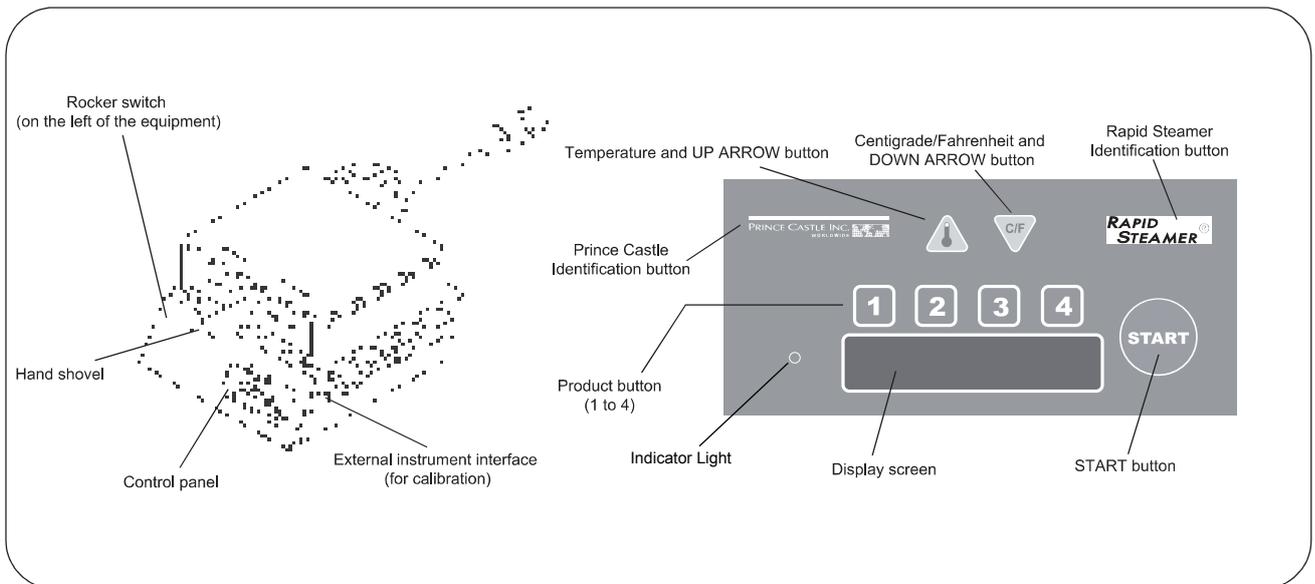


Product Identification



LIMITED WARRANTY

This product is warranted to be free from defects in material and/or workmanship for a period of (2) two years from the date of original installation, not to exceed 30 months from date of shipment from our factory. Any component which proves to be faulty in material and/or workmanship will be replaced or repaired (at the option of Prince Castle, LLC) without cost to the customer for parts or labor. This warranty covers on location service (i.e. trip charges and/or mileage). Travel mileage is limited to 100 miles (200 kilometers) round-trip (one-trip warranty) from an authorized service agency or its sub-service agency.

This warranty is subject to the following exceptions/conditions:

- The warranty does not cover the water tube – part no. 625-357S in addition to any consumable items such as gaskets.
- The warranty does not cover water containment problems such as foreign material in water lines or inside the solenoid valves due to inconsistencies in water quality.
- Water pressure problems or failures resulting from improper/incorrect voltage supply are not covered under the limited warranty.
- The use of any non-genuine Prince Castle parts voids the warranty.
- The warranty does not include overtime charges or work done by unauthorized service agencies or personnel.
- Damage caused by carelessness, neglect, and/or abuse (e.g. dropping, tampering or altering parts, equipment damaged in shipment, by fire, flood or an act of God) is not covered under this warranty.



