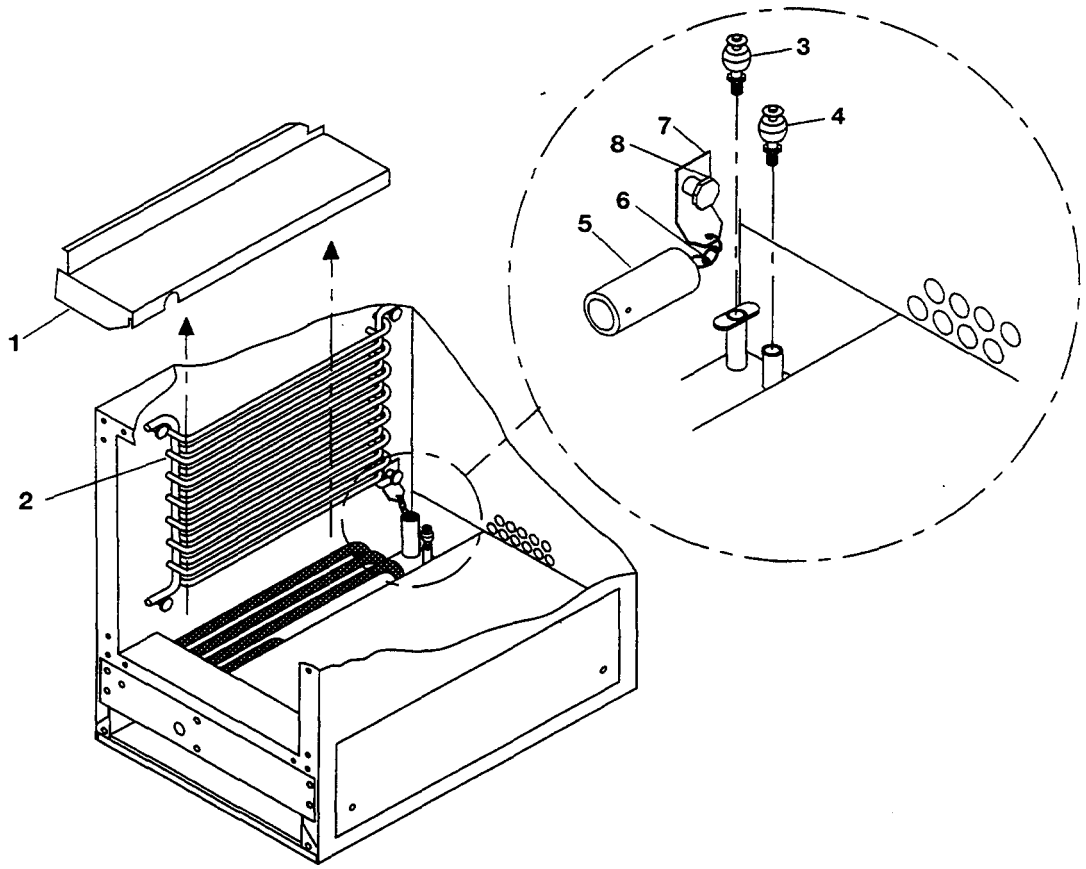
* Not shown on drawing.

+ If door is hinged on right hand side of steamer the hinges would switch position top to bottom.



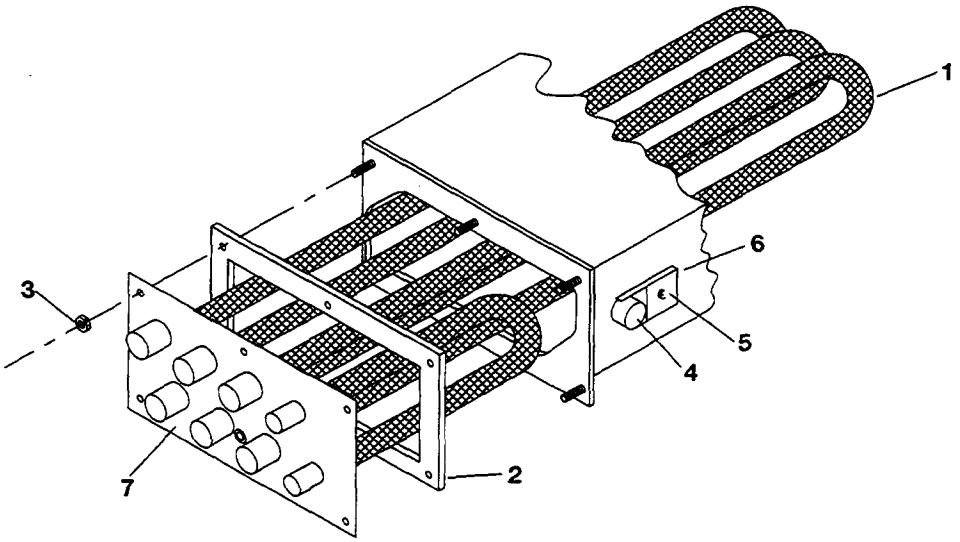
DOOR PANEL ASSEMBLY

ITEM	PART NO.	DESCRIPTION
1	1176402	Door Weld Assembly
2	1173223	Insulation Block (Foam)
3	1173195	Retainer Panel Assembly
4	1172994	Molded Silicone Gasket
5	1173200	Inner Panel Assembly
6	1173188	Door Latch
7	1173199	Door Latch Retainer
8	1176255	Door Magnet
9	1176337	Magnet Support Block
10	1173224	1/4-20x5/8 Slotted Screw
11	1146321	8 - 32 x 3/8 Round Head Screw
12	6600334	6 - 32 x 3/8 Self Tapping Screw
13	PM-141	Plug Button 1/4 Nylon



