



# SERVICE MANUAL

## 2' AND 3' STEAM GRIDDLES



For additional information on American Griddle products,  
or to locate an authorized parts and service provider in your area,  
visit our website at [www.americangriddle.com](http://www.americangriddle.com)

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Fort Wayne, IN 46803

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1-800-428-6550  
[www.americangriddle.com](http://www.americangriddle.com)

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# ELECTRICAL WARNINGS

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL ELECTRICAL EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD STARTUP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

READ THIS MANUAL THOROUGHLY BEFORE OPERATING, INSTALLING OR PERFORMING MAINTENANCE ON THE EQUIPMENT.



**WARNING:** Failure to follow all the instructions in this manual can cause property damage, injury or death.



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



**WARNING:** Electrical connections should be performed only by a certified professional.



**WARNING:** Electrical and grounding connections must comply with the applicable portions of the National Electric Code and/or all local electric codes. Failure to comply with this procedure can cause property damage, injury or death.



**WARNING:** Before connecting the unit to the electrical supply, verify that the electrical and grounding connections comply with the applicable portions of the National Electric Code and/or other local electrical codes. Failure to comply with this procedure can cause property damage, injury or death.



**WARNING:** Before connecting the unit to the electrical supply, verify that the electrical connection agrees with the specifications on the data plate. Failure to comply with this procedure can cause property damage, injury or death.



**WARNING:** UL73 grounding instructions: This appliance must be connected to a grounded, metal, permanent wiring system. Or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the appliance. Failure to comply with this procedure can cause property damage, injury or death.



**WARNING:** Appliances equipped with a flexible electric supply cord, are provided with a three-prong grounding plug. It is imperative that this plug be connected into a properly grounded three-prong receptacle. Failure to comply with this procedure can cause property damage, injury or death.



**WARNING:** If the receptacle is not the proper grounding type, contact an electrician. Do not remove the grounding prong from the plug. Failure to comply with this procedure can cause property damage, injury or death.



**WARNING:** Before performing any service that involves electrical connection or disconnection and/or exposure to electrical components, always perform the Electrical LOCKOUT/TAGOUT Procedure. Disconnect all circuits. Failure to comply with this procedure can cause property damage, injury or death.



**WARNING:** Before removing any sheet metal panels, always perform the Electrical LOCKOUT/TAGOUT Procedure. Be sure all circuits are disconnected. Failure to comply with this procedure can cause property damage, injury or death.



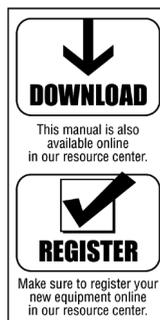
**WARNING:** Do not operate this equipment without properly placing and securing all covers and access panels. Failure to comply with this procedure can cause property damage, injury or death.



**WARNING:** Do not use or store gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance. Failure to comply can cause property damage, injury or death.



**WARNING:** In the event of a power failure, do not attempt to operate this appliance. Failure to comply can cause property damage, injury or death.



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## IMPORTANT: READ THIS FIRST

**NOTICE:** The data plate is located at the center of the back of the griddle. The griddle voltage, wattage, phase, amperage, and serial number are on the data plate. This information should be carefully read and understood before proceeding with the installation.



### **WARNING**

**KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE, ELECTRICAL CONNECTIONS, ETC. CAUTION: ALWAYS KEEP THE AREA NEAR THE APPLIANCE FREE FROM COMBUSTIBLE MATERIALS. KEEP FLOOR IN FRONT OF EQUIPMENT CLEAN AND DRY. IF SPILLS OCCUR, CLEAN IMMEDIATELY, TO AVOID THE DANGER OF SLIPS OR FALLS.**

### **CAUTION:**

**Most cleaners are harmful to the skin, eyes, mucous membranes and clothing. Precautions should be taken to wear rubber gloves, goggles or face shield and protective clothing. Carefully read the warning and follow the directions on the label of the cleaner to be used.**

**NOTICE:** Service on this, or any other, American Griddle appliance must be performed by qualified personnel only.



### **WARNING**

**Both high and low voltages are present inside this appliance when the unit is plugged/wired into a live receptacle. Before replacing any parts, disconnect the unit from the electric power supply.**

## ELECTRICAL LOCKOUT/TAGOUT PROCEDURE



### **WARNING**

**Before performing any service that involves electrical connection or disconnection and/or exposure to electrical components, always follow the Electrical LOCKOUT/TAGOUT Procedure. Disconnect all circuits. Failure to comply can cause property damage, injury or death.**

The Electrical LOCKOUT/TAGOUT Procedure is used to protect personnel working on an electrical appliance. Before performing any maintenance or service that requires exposure to electrical components, follow these steps:

1. In electrical box, place appliance circuit breaker into OFF position.
2. Place a lock or other device on electrical box cover to prevent someone from placing circuit breaker ON.
3. Place a tag on electrical box cover to indicate that appliance has been disconnected for service and power should not be restored until tag is removed by maintenance personnel.
4. Disconnect appliance power cord from electrical outlet.
5. Place a tag on the cord to indicate that unit has been disconnected for service and power should not be restored until tag is removed by maintenance personnel.

# REMOVAL AND REPLACEMENT OF PARTS



## WARNING

Before performing any service that involves electrical connection or disconnection and/or exposure to electrical components, always perform the Electrical LOCKOUT/TAGOUT Procedure. Disconnect all circuits. Failure to comply with this procedure can cause property damage, injury or death.