355, East Kehoe Blvd. Carol Stream, Illinois, 60188 USA.
Tel.: 630-462-8800 Toll Free: 1-800-PCASTLE
Fax: 630-462-1460 · www.princecastle.com

TABLE OF CONTENTS

Product Identification -----	1	Replacing the Auto Reset Hi-Limit -----	12
Table of Contents -----	2	Replacing the Heating Plate -----	13
Safety Information -----	3	Common Faults -----	14
Disconnection of Power Supply -----	3	Exploded Diagram and Repairable Part Table -----	15
Serial Number Matrix -----	3	Circuit Diagram -----	16
Tools Required by Parts Replacement -----	4	Notes -----	17
Replacing the Fuse -----	5		
Replacing the Fuse Holder -----	6		
Replacing the Relay -----	7		
Replacing the Main Circuit Board -----	8		
Replacing the Display Board -----	9		
Replacing the Film-Based Panel Assembly -----	10		
Replacing the Solenoid Valve Assembly -----	11		

Safety Information

Note: This maintenance manual is exclusively used for the personnel who has received the electromechanical training and has acceptable knowledge and skill. PRINCE CASTLE will not and assume any liability for injury or damages caused by use of the manual.

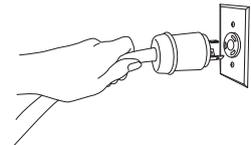
To avoid any personal injury or property damage, it is critical to comply with the following "Safe Maintenance Practice", including the limited practice:

- Do not perform any maintenance on the equipment without reading the manual in advance.
- Do not repair the equipment if there is any doubt to your safe maintenance capability.
- Do not try to repair or replace any component unless the power supply is turned off and unplugged.
- Prior to the restart of the equipment, please ensure as follows:
 - All electrical connections are correct and firm.
 - All safety grounding devices are correct and secure.
 - All components are correctly re-assembled.

Disconnection of Power Supply



Warning
 It will result in severe personal injury or death if the power supply on the device isn't disconnected prior to the maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



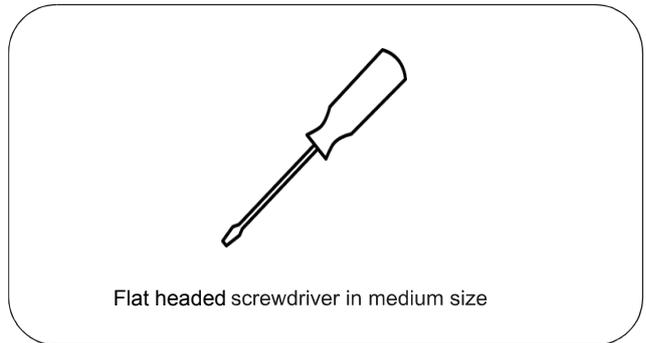
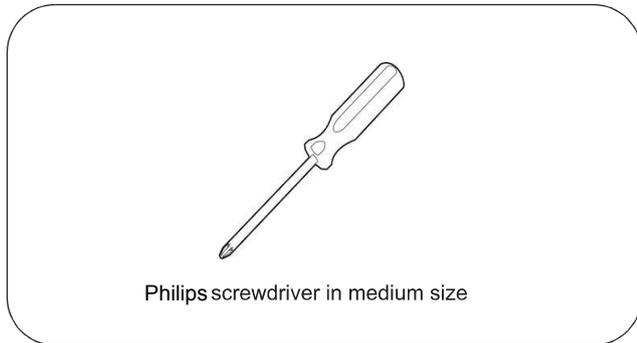
Serial Number Matrix

The manufacture date is encoded in the unit's serial number. The service bench installation date (used to determine warranty coverage) is considered to be the end of the following month.

For example:
 Serial Number: FJ0000458
 Manufacture Date: June 2014
 Service Bench Installation Date: July 31, 2014

		SERIAL NUMBER MATRIX									
		2014	2015	2016	2017	2018	2019	2020	2021	2022	
		J	K	L	M	N	O	P	Q	R	
January	A	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	
February	B	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	
March	C	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	
April	D	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	
May	E	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	
June	F	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	
July	G	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	
August	H	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	
September	J	JJ	JK	JL	JM	JN	JO	JP	JQ	JR	
October	K	KJ	KK	KL	KM	KN	KO	KP	KQ	KR	
November	L	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	
December	M	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	

Tools Required by Parts Replacement



Replacing the Fuse

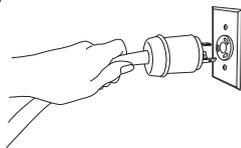
Warning

Unplug the connector on the water pipe whenever the equipment is under maintenance.

