WORLD'S BEST ACCU-STEAM™ GRIDDLE

SERVICE MANUAL
ACCU-STEAM GAS G2 GRIDDLE

⚠ WARNING

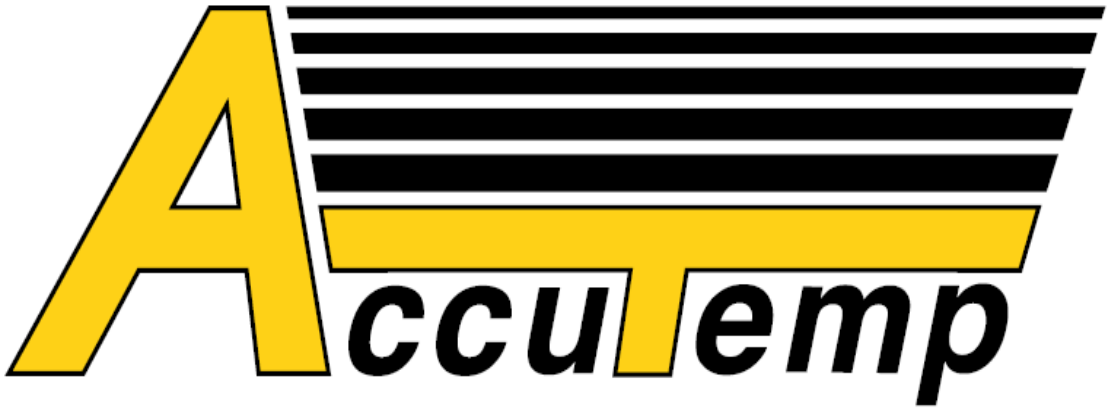
Improper installation, alteration, adjustment,service, cleaning or maintenance of this commercial appliance could result in property damage, serious injury or death.

Read and understand the installation, operational, maintenance instructions before installing, servicing, or operating this commercial appliance.

NOTE

Record the serial number, model number (identification decal located on the left side panel of the commercial appliance) , voltage and the install date. Please have this information when calling for assistance.

Serial Number:	
Model:	
Install Date:	



Technical Services

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WARNING SYMBOL DEFINITIONS

SYMBOL DEFINITIONS

Symbols are used to attract your attention to possible dangers. They are only effective if the operator uses proper accident prevention measures. Some of the symbols are boxed text; while others maybe just picture icons. Please give this information the respect they deserve for safe operation.

Warning Text Boxes

Below are definitions of the warning text boxes.

DANGER

Indicates an imminently hazardous situation; which, if unchanged, will result in death or serious injury.

WARNING

Indicates a potentially hazardous situation; which, if unchanged, will result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation; which, if unchanged, will result in minor or moderate injury.

NOTE

Advises the reader of information or instructions, vital to the operation or maintenance of the equipment.

Symbol Icons

Below are definitions of the symbol icons used in this manual.

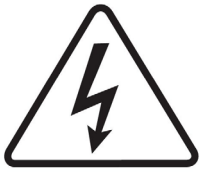
ALERT

Notifies the reader of an important message or warning; usually a safety related message.

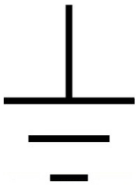
INFORMATION

Notifies the reader of an important information that may or may not be safety related.

CAUTION - HOT SURFACE



DANGEROUS VOLTAGE



EARTH GROUND

SAFETY PRECAUTIONS

DANGER

ELECTRICAL SHOCK HAZARD WHILE WORKING ON ENERGIZED EQUIPMENT.

Unplug equipment prior to removing any components effected by electricity.

PERSONNEL INJURY HAZARD WHILE PICKING UP OR MOVING HEAVY EQUIPMENT.

Always use at least 2 people and proper lifting techniques when picking-up, moving, or flipping-over heavy equipment.

IMPORTANT FOR YOUR SAFETY

The **Safety Instructions** listed on this page below, should be posted in a prominent location as a reminder of safe practices; as well as, recommended actions to follow in the event of an equipment or facility's utility issue.

WARNING

In the event of a Power Failure, DO NOT attempt to operate this appliance.

WARNING

DO NOT store or use Gasoline, or any other Flammable Vapor and/or Liquids in the vicinity of this or any other appliance.

WARNING

IMPROPER installation, adjustment, alteration, service, or maintenance can cause personal injury or death; and/or property damage. Read the installation, operation, and service/maintenance instructions thoroughly; before installing or servicing this equipment.

WARNING

Only QUALIFIED service technicians/electricians should perform the equipment installation, to ensure that all electrical and safety requirements are met; and that all wiring is performed in accordance with all national, state, and local electrical codes.