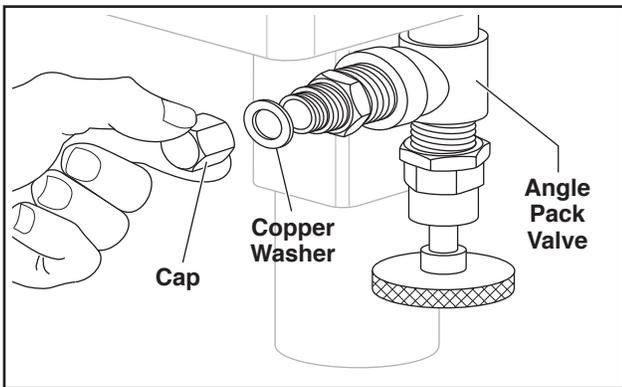
## WARNING

Before removing any sheet metal panels, always perform the Electrical LOCKOUT/TAGOUT Procedure. Be sure all circuits are disconnected. Failure to comply with this procedure can cause property damage, injury or death.

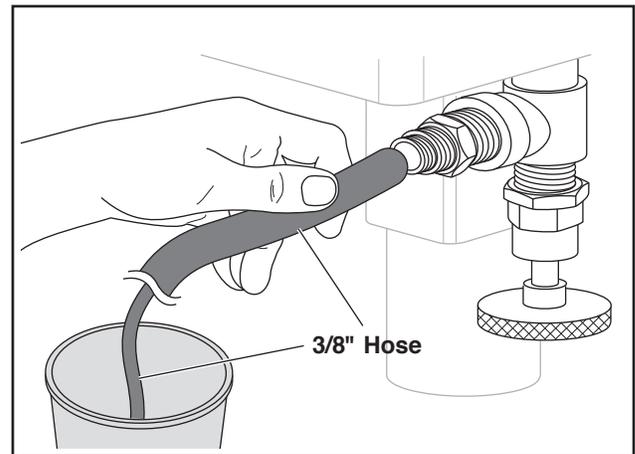
## Draining the Boiler

1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Turn off the water supply.
3. Allow unit to cool to a safe temperature.
4. Remove front skirting and back panel, then locate angle pack valve and remove cap.

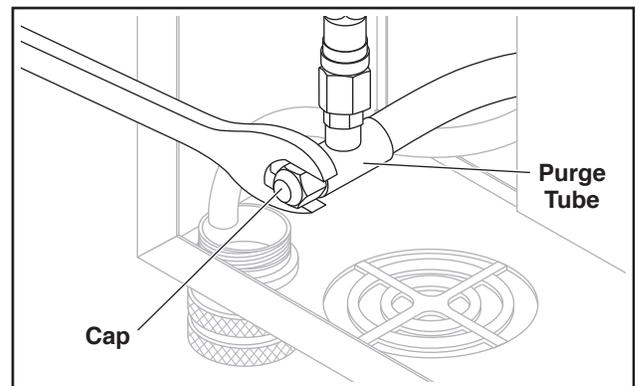
**NOTE:** Do not lose the copper washer found under the cap.



5. Connect a 3/8" hose to the pack valve.



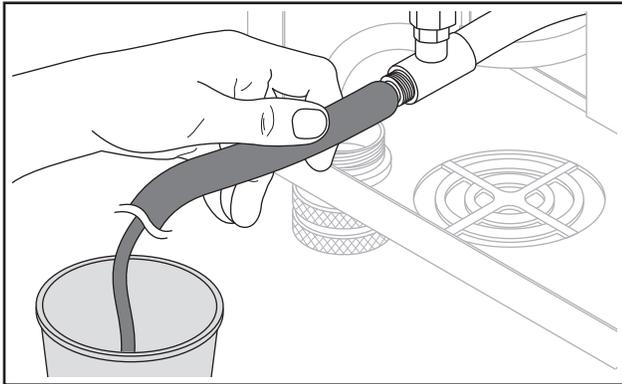
6. Remove cap from purge tube.



7. Place hose into an appropriately sized bucket and open the pack valve.
8. Allow the steam generator to drain fully.

## Filling the Boiler

1. Attach a hose to the purge tube and place other end in bucket.



2. Attach hose to pack valve and attach other end to water pump.

### **CAUTION:**

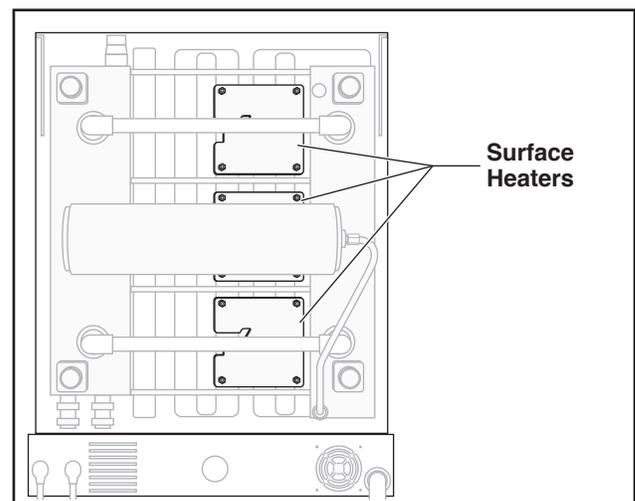
**To avoid future problems, fill the boiler with distilled water only.**

3. Pump 4 to 5 gal. distilled water into boiler.
4. When water escapes from purge tube, boiler is full.
5. Replace cap with copper washer on purge tube and tighten.
6. Close pack valve and replace cap and copper washer and tighten.