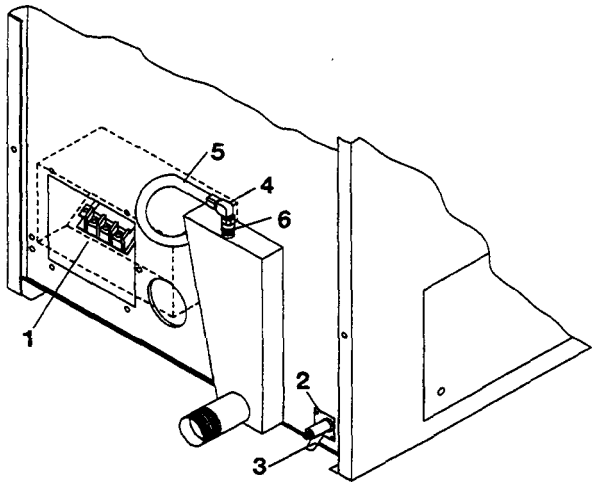
STEAMER CAVITY INTERIOR PARTS

ITEM	PART NO.	DESCRIPTION
1	1176318	Well Cover Deflector
2	1174587	Cavity Side Rack
3	1174924	Float Switch, Water Rll (Red Leads) Normally Open
4	PE-193	Float Switch, Low Water (Black Leads) Normally Closed
5	1176312	Float Baffle Tube (Slow Fill)
6	1176419	Chain, Steamer (Three Links)
7	1176313	Bracket, Baffle Tube Chain
8	1333041	Rack Mounting Studs 1/4 - 20 SPC
9	PH-238	Lock Nut For 1333041



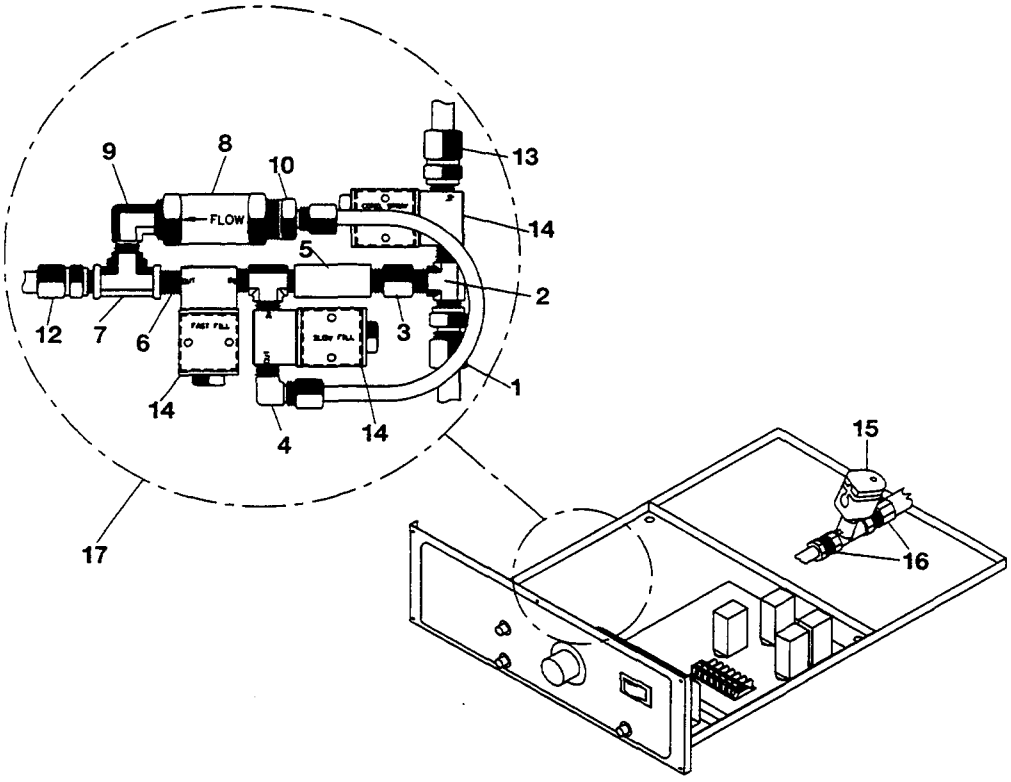
HEATING ELEMENT & THERMOSTAT

ITEM	PART NO.	DESCRIPTION
1	1176485	208V Element Assembly
	1176486	220V Element Assembly
	1176487	240V Element Assembly
	1176488	380V Element Assembly
	1176489	415V Element Assembly
	1176490	480V element Assembly
2	1176492	Element Gasket
3	1146402	Nut 1/4-20 Hex
4	PE-182	Thermostat
5	6600430	Lock Nut
6	1176315	Hold Down Bracket (T-Stat)
7	1176589	Brass Plug