WARNING & CAUTION NOTES

WARNING

ONLY QUALIFIED SERVICE TECHNICIANS SHOULD PERFORM MAINTENANCE ON THIS EQUIPMENT.

CAUTION

GRIDDLE MAY HAVE SHARP EDGES.

Table of Contents

Sequence of Operation

1. When the G2 griddle is plugged in, AC line voltage is supplied to the primary side of the transformer.
2. The voltage out of the secondary side of the transformer is 24VAC nominal. Yellow and blue wires out of the transformer.
3. The blue leg of the secondary side of the transformer (24VAC) is connected to the yellow system harness, is split and is connected to the combination gas valve coils, remote timer connector and the Hi-Limit thermostat.
4. From the HI-Limit thermostat the 24VAC leg is daisy chained to the, heat lamp, the main digital control board and to chassis ground.
5. The yellow secondary leg of power from the transformer connects to the violet system harness and goes to the Hi-Limit, then daisy chains over to the main digital control board. At this time the system is waiting to be powered on via the Digital control board.
6. Upon pressing the "ON" button on the digital controller, the digital controller powers up and a relay on the digital controller is closed making a connection between the violet 24VAC leg and the input of the HI-Limit thermostat through the white with brown striped harness.
7. If the reading from the Hi-Limit RTD (Resistive Thermal Device) is not 425°F or higher, an output relay in the Hi-Limit controller will be closed causing the 24VAC to be sent to the ignition control, DC relay and to the pilot valve coil of the gas combination valve, opening the pilot valve.
8. If the reading from the Hi-Limit RTD (Resistive Thermal Device) is 425°F or higher, an output relay in the Hi-Limit controller will be opened causing the 24VAC to be cut off from the ignition control, DC relay and to the pilot valve coil of the gas combination valve, closing the pilot valve.
9. The over temperature lamp is connected across the common and the normally open contacts of the High Limit thermostat output relay. When the relay is activated or closed, the griddle temperature is below 425°F, there is 24VAC on both sides of the over temp lamp, preventing it from lighting up. If the High Limit thermostat output relay is deactivated or open, the griddle temperature is at or above 425°F, the lamp will see the voltage potential from the chassis ground/ yellow system harness side of the transformer through the pilot valve coil and light up.
10. If the digital controller senses the griddle temperature is below the set point temperature via the digital controller RTD sensor, the controller will output 24VDC to the ignition control DC coil relay and allow 24VAC to be sent to the ignition module via the blue harness to pin 2 of the ignition module, which is daisy chained to the ignition fault indicator lamp.
11. The ignition module will begin the ignition sequence by initiating a spark at the ignition probe first then it will send 24VAC, via the red harness from pin #1 of the ignition module to the heat lamp, which is daisy chained to the main gas valve coil of the combination gas valve through the red system harness. This allows gas to flow through the combination gas valve, through the orifices in each main burner and through the main burner tiles.
12. When the gas air mixture is ignited, the flame sense probe will detect a DC voltage level through the flame's ionized gas to ground via the orange flame sense harness to the ignition module, pin #6.

Sequence of Operation

13. If the DC voltage level is detected before 4 seconds and is at a high enough level the ignition module will continue to hold the main gas valve open.
14. If the DC voltage level is not high enough within the 4 second window, the ignition module will shut down the main gas valve.
15. A fault timer is connected across the red and blue harnesses from the ignition module. When the ignition module is commanded to start the ignition cycle, 24VAC is present on both the red and the blue harnesses and the timer is deactivated.
16. If the ignition module fails to see a sufficiently high enough DC voltage level through the flame sense circuit, the ignition module will disable 24VAC from the red harness and the timer will see the voltage potential from the chassis ground/yellow system harness side of the transformer and begin an approximate 6 second timer sequence that controls the ignition fault indicator lamp causing it to flash.
17. When the griddle heats up to the set point temperature, the digital controller RTD resistance changes and provides a signal to the control board telling it that the set point temperature has been reached.
18. When the digital controller sees the resistance value for the set point temperature, it cuts power to the ignition control DC coil relay and breaks the connection to the ignition module causing the griddle to stop heating further.