## Heaters (Boiler)

1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Turn off the water supply.
3. Allow unit to cool to a safe temperature.
4. Follow "Draining the Boiler" instructions.
5. Mark and disconnect the wires from the heater to be replaced.
6. Loosen and remove the heater.
7. Clean the threads on the fitting.
8. Wrap the threads on heating element with thread sealing tape.
9. Slide the heater into place, screw it into the fitting and tighten.
10. Refill the steam generator tank with distilled water (4-5 gal.) See instructions "Filling the Boiler"
11. Restore power and water supplies to the unit, allow it to heat and test for leaks.
12. Turn off the power supply.
13. Replace any panels that were removed for access.
14. Turn the power supply back on and test unit for proper operation.

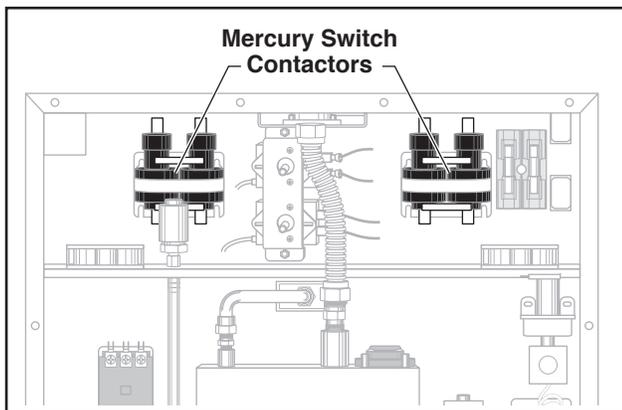
## Heaters (Surface)



1. Turn off power to unit and perform a Lockout/Tagout procedure.

2. Turn off the water supply.
3. Allow unit to cool to a safe temperature.
4. Access bottom of unit.
5. Remove the hex nuts securing the Heater Retaining Plate.
6. Mark and remove the wires from the heating element.
7. Remove the heating element.
8. Set the replacement element into position.
9. Reattach wires.
10. Reinstall the Heater Retaining Plate.
11. Set unit back into position
12. Turn the power supply back on and test unit for proper operation.

### Contactor (Mercury Switch)



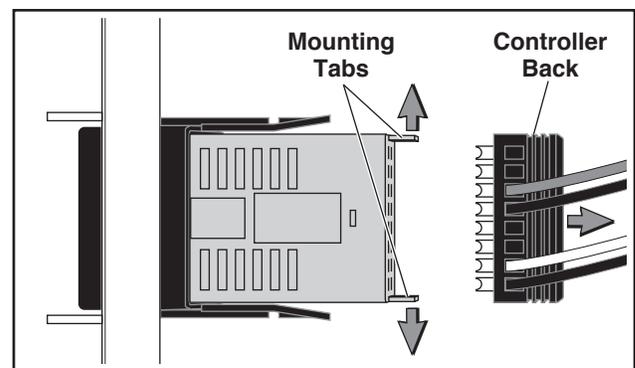
1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Remove rear panel from Power Head.
3. Mark each wire on the contactor to be replaced.
4. Use the correct size nut driver or socket and loosen the hex nuts on the mounting studs.
5. Rotate the contactor to free it from the mounting studs.
6. Install replacement contactor.

**NOTE:** Make sure to orient the contactor correctly. Do not mount the contactor upside down.

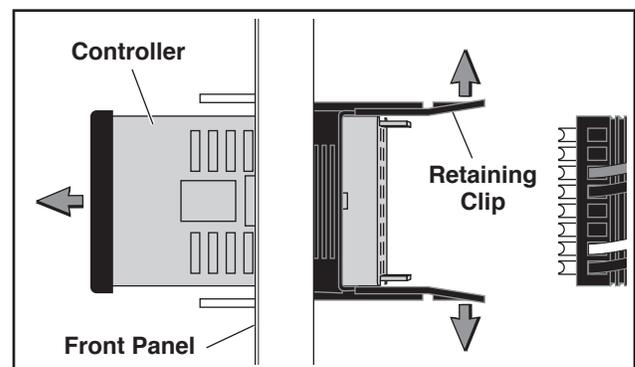
7. Reattach wires according to markings.
8. Make sure all connections are tight.
9. Replace the rear panel.
10. Test the unit for correct operation.

### Controller

1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Remove rear panel from Power Head.
3. Spread the tabs that retain the controller back and remove it. This will eliminate unwiring and rewiring the controller.



4. From inside the Power Head, spread the tabs of the retaining clip and slide the controller out the front of the unit.



5. Slide the replacement controller through the opening in the Power Head and secure with the retaining clip. Make sure the tabs are correctly engaged.
6. Snap the controller back onto the new controller. Make sure the tabs are fully engaged.
7. Make sure all connections are tight.