- 1 Shut down unit from the power supply and make sure power cord is unplugged.

Warning

It will result in severe personal injury or death if the power supply on the unit isn't disconnected prior to maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



- 2 Unplug the connector on the water pipe. Remove the hand shovel, head cover, top plate, Venturi plate and back shield.



- 3 Turnover the equipment and place the bottom of the equipment upwards on the workbench.



- 4 Unscrew the black rotary knob using a flat headed screwdriver and remove the fuse. After replacing with the new fuse, assemble the dismantled parts in reverse order.



Replacing the Fuse Holder

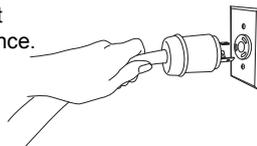
Warning

Unplug the connector on the water pipe, whenever the equipment is under maintenance.

- 1** Shut down unit from the power supply and make sure power cord is unplugged.

Warning

It will result in severe personal injury or death if the power supply on the unit isn't disconnected prior to maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



- 2** Unplug the connector on the water pipe. Remove the hand shovel, head cover, top plate, Venturi plate and back shield. Turn over the equipment and place the bottom of the equipment upwards on the workbench.



- 3** Remove the 4 screws used to secure the control panel components via the Philips screwdriver, and turn over the control panel components.



- 4** Unplug the connecting terminal on the fuse holder via the sharp-nose pliers; unscrew the nut used for securing the fuse holder; remove the fuse holder and fuse.



- 5** After installing the new fuse in the new fuse holder, assemble the dismantled parts in reverse steps.



Replacing the Relay

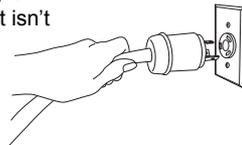
Warning

Unplug the connector on the water pipe whenever the equipment is under maintenance.

- 1** Shut down unit from the power supply and make sure power cord is unplugged.

Warning

It will result in severe personal injury or death if the power supply on the unit isn't disconnected prior to maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



- 2** Unplug the connector on the water pipe. Remove the hand shovel, head cover, top plate, Venturi plate and back shield. Turn over the equipment and place the bottom of the equipment upwards on the workbench.



- 3** Remove the 4 screws used to secure the control panel components via the Philips screwdriver, and turn over the control panel components.



- 4** Remove the retaining screw by using the Philips head screwdriver to remove the connecting wire. Unscrew the retaining nut using a socket wrench and remove the relay.



- 5** Scrub thermal conductive grease remaining on the installation board. Apply the thermal conductive grease on the relay. Assemble the dismantled parts in reverse steps. (Re-install the insulation sheet to the equipment)



Replacing the Main Circuit Board

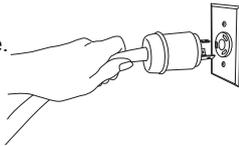
Warning

Unplug the connector on the water pipe whenever the equipment is under maintenance.

- 1 Shut down unit from the power supply and make sure power cord is unplugged.

Warning

It will result in severe personal injury or death if the power supply on the unit isn't disconnected prior to maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



- 2 Unplug the connector on the water pipe. Remove the hand shovel, head cover, top plate, Venturi plate and back shield. Turn over the equipment and place the bottom of the equipment upwards on the workbench.



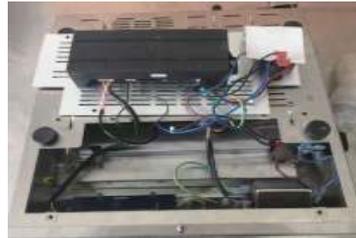
- 3 Remove the 4 screws used to secure the control panel components via the Philips screwdriver, and turn over the control panel components.