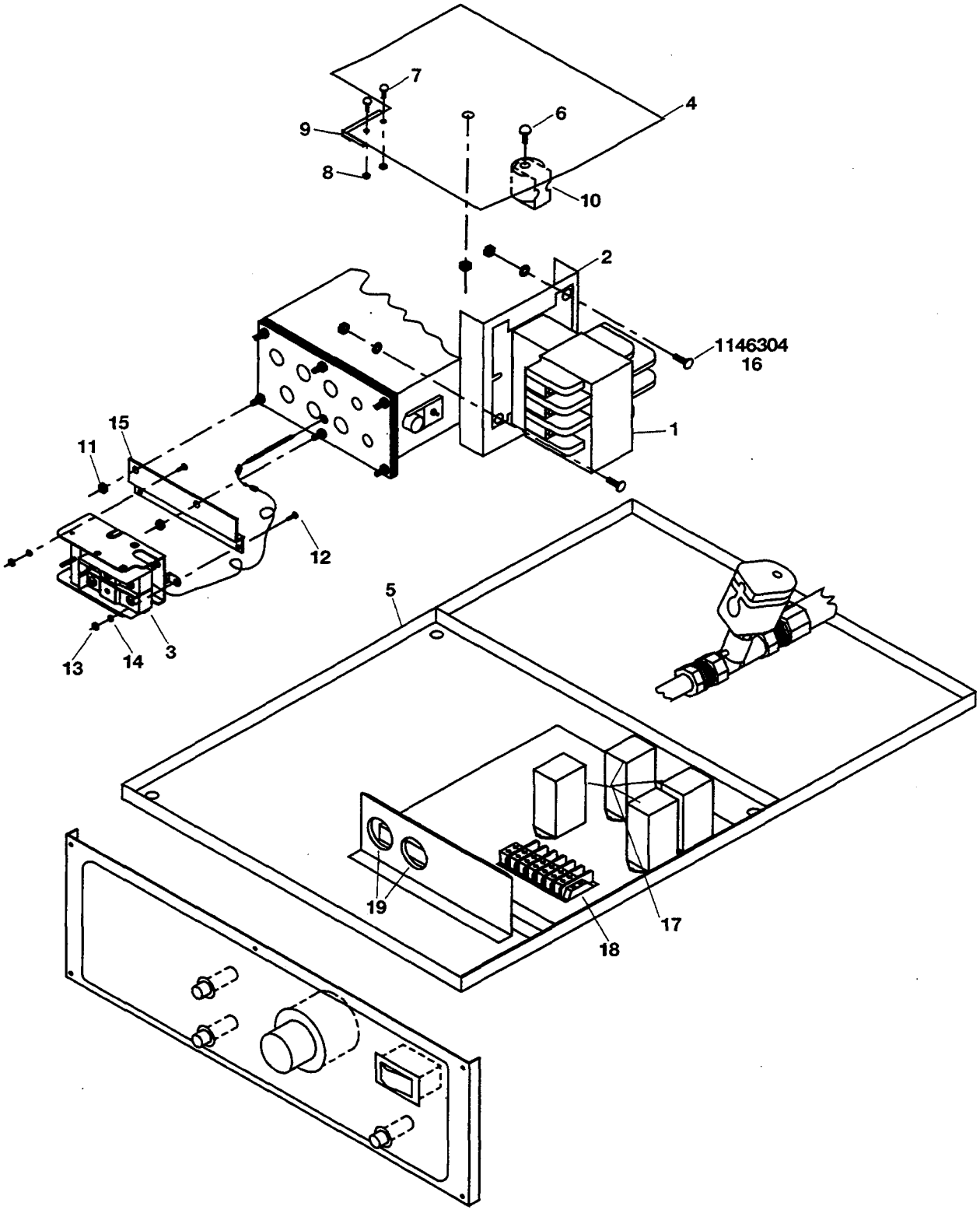
TERMINAL BLOCK (Rear of Steamer)

ITEM	PART NO.	DESCRIPTION
1	PE-023	Terminal Block (1 Section) Assembly 1174700
2	1176324	Water Inlet Plate Weld Assembly
3	1173428	In Line "Y" Strainer
4	P-4119	Brass Elbow 1/4 x 1/8 NPT
5	1176409	Condenser Tube
6	1174620	Spray Nozzle 1/8 NPT .34 GPM
	1160031	Ground Lug



WATER SOLENOID ASSEMBLY

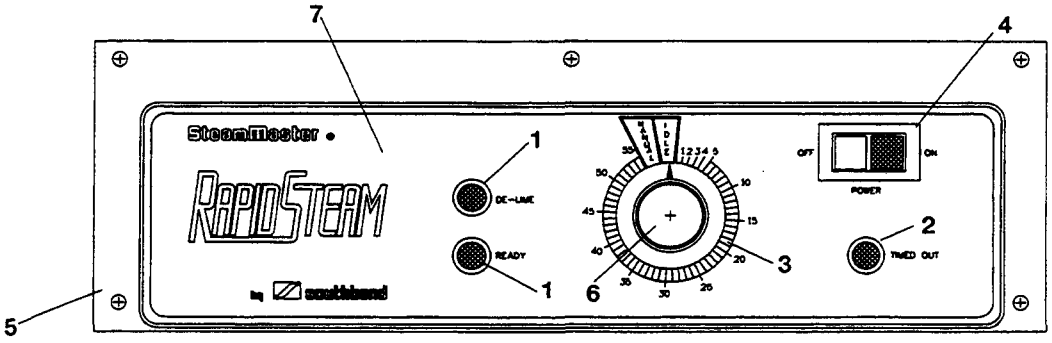
ITEM	PART NO.	DESCRIPTION
1	1174948	3/8 CC-1/8 NPT Female
2	PP-269	1/8 NPT Male Tee
3	1161541	1/8 NPT Male/Female
4	P-4119	1/4CC-1/8 NPT Male Elbow
5	PP-501	1/8 NPT Coupling
6	1176384	1/8 NPT Nipple
7	1176254	1/8 NPT Female Tee
8	PP-636	Flow Regulator
9	PP-275	3/8 NPT M-1/8 NPT M Elbow
10	PP-286	3/8 NPT M-1/4CC
11	1176372	1/4 Diameter Copper Tubing
12	1176385	3/8 CC-1/8 NPT Male
13	P5552	1/4CC-1/8 NPT Male
14	1174933	Solenoid Water Valve 240 (VAC)
15	1174921	Drain Solenoid
16	1-3195	Brass Fitting 68C-8-8
17	1176386	(RS-4E) Solenoid Assembly


7
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1146304
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INTERNAL CONTROL COMPONENTS

ITEM	PART NO.	DESCRIPTION
1	1173448	Contactor
2	1176316	Contactor Bracket
3	1176493	High Limit
*	PM-019	5/8 Clamp For High Limit Bulb
4	1176363	Mount, Insulation Shield Door Switch
5	1176375	Component Slide Pan Weld Assembly
6	6600334	Screw, 6 - 32 x 3/8 Stainless Steel TC
7	1146388	Screw, 4 -40x1/2 Slot, 2I\I
8	1172327	Nut #4-40 Hex
9	PE-185	Door Switch
10	1109900	Buzzer, 240V (Used on units before 95B93610)
	1175712	Buzzer, 220V (Used on units after 95B93609)
11	1146402	Nut 1/4-20 Hex Head
12	1146358	Screw, #8 - 32 x 5/8 Round Head
13	1146406	Nut 8-32 Hex
14	1146501	Washer 3/16 Lock
15	1176520	High Limit Switch Bracket
16	1146304	Screw #10 x 1/2 Truss Head
17	PE-179	Relay (Clear) 10Amp, 240V
18	1170335	Terminal Strip
*	1170336	Marker Strip
19	1161664	Bushing, SNAP, 7/8
*	1176388	Transformer (480V to 240V, 75VA)
*	1176509	Fuse, 3/4A, 600V

* Not shown on diagram.