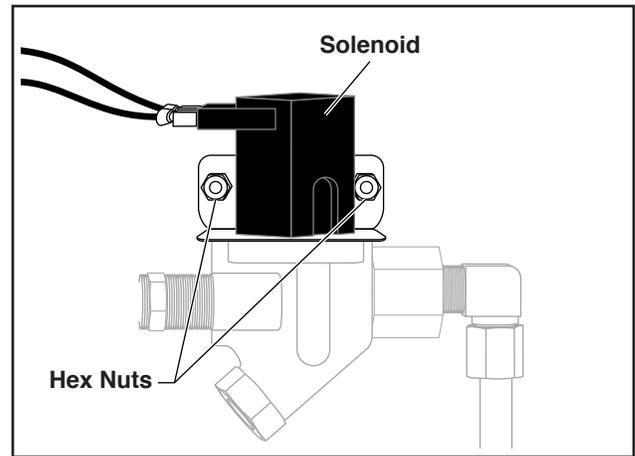
8. Replace the rear panel.
9. Restore power to the unit and test for proper function.

### Thermocouple (Boiler Temperature Sensor)

1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Turn off the water supply.
3. Remove the rear panel from the Power Head.
4. Follow the procedure for “Draining the Boiler”
5. Disconnect the Thermocouple wires from the Temperature Controller.
6. Unscrew the Thermocouple from the boiler.
7. Clean the threads of the fitting.
8. Wrap threads of replacement Thermocouple with thread sealing tape and screw into boiler fitting.
9. Ensure a tight seal.
10. Thread the Thermocouple wires up to the temperature controller and attach: Black to 14 – Red to 13.
11. Follow procedure for “Filling the Boiler”.
12. Reinstall all access panels.
13. Restore power and water supply to unit and test for proper function.

### Solenoid (Water Fill)

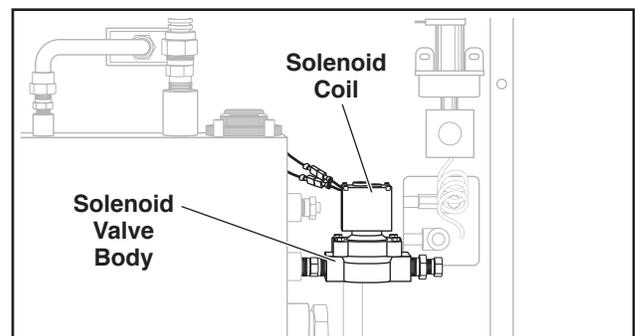
1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Turn off the water supply.
3. Remove the rear panel from the Power Head.



4. Mark and disconnect the wires to the Solenoid coil.
5. Remove the fittings from the Solenoid valve body.
6. Loosen and remove the two hex nuts securing the Solenoid.
7. Remove the Solenoid from the Power Head.
8. Reverse this procedure to install new Solenoid.
9. Use the appropriate thread sealing tape on pipe fittings.
10. Restore power and water supply to unit and test for proper function.

### Solenoid (Drain, Steam Generator)

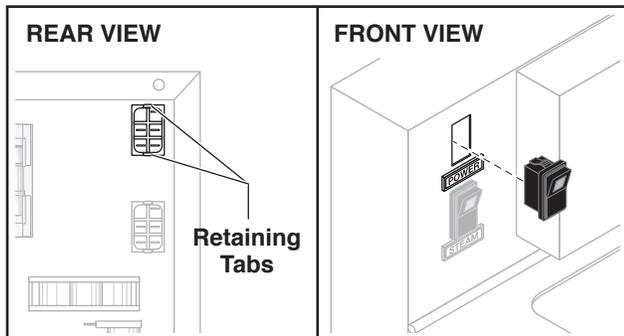
1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Turn off the water supply.
3. Remove the rear panel from the Power Head.
4. Open the drain on the bottom of the steam generator and allow to drain fully.



5. Mark and disconnect the wires to the Solenoid coil.
6. Remove the fittings from the Solenoid valve body.
7. Remove the Solenoid from the Power Head.
8. Reverse this procedure to install new Solenoid.
9. Use the appropriate thread sealing tape on pipe fittings.
10. Restore power and water supply to unit and test for proper function.

### Switch (Power)

1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Remove rear panel from Power Head.
3. Mark each wire on the switch to be replaced.
4. Remove all wires.
5. From inside the Power Head, squeeze the retaining tabs and slide the switch out the front of the unit.

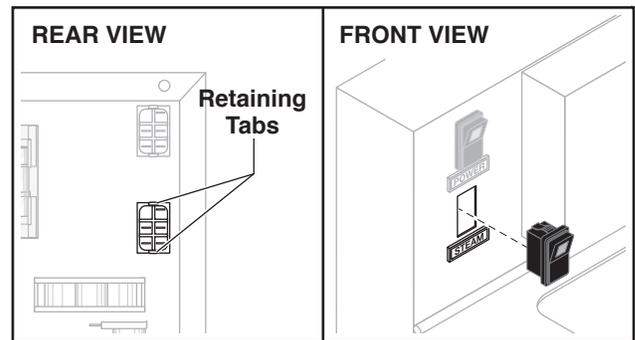


6. Slide the replacement Power Switch into the opening and snap it into place. Make sure the retaining tabs are fully engaged.
7. Rewire according to markings.
8. Replace the rear panel.
9. Restore power to the unit and test for proper function.