- 4 Unscrew the retaining nut using a socket wrench. Turn over the main circuit board and unplug the connecting wire connector of the circuit board.



- 5 After installing the new main circuit board, assemble the dismantled parts in reverse steps.



Replacing the Display Board

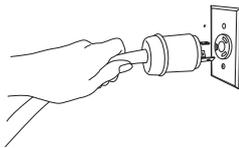
Warning

Unplug the connector on the water pipe whenever the equipment is under maintenance.

- 1** Shut down unit from the power supply and make sure power cord is unplugged.

Warning

It will result in severe personal injury or death if the power supply on the unit isn't disconnected prior to maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



- 2** Unplug the connector on the water pipe. Remove the hand shovel, head cover, top plate, Venturi plate and back shield. Turn over the equipment and place the bottom of the equipment upwards on the workbench.



- 3** Remove the 4 screws used to secure the control panel components via the Philips screwdriver, and turn over the control panel components.



- 4** Unscrew the retaining nut using a socket wrench. Turn over the main circuit board and unplug the connecting wire connector of the circuit board.



- 5** Use the sharp-nose pliers to straighten the stator (marked by the circle) to pull out of the display board.



- 6** Pull out the connection plug on the display board with the film-based panel to remove the display board.



- 7** Install the new display board to the equipment and assemble the dismantled parts in reverse steps.



Replacing the Film-Based Panel Assembly

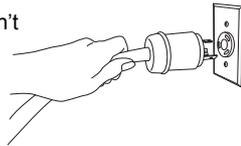
Warning

Unplug the connector on the water pipe whenever the equipment is under maintenance.

- 1 Shut down unit from the power supply and make sure power cord is unplugged.

Warning

It will result in severe personal injury or death if the power supply on the unit isn't disconnected prior to maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



- 4 Unscrew the retaining nut using a socket wrench. Turn over the main circuit board and unplug the connecting wire connector of the circuit board.



- 5 Pull out the connection plug on the display board with the film-based panel to remove the display board.



- 2 Unplug the connector on the water pipe. Remove the hand shovel, head cover, top plate, Venturi plate and back shield. Turn over the equipment and place the bottom of the equipment upwards on the workbench.



- 6 Use the Philips screwdriver to remove the ground wire screw and use the sharp-nose pliers to straighten the stator (marked by the circle) to pull out of the display board assembly; remove the remaining glue on the panel.



- 3 Remove the 4 screws used to secure the control panel components via the Philips screwdriver, and turn over the control panel components.



- 7 Apply the suitable DowCorning 734 glue on the new film-based panel assembly and install in the equipment (fully sealed); assemble the dismantled parts in reverse steps.



Replacing the Solenoid Valve Assembly

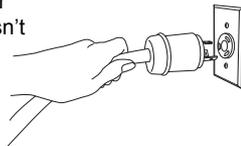
Warning

Unplug the connector on the water pipe whenever the equipment is under maintenance.

- 1** Shut down unit from the power supply and make sure power cord is unplugged.

Warning

It will result in severe personal injury or death if the power supply on the unit isn't disconnected prior to maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



- 2** Unplug the connector on the water pipe. Remove the hand shovel, head cover, top plate, Venturi plate and back shield. Turn over the equipment and place the bottom of the equipment upwards on the workbench.



- 3** Remove the 4 screws used to secure the control panel components via the Philips screwdriver, and turn over the control panel components.



- 4** Unscrew the retaining nut using a socket wrench. Turn over the main circuit board and unplug the connecting wire connector of the circuit board.



- 5** Withdraw the base plate components, turn over and place onto workbench. Remove the thermal baffle; cut out the strap on the solenoid valve connection.



- 6** Use the flat headed screwdriver to remove the screw used to secure the solenoid valve; use the Philips screwdriver to remove the 3 screws used to secure the mounting plate on the solenoid valve. Unscrew the nut off the water inlet connector, to remove the solenoid valve assembly.