CONTROL PANEL COMPONENTS

ITEM	PART NO.	DESCRIPTION
1	1176399	Light Assembly Amber (Light only 6600030)
2	1176417	Light Flashing G Amber (Light only 117-6413)
3	1176416	Timer 208 - 240V - 60Hz/60 Minute
	1176436	Timer 208 - 240V - 50Hz/60 Minute
4	1174935	Switch Lighted, Water Proof
5	1176360	Control Panel (Used on all units before 95B93610)
	1176877	Control Panel Weld Asm. (Used on all units after 95B93610)
6	1170337	Knob (For Timer.)
7	1174926	Poly Panel
●	1176394	Control Panel 60 Hz
●	1176437	Control Panel 50 HZ

* Not shown on drawing.

● Complete assembly.

RAPID STEAM - COUNTERTOP CONVECTION STEAMER

SOUTHBEND
REGISTERED TO ISO 9002
CERTIFICATE NO. A2062

Certification No.FM25780

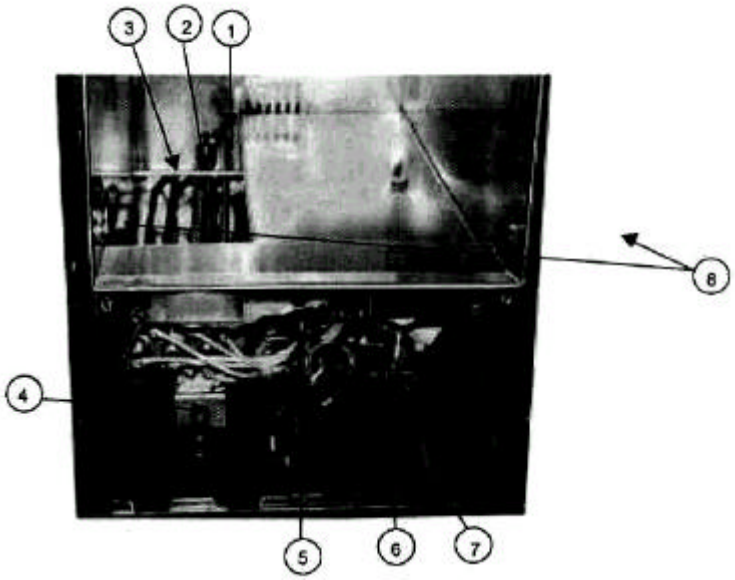
Southbend Registered to ISO 9001

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Litho U.S.A.
PART NUMBER 4460002 5-95

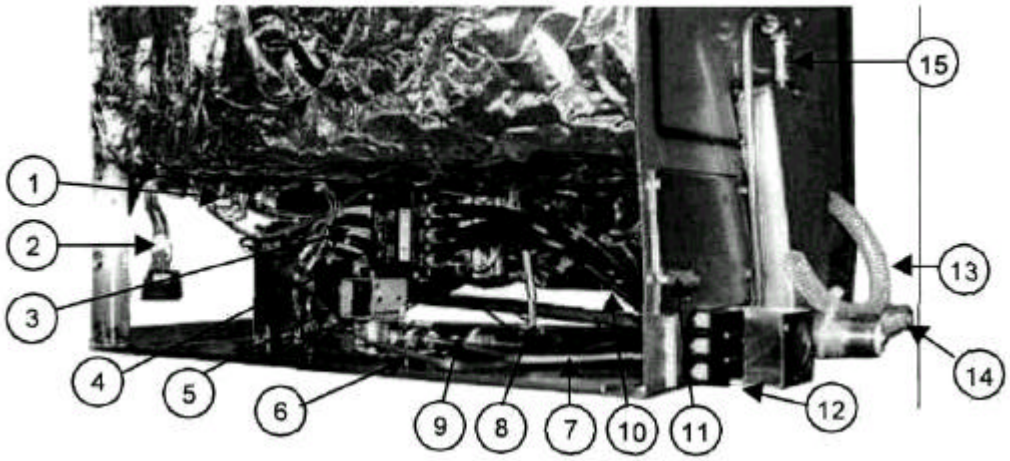
1100 Old Honeycutt Road
Fuquay, NC 27526
(919)552-9161
FAX (919) 552-9798
(800) 348-2558

R2 Control Parts (Interior and Lower Front View)



Key	Part Number	Qty	Description
1	PE-193	1	Low Water Float
2	1178007	1	208V Middle Element
	1178008	1	220V Middle Element
	1178009	1	240V Middle Element
	1178010	1	380V Middle Element
	1178011	1	415V Middle Element
	1178012	1	480V Middle Element
3	1174561	2	208V Outer Elements
	1174616	2	220V Outer Elements
	1174562	2	240V Outer Elements
	1174563	2	380V Outer Elements
	1174617	2	415V Outer Elements
	1174564	2	480V Outer Elements
4	1178677	1	Valve Rod Weld Assembly
5	1177440	1	Well Thermostat
6	1177996	1	High Limit
7	1178019	1	High Limit Bracket
N/S	1176315	1	Well Thermostat Bracket (Not Shown)
N/S	1166801	1	Brass Elbow to Drain Valve (Not Shown)
N/S	1176667	1	Drain Valve (Not Shown)
N/S	1166170	1	Brass Connector from Drain Valve to Drain Tube (Not Shown)
N/S	1177775	1	Drain Tube (Not Shown)
N/S	1-3195	1	Brass Connector from Drain Tube to Drain Pipe (Not Shown)
8	1333041	4	Rack Mounting Studs, 1/4-20 w/ PH-238 Nuts (Not Shown)

R2 Control Parts (Bottom Interior and Rear View)