### Switch (Steam Power)

1. Turn off power to unit and perform a Lockout/Tagout procedure.

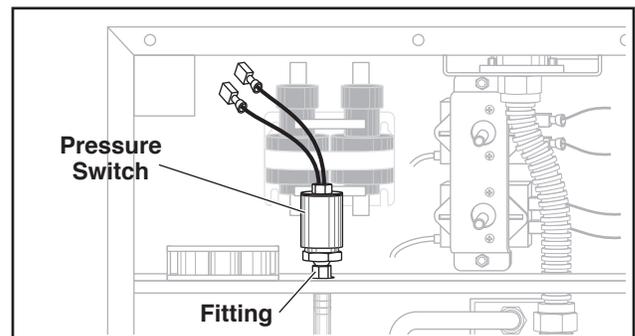
2. Remove rear panel from Power Head.
3. Mark each wire on the switch to be replaced.
4. Remove all wires.



5. From inside the Power Head, squeeze the retaining tabs and slide the Steam Power Switch out the front of the unit.
6. Slide the replacement Steam Power Switch into the opening and snap it into place. Make sure the retaining tabs are fully engaged.
7. Rewire according to markings.
8. Replace the rear panel.
9. Restore power to the unit and test for proper function.

### Switch (Pressure)

1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Turn off the water supply.
3. Remove the rear panel from the Power Head.
4. Mark and disconnect the wires to the Pressure Switch.



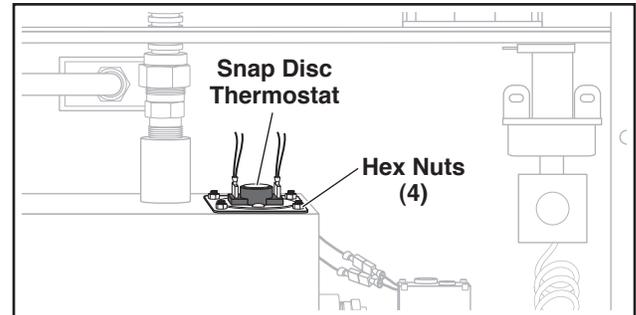
5. Remove the fitting from the switch body.
6. Remove the Pressure Switch from the Power Head.
7. Reverse this procedure to install new Pressure Switch.
8. Use the appropriate thread sealing tape on pipe fittings.
9. Replace the rear panel.
10. Restore power to the unit and test for proper function.

### Switch (Boiler, High Pressure)

1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Allow unit to cool fully.
3. Remove the rear panel from the Power Head.
4. Open the boiler drain valve slowly to relieve any pressure.
5. Close the valve when the pressure is released.
6. Mark and disconnect the wires to the Boiler Pressure Switch.
7. Remove the fitting from the switch body.
8. Remove the Boiler Pressure Switch from the Power Head.
9. Reverse this procedure to install new Boiler Pressure Switch.
10. Use the appropriate thread sealing tape on pipe fittings.
11. Replace the rear panel.
12. Restore power to the unit and test for proper function.

### Thermostat (High Limit, Snap Disc, Steam Generator)

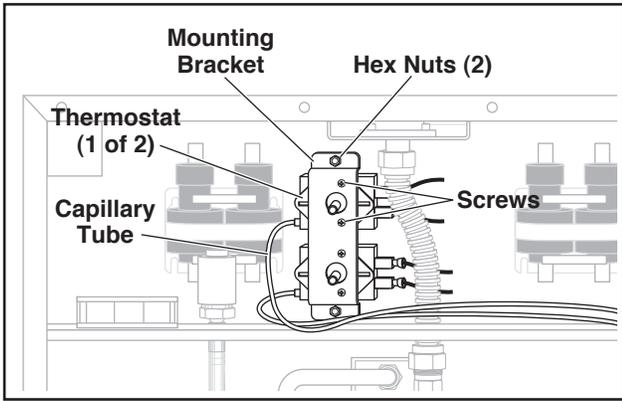
1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Allow unit to cool fully.
3. Remove the rear panel from the Power Head.
4. Mark and disconnect the wires to the Snap Disc Thermostat.



5. Loosen and remove the four hex nuts securing the Snap Disc Thermostat to the top of the Steam Generator.
6. Remove the Snap Disc Thermostat.
7. Remove the O-Ring
8. Clean the sealing surface thoroughly.
9. Install new Snap Disc Thermostat and O-ring.
10. Replace the four nuts that secure the Snap Disc Thermostat and tighten them evenly for a good seal.
11. Replace the wires using markings.
12. Replace the rear panel.
13. Restore power to the unit and test for proper function.

### Thermostat (High Limit, Surface or Boiler)

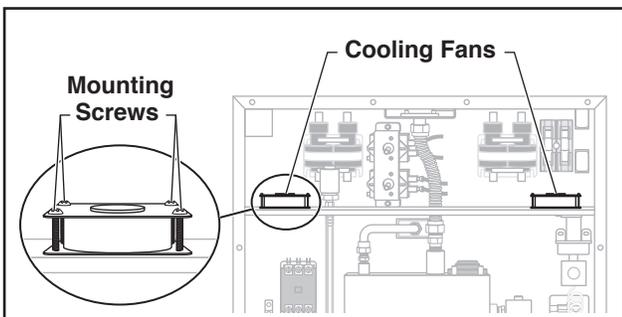
1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Allow unit to cool fully.
3. Mark and disconnect the wires to the Thermostat.