- 7** After installing the new solenoid valve assembly in the equipment, assemble the dismantled parts in reverse steps.

Replacing the Auto Reset Hi-Limit

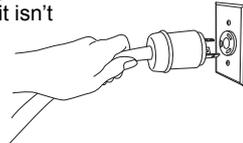
Warning

Unplug the connector on the water pipe whenever the equipment is under maintenance.

- 1 Shut down unit from the power supply and make sure power cord is unplugged.

Warning

It will result in severe personal injury or death if the power supply on the unit isn't disconnected prior to maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



- 2 Unplug the connector on the water pipe. Remove the hand shovel, head cover, top plate, Venturi plate and back shield. Turn over the equipment and place the bottom of the equipment upwards on the workbench.



- 3 Remove the 4 screws used to secure the control panel components via the Philips screwdriver, and turn over the control panel components.



- 4 Unscrew the retaining nut using a socket wrench. Turn over the main circuit board and unplug the connecting wire connector of the circuit board.



- 5 Withdraw the base plate components. Turn over and place unit on the workbench, unplug the connecting wire connector of the auto reset Hi-Limit. Remove the 4 screws used for securing the auto reset Hi-Limit via the Philips screwdriver.



- 6 Install the new auto reset Hi-Limit to the equipment and assemble the dismantled parts in reverse steps.

Replacing the Heating Plate

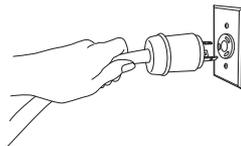
Warning

Unplug the connector on the water pipe whenever the equipment is under maintenance.

1 Shut down unit from the power supply and make sure power cord is unplugged.

Warning

It will result in severe personal injury or death if the power supply on the unit isn't disconnected prior to maintenance. ON/OFF switch will not disconnect the incoming power supply on the device.



2 Unplug the connector on the water pipe. Remove the hand shovel, head cover, top plate, Venturi plate and back shield. Turn over the equipment and place the bottom of the equipment upwards on the workbench.



3 Remove the 4 screws used to secure the control panel components via the Philips screwdriver, and turn over the control panel components.



4 Unscrew the retaining nut using a socket wrench. Turn over the main circuit board and unplug the connecting wire connector of the circuit board.



5 Withdraw the base plate components, turn over and place on the workbench; remove probes of high temperature protector and temperature sensor as well as the supply line of heating plate;



6 Use a socket wrench to remove the 4 screws (marked by the circle) used for securing the heating plate; remove the mounting bracket and heating plate.