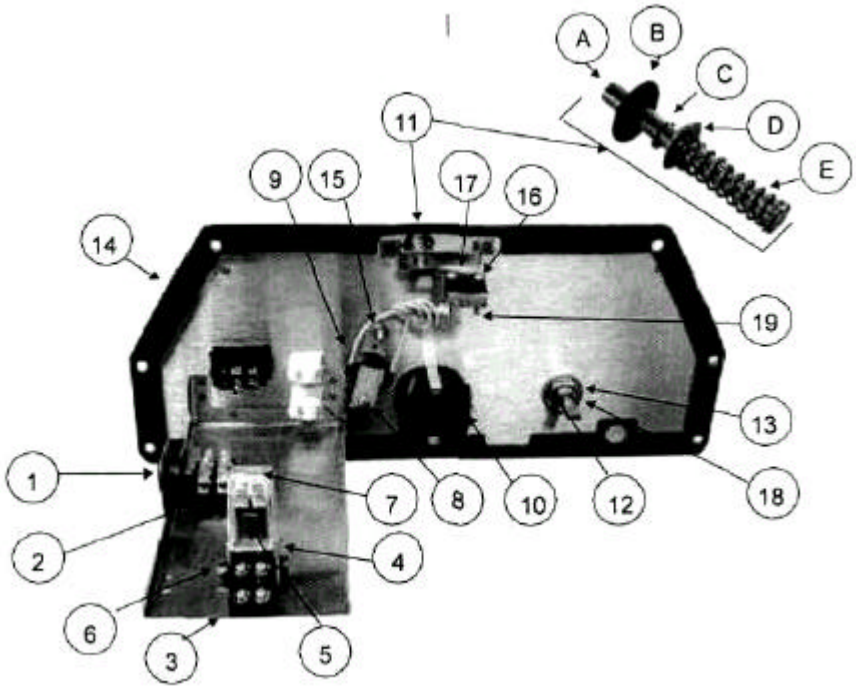


Key	Part Number	Qty	Description
1	1177653	1	Terminal Strip
2	1178511	1	Wiring Harness (Includes front control panel section)
3	1177878	1	Element Leads (Assembly of 6 Wires - White)
4	1173448	1	Contactor
5	1174933	1	Water Fill Solenoid
6	1178514	1	Water Supply Tube
7	1178515	1	Condensate Supply Tube
8	1178513	1	Cavity Fill Tube
9	PP-636	1	Flow Regulator
10	1177418	3	Main Power Leads (Black)
11	1175547	1	Grounding Lug
12	1177361	1	(3) Pole Terminal Block
13	1177877	1	Vent Hose
14	1173428	1	In-Line Strainer
15	1174620	1	Condensate Spray Nozzle

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R2 Control Panel Parts (Rear View)



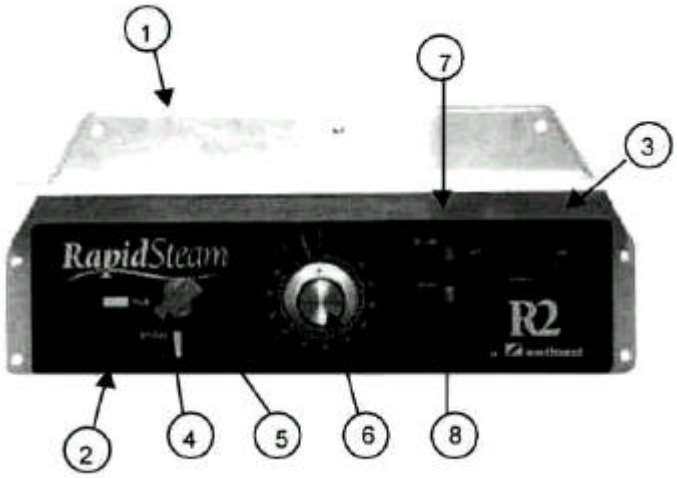
Key	Part Number	Qty	Description
1	1161664	1	7/8" Snap Bushing
2	1177653	1	Terminal Strip
3	1177360	1	Relay Socket
4	1177363	1	Gasket, Relay
5	1177359	1	Relay, 240V, Sealed
6	1146397	4	8-32X5/8, SS, Phil, Pan Head Screw
7	1177377	1	Wire Tie, 6"
8	1146319	1	Screw, 6-32X1/2, Screw
9	1175712	1	Buzzer assembly
10	1178341	1	Timer
11			Door Switch Actuator
A	1178270	1	Switch, actuator rod
B	1178347	2	Seal, shaft (1) Behind Timer Knob
C	1178338	1	Retaining ring
D	1178339	1	Washer
E	1179932	1	Spring
12	1177865	1	Nut, Bronze 5/8-18
13	1178339	1	Washer
14	1178642	1	Gasket
15	6600430	5	Locknut
16	1146320	2	Screw, 6-32X1, Roundhead
17	1178430	1	Door Switch
18	1177864	1	E-Clip, SS, .375 Dia. Shaft
19	1177396	2	Locknut, 6-32 SS

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R2 Control Panel Parts (Front View)



NOTE: The entire Control Panel Assembly can be ordered as part number 1178507.

Key	Part Number	Qty	Description
1	1178403	1	Panel, control, weld assembly
2	1181616	1	Polypanel
3	1178700	1	Power Switch (was 1174935)
4	1177773	1	Valve lever weld assembly
5	1177770	1	Valve lever bushing
6	1170337	1	Timer Knob
7	1178330	1	Red "De-Lime' Light
8	1178329	1	Amber "Ready" Light

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R-2 Part's List

1174935	POWER SWITCH
PE-193	LOWER WATER FLOAT
1177359	240V SEALED RELAY
1177360	RELAY SOCKET
1177363	RELAY GASKET
1177361	TERMINAL BLOCK 3 POLE AT REAR
1177362	TERMINAL BLOCK 4 POLE AT REAR
1174933	WATER FILL SOLENOID
1177440	WELL THERMOSTAT
1177996	HIGH LIMIT BEGINNING SER# 97A 19594
PE-185	DOOR SWITCH
1146388	SCREW FOR DOOR SWITCH
6600030	READY LIGHT DE-LIME LIGHT
1173448	CONTACTOR
1177441	POLYPANEL.
PP-636	FLOW CONTROL
1174587	SIDE RACK GUIDES
4440451	DOOR ASSEMBLY PRIOR 8/14/98
1178647	DOOR ASSEMBLY BEGINNING 8/14/98
1176667	DRAIN VALVE
1178341	TIMER
1170337	TIMER KNOB
1174620	SPRAY NOZZLE
1177080	DOOR STRIKER (CAST)
1176328	EXTERIOR COVER
1177775	DRAIN TUBE
1332048-1	LEFT DOOR HINGE
1332048-2	RIGHT DOOR HINGE
1333041	RACK MOUNTING STUD
6600430	LOCKNUT
PH-238	LOCKNUT ¼ -20
PH-292	NYLON WASHER
PH-423	BRONZE BUSHING
PM-019	HOSE CLAMP
PM-141	NYLON PLUG BUTTON
PP-439	'T FEMALE
1178268	WELL COVER DEFLECTOR COVER ELEMENTS
1177400	AMBER LIGHT 240V
1178143	LIGHT ASM. 250V (6600028 LIGHT ONLY)
1177836	HOSE FITTING
1179551	90 DEGREE ELBOW
1179553	FITTING 3/8 X ¼ HOSE
PP-275	90 DEGREE ELBOW