4. Remove the 2 hex nuts that secure the mounting bracket.
5. Loosen and remove the 2 screws securing the Thermostat to the bracket.
6. Remove the Thermostat from the bracket.
7. Follow the capillary tube to the bulb and loosen the bulb mounting bracket.
8. Reverse this procedure to install new Thermostat.
9. Replace the rear panel.
10. Restore power to the unit and test for proper function.

### Fan (Cooling)

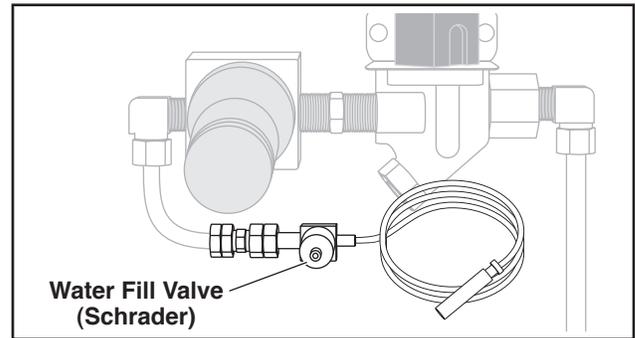
1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Remove the rear panel from the Power Head.
3. Mark and disconnect the wires to the Fan.



4. Loosen and remove the Fan mounting screws.
5. Remove the Fan from the Power Head.
6. Reverse this procedure to install new Fan.
7. Replace the rear panel.
8. Restore power to the unit and test for proper function.

### Valve – Water Fill (Schrader)

1. Turn off power to unit and perform a Lockout/Tagout procedure.
2. Turn off the water supply.
3. Remove the rear panel from the Power Head.
4. Disconnect the fittings from the Water Fill Valve body.



5. Remove the Water Fill Valve from the Power Head.
6. Reverse this procedure to install new Water Fill Valve.
7. Use the appropriate thread sealing tape.
8. Open the new valve.
9. Replace the rear panel.
10. Restore power and water to the unit and test for proper function.

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## Notes

# TROUBLESHOOTING

The griddle is designed to operate smoothly and efficiently if properly maintained. However, the following is a list of checks to make in the event of a problem.

Wiring diagrams are furnished inside the service panel as well as in this manual.

**NOTE:** If an item on the list is followed by an (\*), the work should be done by a qualified service representative.

## First – Check the Basics

The unit needs power and water (for Steam Generator).

BASIC #1- POWER: Is there power to the unit of the proper voltage and phase?

BASIC #2- WATER: Is there water supplied to the unit? Is it on?

Check the BASICS. Then the malfunction of controls can be considered.

Refer to the INSTALLATION & OPERATION manual to make sure the unit was installed properly. After all previous steps have been complied with, proceed with this troubleshooting guide. Carefully check all symptoms listed to find the one closest to the actual malfunction of your griddle.

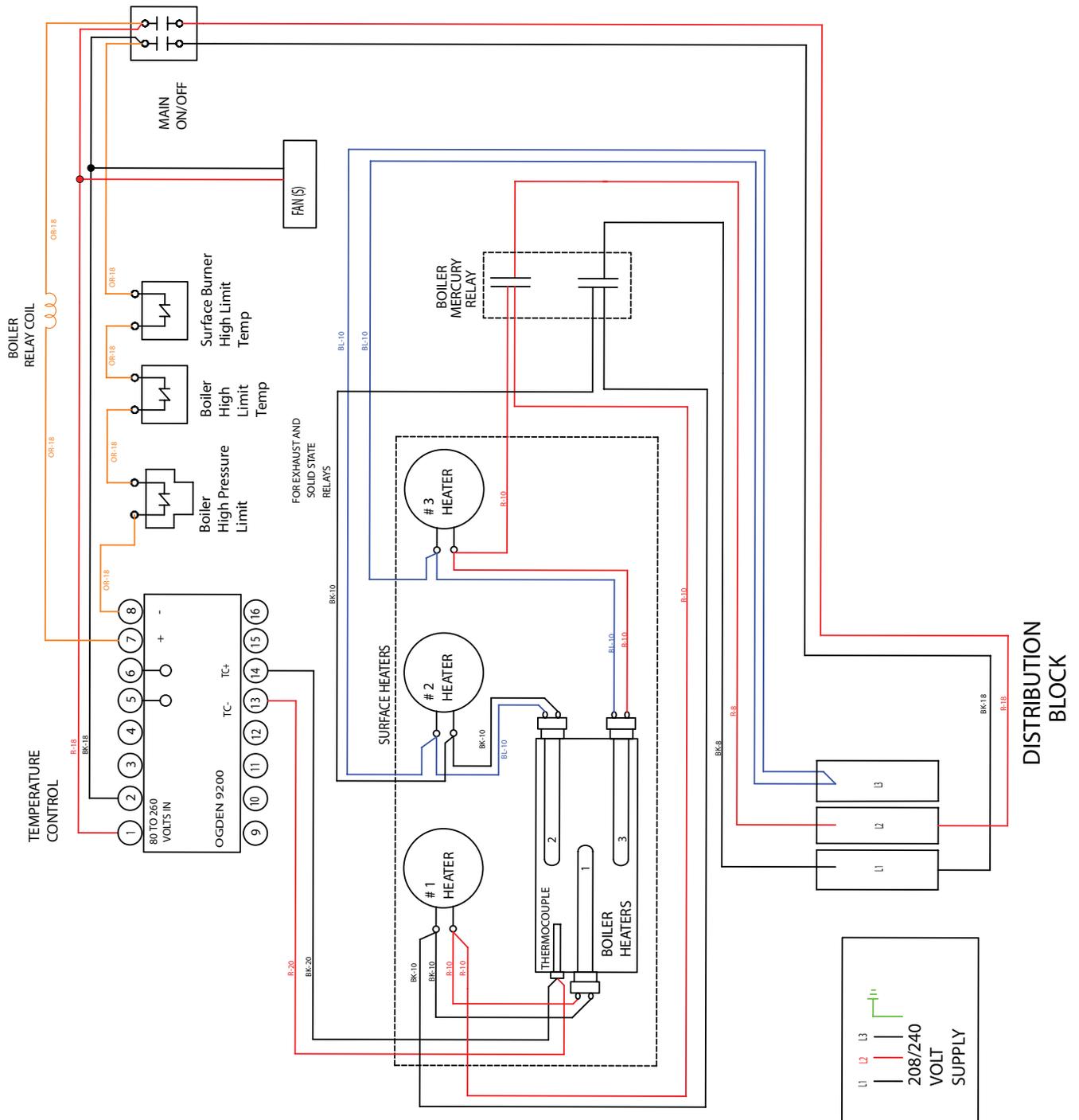
**NOTE:** Most problems associated with the steam generator are due to lack of proper maintenance. Lime buildup on internal parts will cause malfunctions. DE-SCALE STEAM GENERATOR FIRST.