Griddle Specifications Sheet

GENERIC MODEL NO	COOKING SURFACE		COOKING AREA SQUARE INCHES	VOLTAGE	Hz	AMPS	BTU/H	HEAT SOURCE TYPE	Minimum Recommended Clearances			Griddle Weight	W/legs	w/ Stand w/ Casters	Pallet weight	Ship Weight Legs	Ship Weight Stands
	WIDTH	DEPTH							SIDES	BACK	BTTM						
GGX1201A24	24 INCHES	30 INCHES	720	120	50/60	1	42,300	NAT 5" WC	1 INCH	2 INCH	4" LEGS	240.5	244.5	273	35.5	280	308.5
GGX1201B24	24 INCHES	24 INCHES	576	120	50/60	1	42,300	NAT 5" WC	1 INCH	2 INCH	4" LEGS				35.5		
GGX1201A36	36 INCHES	30 INCHES	1,080	120	50/60	1	65,000	NAT 5" WC	1 INCH	2 INCH	4" LEGS	325.0	329.5	366	59.5	389	425.5
GGX1201B36	36 INCHES	24 INCHES	864	120	50/60	1	65,000	NAT 5" WC	1 INCH	2 INCH	4" LEGS				59.5		
GGX1201A48	48 INCHES	30 INCHES	1,440	120	50/60	1	85,000	NAT 5" WC	1 INCH	2 INCH	4" LEGS	413	417	462	64	481	526
GGX1201X48	48 INCHES	24 INCHES	1,152	120	50/60	1	85,000	NAT 5" WC	1 INCH	2 INCH	4" LEGS				64		
PGX1201A24	24 INCHES	30 INCHES	720	120	50/60	1	42,300	PROP 10" WC	1 INCH	2 INCH	4" LEGS	240.5	244.5	273	35.5	280	308.5
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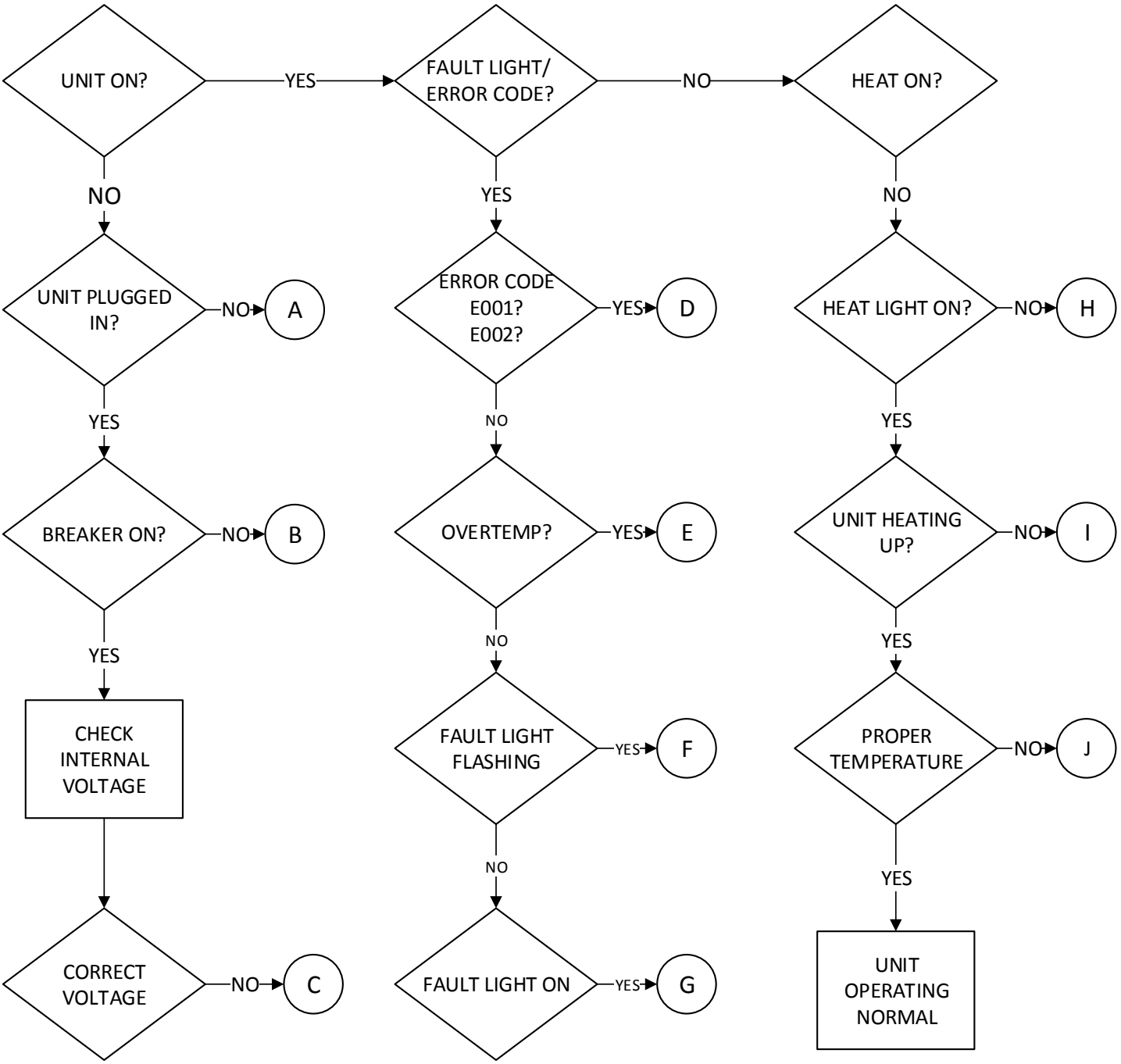
Troubleshooting Guide