1174561 208V ELEMENT (2 IN UNIT)
1178001 208V ELEMENT
1174616 220V ELEMENT (2 IN UNIT)
1178008 220V ELEMENT
1174562 240V ELEMENT (2 IN UNIT)
1178009 240V ELEMENT
1174563 380V ELEMENT (2 IN UNIT)
1178010 380V ELEMENT
1174617 415V ELEMENT (2 IN UNIT)
1178011 415V ELEMENT
1174564 480V ELEMENT (2 IN UNIT)
1178012 480V ELEMENT
WHEN CHANGING ELEMENT FOR SERIAL NUMBERS PRIOR 97A19594
MIDDLE ELEMENT ORDER HIGH LIMT KIT 4440462 ALSO
1177361 208V TERMINAL BLOCK
1177361 220V TERMINAL BLOCK
1177361 240V TERMINAL BLOCK
1177362 380V TERMINAL BLOCK
1177362 415V TERMINAL BLOCK
1177361 480V TERMINAL BLOCK

PART NUMBER	DESCRIPTION	UNITS	QTY
PH-422	BELLEVILLE WASHER, 1/4 ID	EA	16
1332076	BLANK, DOOR HINGE	EA	2
1178266	BOX WELD ASM., REAR	EA	1
1178651	BRACKET, COMPONENT SIMPLE	EA	1
1178534	BRACKET, ON/OFF SWITCH	EA	1
1178525	BRACKET, VENT TUBE, EZ-3	EA	2
1178411	BRACKET.WIRE HANGER	EA	2
1177770	BUSHING, VALVE LEVER MOUN	EA	1
1178389	BUSSMAN FUSE BLOCK.30A	EA	1
1178494	BUSSMAN FUSE BLOCK,60A 48	EA	1
1175708	BUZZER, ADJUSTABLE, 220V,	EA	1
1178276	CAM ACTUATOR, STEAMER	EA	1
1178370	CAVITY INSULATION	EA	1
1178299	CAVITY WELD ASM, EZ-3	EA	1
1178256	CLAMP, HEATER	EA	4
1176561	CLEANING INSTRUCTIONS,RS-	EA	1
1161525	CONTACTOR, 2-POLE,240V,30	EA	1
1173448	CONTACTOR, 63A.240V COIL	EA	1
1178397	CONTROL PANEL S/A, EZ-3	EA	1
1178311	CONTROL PANEL W/A, EZ-3	EA	1
1178442	COVER ASM.,POOL	EA	1
1178524	COVER W/A, DRAIN BOX, EZ-	EA	2
1178552	COVER W/A, DRAIN, EZ-3	EA	2
1178265	COVER, BOTTOM	EA	1
1178527	COVER, REAR STEAMER, EZ-3	EA	1
1178255	COVER,EXTERIOR,SIMPLE STE	EA	1
1179962	COVER.REMOVABLE BUSS	EA	1
1176797	DESCALER, 3.50Z PKG (100G	EA	2
1178167	DOOR ASSEMBLY COMPLETE, EZ	EA	1
1178171	DOOR INSUL. BLOCK	EA	1
1178522	DRAIN BOX WELD ASM., EZ-3	EA	2
1178410	DRAIN PAN WELD ASM.	EA	1
1333045	DRAIN VENT TUBE (AIR VEN	EA	1
1178353	DUAL HEATING ELEMENT	EA	1
1178359	DUAL HEATING ELEMENT	EA	2
1178526	ELBOW, 90 DEG. 1-NPT FEM,	EA	2
1178354	ELEMENT BLOCK, 220V,CENTE	EA	1
1178360	ELEMENT BLOCK, 220V,OUTER	EA	2
1178355	ELEMENT BLOCK, 240V.CENTE	EA	1
1178361	ELEMENT BLOCK, 240V.OUTER	EA	2
1178358	ELEMENT BLOCK, 480V.CENTE	EA	1
1178364	ELEMENT BLOCK, 480V,OUTER	EA	2
1178332	FITTING,3/4 HOSE ID X 1/2	EA	2
1178423	FITTING,3/4" KYNAR HOSE.E	EA	2
1178422	FITTING, FLOAT SWITCH	EA	1
PI-M23	FLANGE BUSHING, 1/4ID BRO	EA	2
1178318	FRONT FRAME WELD ASM	EA	1
1178317	FRONT TOP CROSSMEMBER W/A	EA	1
1178545	FUSE, 10AMP	EA	2