PROBLEM	POSSIBLE CAUSE	REMEDY
Low Water In Boiler	Steam system leak.	Repair leak.*
Heater(s) Not Working	Unit not wired properly.	Check wiring. *
	Heater(s) bad.	Replace heater(s).*
	Contact or solid state relays not working.	Repair or replace.*
	Failed temperature controller.	Replace temperature controller.*
Griddle Hotter Than Set Point	Temperature controller out of calibration.	Recalibrate temperature controller.*
	Thermocouple sensor defective.	Replace thermocouple.*
	Solid state relay(s) stuck on.	Replace solid state relay(s).*
	Failed temperature controller.	Replace temperature controller.*
Griddle Heats Up Too Slowly	Heater(s) not working.	Purge air per instruction.
	Too much water in boiler.	Remove excess water.

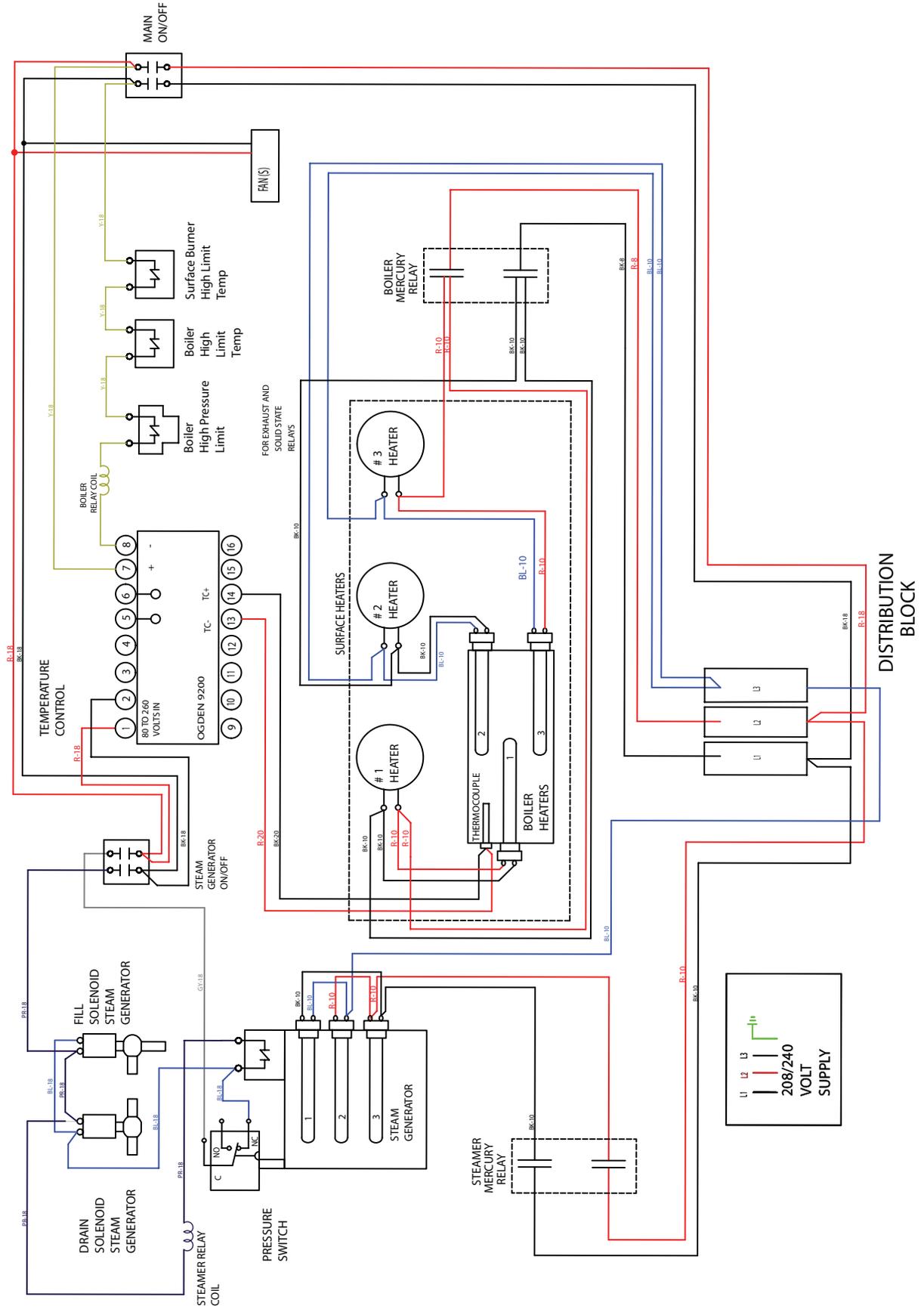
<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>
Griddle Not Heating Up	Temperature control not set high enough.	Adjust to desired temperature.
	Low water in boiler.	See “Low Water In Boiler”.
	Failed temperature controller.	Replace temperature controller.*
	Heater(s) not working.	See “Heater(s) Not Working”.
Uneven Surface Temperature	Air in system.	Check water level and purge air from system. Check for leaks.
	Low water in boiler.	Check water level in boiler. Add water if needed.
No Power	Power switch off.	Turn switch on.
	Not plugged in.	Check plug.
	Breaker off or tripped.	Check breaker.
	Short circuit.	Check for shorts.*
No Steam Coming Out Steam Nozzle	Start up procedure not done.	Perform “Start Up Procedure”.
	Steam generator low on water.	See “Steam Generator Low On Water”.
	Lid not closed.	Close lid to activate steam.
	Heater(s) not working.	See “Heater(s) Not Working”.
	Steam solenoid defective.	Replace solenoid.
Steam Generator Low On Water	Water supply to steam generator off.	Check water supply.
	Water solenoid plugged or defective.	Repair or replace.*
Not Enough Steam Pressure	Heater(s) not working.	See “Heaters Not Working”.
	Pressure switch out of adjustment or defective.	Repair or replace.*
	Pressure switch waterlogged.	Restore air trap for pressure switch and repair air leak.
Heater(s) Not Working	Wired incorrectly.	Check wiring.*
	Heater(s) bad.	Replace heater(s).*
	Pressure switch out of adjustment or defective.	Repair or replace.*
	Pressure switch waterlogged.	Restore air trap for pressure switch and repair air leak.*