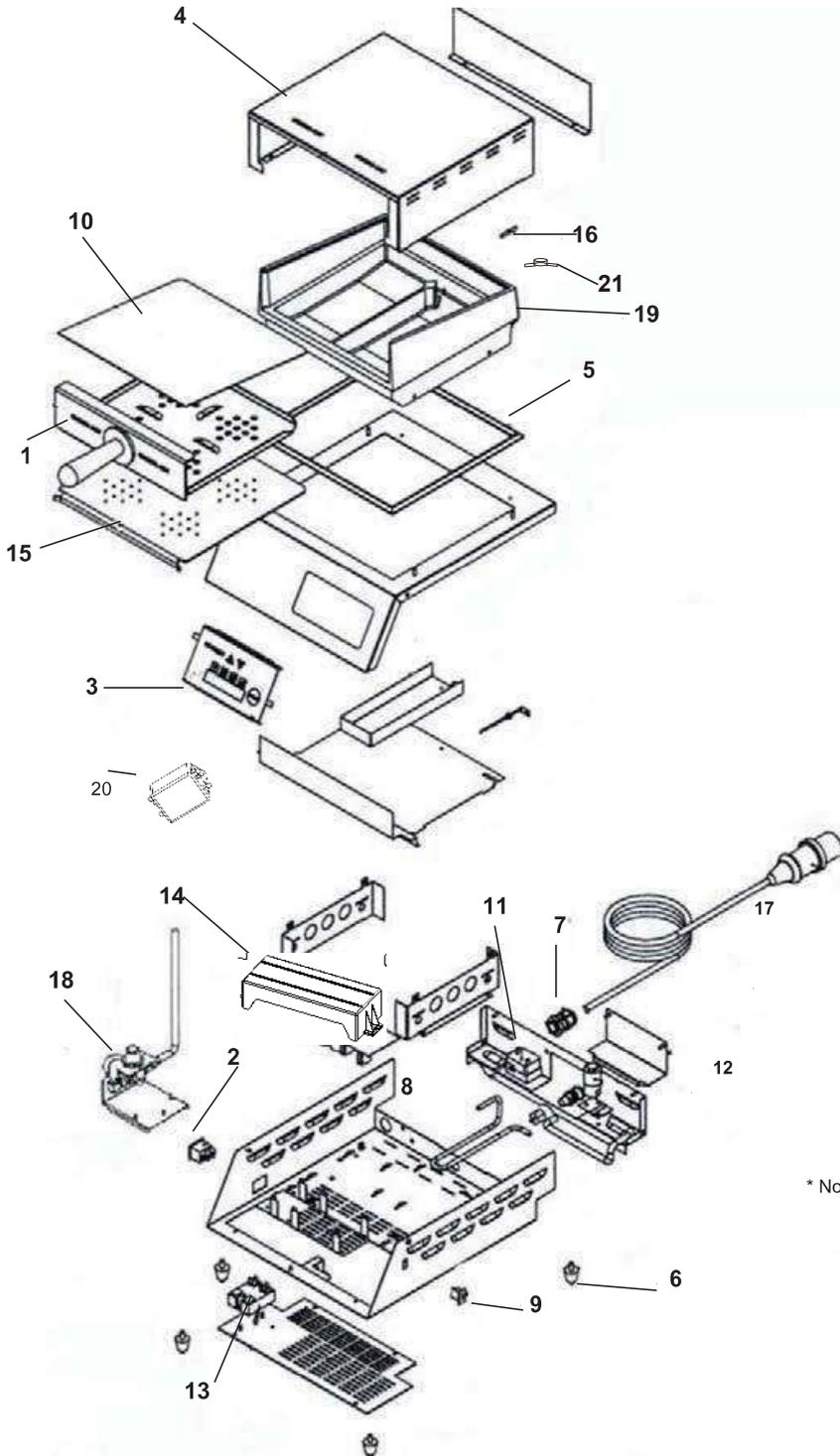


7 Install the new heating plate into the equipment and assemble the dismantled parts in reverse steps.

Common Faults

Problems	Possible Reasons	Solutions
The equipment cannot operate.	<ol style="list-style-type: none"> 1. The plug or power line is loose; 2. High temperature protector acts; 3. Water-proof switch is damaged; 4. Fuse. 	<ol style="list-style-type: none"> 1. Plug/unplug the powerline cord; 2. Reset the high temperature protector; 3. Turn on the water-proof switch; if the light switch is not lit, replace it; 4. Check whether the fuse is blown; replace the fuse if it is burnt.
The equipment can heat but there is no steam.	<ol style="list-style-type: none"> 1. The source of water is not connected; 2. The water outlet is blocked; 3. The main circuit board fails; 4. The solenoid valve fails. 	<ol style="list-style-type: none"> 1. Connect with the source of water; 2. Replace the water inlet or clean the water inlet; 3. Before the countdown of equipment, measure whether the connector voltage of main circuit board is DC12V; otherwise, replace it; 4. Under the power-off condition, measure whether the resistance of solenoid valve is about 22Ω; otherwise, replace it.
The steam continues to erupt from the equipment.	<ol style="list-style-type: none"> 1. The main circuit board fails; 2. The solenoid valve is damaged. 	<ol style="list-style-type: none"> 1. When the equipment is not working, measure whether the connector voltage of solenoid valve is DC0V; otherwise, replace it; 2. Directly replace the solenoid valve.