1178392	FUSE, 2.5 AMP	EA	2
1178390	FUSE, 30 AMP	EA	3
1178495	FUSE, 50 AMP, CLASS G	EA	2
1178391	FUSEBLOCK, CONTROLS	EA	1
1178096	GASKET, DOOR	EA	1
1178227	GASKET, SIDE PANEL	EA	2
1178325	GASKET, CONTROL PANEL EZ-3	EA	1
1180953	HANGER,HOSE,COMBI/EZ STEA	EA	2
1332048-1	HINGE, LT DOOR	EA	1
1332048-2	HINGE, RT DOOR	EA	1
1178483	HOSE, 1 1/2"ID,SILCONE	FT	N/A
1178386	HOSE.3/4" ID SILCONE	FT	N/A
1178369	INSULATION, BACK PANEL	EA	1
1178371	INSULATION, BOTTOM	EA	1
1178418	INSULATION, FRONT CAVITY	EA	1
4440478	KIT, DRAIN BOXES.STACK EZ	EA	1
1170337	KNOB	EA	1
1177079	LATCH ARM, CAST	EA	1
1177317	LATCH ASSEMBLY, STEAMERS	EA	1
1177078	LATCH COVER PLATE, CAST	EA	1
1178485	LEG,4" S/S.EZ-3 (FRONT)	EA	2
1178486	LEG,4" S/S,EZ-3 (REAR)	EA	2
1178329	LIGHT, INDICATING.AMBER	EA	1
1178330	LIGHT, INDICATING.RED	EA	1
1175547	LUG, GROUNDING	EA	1
1178374	MAIN POWER LEADS	EA	3
1178387	MANUAL, EZ-3 STEAMER	EA	1
1178367	METAL OXIDE VARISTOR	EA	1
1178643	NIPPLE, CLOSE, 1/2" NPT	EA	1
1178351	NYLON INSERT NUT	EA	8
PH-292	NYLON WASHER	EA	2
1178342	O-RING, VALVE SHAFT	EA	1
1178344	PAN Z-BRACKET.LEFT	EA	1
1178345	PAN Z-BRACKET, RIGHT	EA	1
1178169	PANEL ASM.,DOOR EZ-3	EA	1
1178105	PANEL ASM., INNER DOOR	EA	1
1178106	PANEL, GASKET RETAINER,EZ	EA	1
1177081	PIN, .250 DIA, SS, CAST L	EA	1
1172949	PIPE ALUM.1" SCHEDULE 40	FT	1
PM-141	PLUG BUTTON, 1/4 NYLON	EA	2
1178319	POLYPANEL W/TIMER	EA	1
1178684	POT FILLER	EA	1
1178352	POTENTIOMETER.TDR	EA	1
1333041	RACK MOUNTING STUDS, 1/4-2	EA	8
1178337	RELAY, TIME DELAY, 120V	EA	1
1177086	RETAINER, CAST LATCH	EA	1
1178338	RETAINING RING	EA	1
6600402	RING,RETAINING S.S.	EA	1
1178343	ROLL PIN	EA	1
1175712	S/A BUZZER, 220V	EA	1

1178347	SEAL, SHAFT	EA	2
1178373	SHIELD,HEAT TRANSFER	EA	1
1177318	SHIM, CAST STRIKER	EA	1
1178234	SIDE PANEL.SIMPLE STEAM	EA	2
1172951	SLEEVE, RUBBER 1 1/4"1D X	EA	3
1178113	SLIDE RACK, 3 PAN STEAMER	EA	2
1178644	SLIDE RACK, 5 POS. 3 PAN	EA	2
1179932	SPRING	EA	1
1177082	SPRING, DOOR HANDLE	EA	1
1178654	STAND W/DRAIN, EZ	EA	1
1178655	STAND, EZ	EA	1
1178379	STEAM TRAP	EA	1
1177080	STRIKER, CAST	EA	1
1178270	SWITCH ACTUATOR ROD	EA	1
1178340	SWITCH, FLOAT	EA	1
1178533	SWITCH, POWER S/A	EA	1
1178430	SWITCH.DOOR S/A.SIMPLE ST	EA	1
1174302	THERMOSTAT, ELEMENT, 2001	EA	3
1178341	TIMER, MECHANICAL	EA	1
1176388	TRANSFORMER, 480 TO 240,7	EA	1
1178439	TROUGH SCREEN ASM.	EA	1
1178261	TUBE & BOX TOP W/A	EA	1
1178376	TUBE, VALVE ACTUATOR	EA	1
1178388	VALVE LEVER WELD ASM	EA	1
1178425	VALVE, 1/2" DRAIN.MODIFIE	EA	1
1178444	VALVE, 3/8" BALL.NSF/FDA	EA	1
1176878	VENT PIPE, 1" NIPPLE	EA	2
1180460	WASHER, SEALING, #10	EA	10
1178324	WATER TROUGH W/A	EA	1
1178652	WIRE HARNESS SUPPL, 480V	EA	1
1178394	WIRE HARNESS W/DISC TSTAT	EA	1
1178650	WIRING, DIAGNOSTIC, 480V	EA	1
1178395	WIRING, DIAGNOSTIC.208/22	EA	1

PART NUMBER	DESCRIPTION	UNITS	QTY
PH-422	BELLEVILLE WASHER, 1/4 ID	EA	16
1332076	BLANK, DOOR HINGE	EA	2
1178266	BOX WELD ASM., REAR	EA	1
1178651	BRACKET, COMPONENT SIMPLE	EA	1
1178534	BRACKET, ON/OFF SWITCH	EA	1
1178525	BRACKET, VENT TUBE, EZ-3	EA	1
1178411	BRACKET.WIRE HANGER	EA	2
1177770	BUSHING, VALVE LEVER MOUN	EA	1
1178494	BUSSMAN FUSE BLOCK,60A 48	EA	1
1178276	CAM ACTUATOR, STEAMER	EA	1
1181019	CAVITY WELD ASM, EZ-5	EA	1
1178256	CLAMP, HEATER	EA	4
1161525	CONTACTOR, 2-POLE,240V,30	EA	1
1181032	CONTACTOR, DP, 60 FLA	EA	1
1181042	CONTROL PANEL S/A, EZ-5	EA	1
1178311	CONTROL PANEL W/A, EZ-3	EA	1
1181038	CONTROLLER, EZ-5	EA	1
1178442	COVER ASM..POOL	EA	1
1178524	COVER W/A, DRAIN BOX, EZ-	EA	1
1178552	COVER W/A, DRAIN, EZ-3	EA	1
1178265	COVER, BOTTOM	EA	1
1181000	COVER, REAR STEAMER, EZ-5	EA	1
1181009	COVER,EXTERIOR, EZ-5	EA	1
1178657	COVER,EXTERIOR,STACKED	EA	1
1179962	COVER, REMOVABLE BUSS	EA	1
1181015	DOOR ASSEMBLY COMPLETE.EZ	EA	1
1178522	DRAIN BOX WELD ASM., EZ-3	EA	1
1178410	DRAIN PAN WELD ASM.	EA	1
1178670	ELBOW, 90 DEG, STR. 1/2"	EA	1
1178332	FITTING,3/4 HOSE ID X 1/2	EA	2
1178422	FITTING.FLOAT SWITCH	EA	1
PH^23	FLANGE BUSHING, 1/4ID BRO	EA	2
1181020	FRONT FRAME WELD ASM, EZ-	EA	1
1178317	FRONT TOP CROSSMEMBER W/A	EA	1
1178545	FUSE, 10AMP	EA	2
1181024	FUSE, 35 AMP	EA	3
1181026	FUSE, 60 AMP	EA	2
1178391	FUSEBLOCK, CONTROLS	EA	1
1181010	GASKET, DOOR	EA	1
1178325	GASKET, CONTROL PANEL EZ-3	EA	1
1180953	HANGER,HOSE,COMBI/EZ STEA	EA	2
1181041	HARNESS, WIRE, EZ-5	EA	1
1178560	HEAT ELEMENT,DUAL COIL.20	EA	1
1178561	HEAT ELEMENT, DUAL COIL.22	EA	1
1178565	HEAT ELEMENT, DUAL COIL.48	EA	1
1178562	HEAT/ELEMENT,240V,DUAL CO	EA	1
1178554	HEATING ELEMENT, 208V, EZ	EA	2
1178555	HEATING ELEMENT, 220V, EZ	EA	2
1178556	HEATING ELEMENT, 240V	EA	2