# ELECTRICAL DIAGRAMS

## No Steam



# With Steam



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## WARRANTY AND RESPONSIBILITIES

American Griddle Corporation warrants to the original purchaser for use of each new Steam Shell Griddle the following: Any part which proves to be defective in materials or workmanship within the warranty period will, subject to terms of this warranty, be repaired or replaced at American Griddle's option. Claims under this warranty must be presented to American Griddle Corporation promptly in writing.

Griddle surface, lids, casters, fluid system components, and electrical components are warranted against defect for one year from the date of purchase.

This warranty applies only to Steam Shell Griddles in the Continental United States. This warranty shall not apply if the griddle or any part is subjected to accident, casualty, alteration, misuse, abuse, neglect, faulty installation, or if the date of manufacture is altered or removed.

The obligation of American Griddle Corporation is limited specifically to the aforementioned. No additional guarantees or warranty, expressed or implied, to include without limitation warranties of Fitness or Merchantability with respect to Steam Shell Griddles and American Griddle Corporation regarding other liability with respect thereto including without limitation, liability for incidental, special, or consequential damages.

### RESPONSIBILITIES OF PURCHASER

It is the responsibility of the purchaser to:

1. Arrange on-site electrical services in accordance with American Griddle specifications.
2. Receive shipment of Steam Shell Griddle to include unloading, uncrating, inspecting for damage in shipment and installation of the Griddle in its proper location; in accordance with installation instructions.
3. Arrange electrical services to be connected properly by a qualified technician. All such connections must be in accordance with applicable code requirements and American Griddle's installation procedures.

Please note the specific details on the Warranty

and make certain that service connections are made to the proper utility services. This warranty and purchaser's responsibility information should be retained for future use.

For assistance please call (260) 428-2685 or (800) 428-6550.

### CONDITIONS AND TERMS OF LIMITED 1 YEAR WARRANTY

A complete statement of warranty and conditions is included in this manual. To ensure that you are familiar with maintenance/warranty-related conditions, please study the following list.

The warranty does not extend to:

1. Malfunction as a result of improper maintenance.
2. Repairs made by anyone other than qualified service personnel as recommended by American Griddle Corporation.
3. Damage caused in shipment or damage as a result of improper use.
4. Normal maintenance as outlined in this manual.
5. Damage caused by tampering with, removal of, or change of preset controls or safety devices.
6. Damage caused by striking the cooking surface with steel implements, or by rubbing or scraping the cooking surface with abrasive materials.
7. Simple adjustments like calibration of the thermostat and tightening of fittings.
8. Damage to any part of the unit as a result of cleaning with high-pressure water or steam. Do not spray the exterior of the equipment with water or steam.
9. Damage or failure of steam generator due to improper maintenance.
10. Service charge for moving other equipment to gain access to the unit.
11. Freeze damage from failure to winterize the griddle for storage at temperatures below 32°F.

If you have any questions about warranty coverage, operating procedures, or maintenance, please contact American Griddle Corp. or an authorized American Griddle Corp., service agent.

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## Notes