The accumulated water generates from the heating plate.	<ol style="list-style-type: none"> 1. The heating plate fails; 2. The solenoid valve fails; 3. The relay fails. 	<ol style="list-style-type: none"> 1. Measure whether the resistance of heating plate is about 20Ω; otherwise, replace it; 2. Measure whether the connector voltage of main circuit board relay is DC12V; otherwise, replace it; 3. Measure whether the output end voltage of relay is AC220V; otherwise, replace it;
The temperature/humidity of the bread is too low.	<ol style="list-style-type: none"> 1. The cycle times of the water is not adequate; the water supply time is too short; 2. The water outlet is blocked. 	<ol style="list-style-type: none"> 1. Place the shovel in the equipment after finished using; 2. Replace the shovel.
The temperature/humidity of the bread is too high.	<ol style="list-style-type: none"> 1. The cycle times of the water is excessive; the water supply time is too long 	<ol style="list-style-type: none"> 1. Regulate the setting parameter of menu;
There is water leakage from the rear of the equipment.	<ol style="list-style-type: none"> 1. The silicone hose is not fully attached into the heating plate; 2. The stainless water pipe is not fully plugged into the solenoid valve; 3. The silicone hose is damaged; 4. The solenoid valve is damaged. 	<ol style="list-style-type: none"> 1. Re-plug into the heating plate; 2. Re-plug into the solenoid valve; 3. Replace the silicone hose; 4. Replace the solenoid valve.
The bread sticks to the shovel.	<ol style="list-style-type: none"> 1. The temperature of shovel is too low; 2. The surface of shovel is not smooth. 	<ol style="list-style-type: none"> 1. Place the shovel in the equipment after finished using; 2. Replace the shovel.

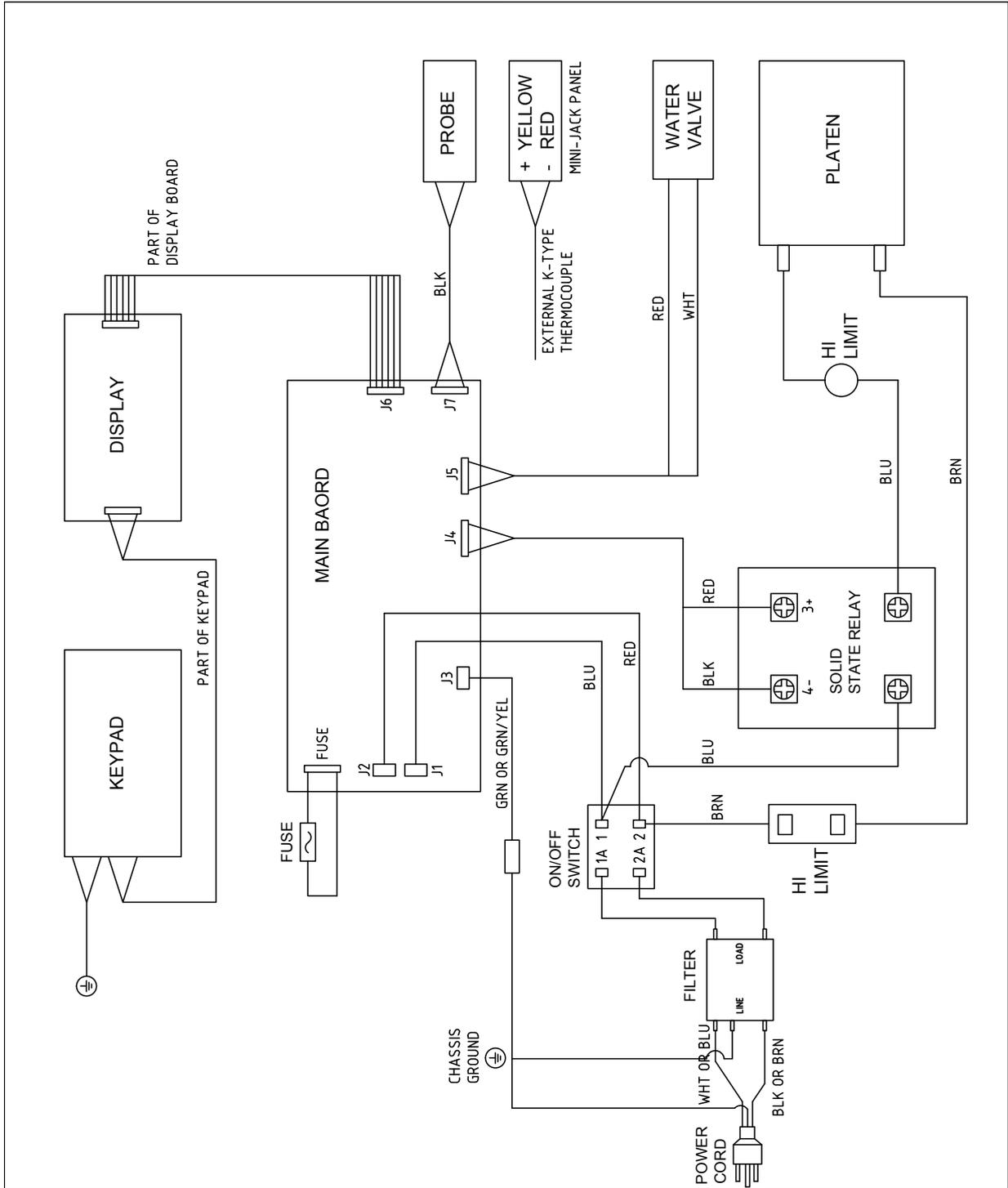
Exploded Diagram and Repairable Part Table