1178559	HEATING ELEMENT, 480V, EZ	EA	2
1178685	HOSE, OVERFLOW, 28"	EA	1
1178386	HOSE,3/4" ID SILCONE	FT	N/A
1181021	INSULATION, BACK PANEL, E	EA	1
1178371	INSULATION, BOTTOM	EA	1
1181018	INSULATION, DOOR, EZ-5	EA	1
1181022	INSULATION,CAVITY,EZ-5	EA	1
1178418	INSULATION,FRONT CAVITY	EA	1
4440480	KIT, DRAIN BOXES, STACK EZ	EA	1
1170337	KNOB	EA	1
1175168	KNURLED INSERT, 3/8"	EA	4
1177079	LATCH ARM, CAST	EA	1
1177317	LATCH ASSEMBLY, STEAMERS	EA	1
1177078	LATCH COVER PLATE, CAST	EA	1
1181039	LEAD, ELEMENT EZ-5	EA	6
1178485	LEG,4" S/S,EZ-3 (FRONT)	EA	2
1178486	LEG,4" S/S,EZ-3 (REAR)	EA	2
1179930	LEVER, VALVE	EA	1
1178329	LIGHT, INDICATING.AMBER	EA	1
1178330	LIGHT, INDICATING,RED	EA	1
1175547	LUG, GROUNDING	EA	1
1178374	MAIN POWER LEADS	EA	3
1181046	MANUAL, EZ-5 STEAMER	EA	1
1178367	METAL OXIDE VARISTOR	EA	1
1178643	NIPPLE, CLOSE, 1/2" NPT	EA	1
1146402	NUT 1/4-20, HEX HEAD	EA	18
1177865	NUT, HEX, 5/8 -18, BRASS	EA	1
PH-292	NYLON WASHER	EA	2
1178342	O-RING, VALVE SHAFT	EA	1
1178344	PAN Z-BRACKET.LEFT	EA	1
1178345	PAN Z-BRACKET, RIGHT	EA	1
1181017	PANEL ASM., DOOR EZ-5	EA	1
1181016	PANEL ASM., INNER DOOR, EZ	EA	1
1181001	PANEL, GASKET RETAINER, EZ	EA	1
1177081	PIN, .250 DIA, SS, CAST L	EA	1
1178393	PIN,COTTER,SS,1/8"X 1 1/4	EA	1
PM-141	PLUG BUTTON, 1/4 NYLON	EA	2
1178319	POLYPANEL W/TIMER	EA	1
1178684	POT FILLER	EA	1
1333041	RACK MOUNTING STUDS, 1/4-2	EA	8
1177086	RETAINER, CAST LATCH	EA	1
1178338	RETAINING RING	EA	1
6600402	RING.RETAINING S.S.	EA	1
1175712	S/A BUZZER, 220V	EA	1
1178347	SEAL,SHAFT	EA	2
1178275	SHAFT, VALVE LEVER	EA	1
1178373	SHIELD.HEAT TRANSFER	EA	1
1177318	SHIM, CAST STRIKER	EA	1
1181045	SIDE, RACK W/A	EA	2
1172951	SLEEVE, RUBBER 1 1/4"ID X	EA	2

1179932	SPRING	EA	1
1177082	SPRING, DOOR HANDLE	EA	1
1178654	STAND W/DRAIN, EZ	EA	1
1178655	STAND, EZ	EA	1
1178379	STEAM TRAP	EA	1
1177080	STRIKER, CAST	EA	1
1178270	SWITCH ACTUATOR ROD	EA	1
1178340	SWITCH, FLOAT	EA	1
1178535"	SWITCH, POWER S/A	EA	1
1178430	SWITCH,DOOR S/A.SIMPLE ST	EA	1
1181013	THERMOSTAT ASSEMBLY, F/F	EA	1
1181012	THERMOSTAT ASSEMBLY, M/M	EA	2
1178341	TIMER, MECHANICAL	EA	1
1176388	TRANSFORMER, 480 TO 240,7	EA	1
1178439	TROUGH SCREEN ASM.	EA	1
1178261	TUBE & BOX TOP W/A	EA	1
1178376	TUBE, VALVE ACTUATOR	EA	1
1178388	VALVE LEVER WELD ASM	EA	1
1178425	VALVE, 1/2" DRAIN,MODIFIE	EA	1
1178444	VALVE, 3/8" BALL,NSF/FDA	EA	1
1178683	VENT PIPE, 1"X 24.375"	EA	1
1178324	WATER TROUGH W/A	EA	1
1181043	WIRE HARNESS SUPPL, 480V	EA	1
1181040	WIRE, DIAGNOSTIC, EZ-5.480V	EA	1
1181037	WIRING, DIAGNOSTIC,208/22	EA	1