S/N	Part No.	Description
1	625-128S 625-333S 625-097S	Spatula Assembly Spatula Assembly (625-MCDUKC) Spatula Handle kit
2	78-233S	Rocker Switch, 20A
3	625-619S 625-627S 625-628S	Membrane Switch Assembly Display (Control), PCB Display (Control),PCB (625-MCDUKC)
4	625-158S	Top Cover
5	625-130S	Silicone Gasket
6	197-232S	Feet (Pkg of 4)
7	66-045S 66-061S	Strain Relief (625-MCDEUC/625-MCDUSC/625-MCDNAC) (625-MCDUKC) Strain Relief (625-MCDAUC/625-MCDNC)
8	625-357S	Water Dispensing Tube Kit
9	88-497S	Mini-Jack, Type K
10	625-064S 625-274S	Top Plate Top Plate (625-MCDUKC)
11	625-207S	High-Limit Thermostat
12	625-405S	Water Valve Assembly (625-MCDEUC/625-MCDAUC/625-MCDNC)
	625-401-JPS	Water Valve Assembly (625-MCDUSC/625-MCDNAC/625-MCDUKC)
13	65-058S	Relay
14	625-626S	Main Power PCB
15	625-065S 625-337S	Venturi Plate Venturi Plate (625-MCDUKC)
16	625-082-JPS	Temperature Probe, 1000 ohm RTD
17	72-386S 72-392S 72-381S 72-379S 72-417S	Line Cord Assembly, 625-MCDUSC Line Cord Assembly, 625-MCDNAC Line Cord Assembly, 625-MCDEUC/625-MCDUKC Line Cord Assembly, 625-MCDAUC Line Cord Assembly, 625-MCDNC
18	625-253S 625-104S 625-276S	Regulator Parts (Not Shown) (625-MCDNAC/625-MCDUSC) Regulator Parts (Not Shown) (625-MCDEUC/625-MCDAUC/625-MCDNC) Regulator Parts(625-MCDUKC)
19	625-289S	Platen
20	520-014S	Filter
21	625-808S	Auto reset High-Limit

* Notes: No plug is equipped for 625-MCDNC model during the delivery.

Circuit Diagram



Notes