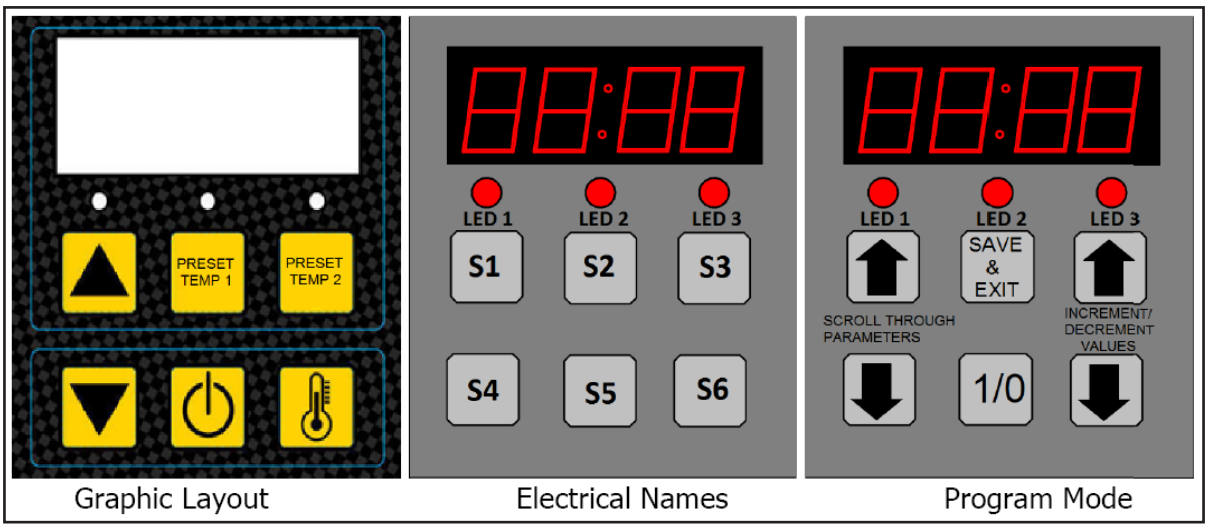
Troubleshooting Guide

A	Power cord disconnected	Confirm proper voltage at outlet. Plug in power cord.
B	Breaker is tripped	Unplug griddle and check line voltage at outlet. Reset breaker.
C	Temperature Controller	If 24VAC is on secondary side of transformer, check power input terminals of Temp Controller J2-1 & J2-2. If 24VAC is at terminals, replace Temp Controller. If 24VAC is not at terminals, check for broken wires or poor crimps at the terminals. If no 24VDC at the terminals, measure across the controller outputs J7-1 and J7-2 for 24VDC. If no voltage, replace controller. If there is voltage, check for poor crimps or loose wires at the terminals.
	Fuses	Check for loose or blown fuses.
	Wiring	Inspect wiring for damage, opens and/or shorts. Inspect ground and wire to wire connections. Note* Unit has a digital controller, if voltages, fuses and wiring appear to be in order, try cycling power.
	Transformer	Check for 24 Volts from secondary side of transformer. If input to transformer is present and there is no output, replace transformer.
D	Error Code E001 or E002 on display	E001: Open Temp (RTD) sensor J3-1 & J3-2. Check terminals for poor crimping. E002: Shorted Temp (RTD) sensor J3-1 & J3-2. If RTD checks good, reconnect RTD and cycle power. Is error code still present? Replace Temperature Controller.
E	Over temp indicator	If griddle is not warming up or holding a set point temperature, cycle power. Check Over Temp RTD for proper values at current temperature. If temp/resistance values match RTD, replace Over Temp Thermostat. If values do not match RTD, replace Over Temp RTD. If Over Temp and Heat light are on and griddle is not warming, cycle power. If Over Temp light goes out, monitor griddle to see if it over temps again. If temperature is greater than 50 degrees different than measurement device, verify measurement device. If measurement device appears to be accurate, measure RTD. If RTD measures normally, replace temperature controller. If RTD measures out of specifications, replace RTD.
F	Fault light flashing	If burners did not ignite, check gas pressure, cycle power. If burners did ignite and unit is heating, check for poor connections in the harness at the fault timer relay.

Troubleshooting Guide

G	Fault light on	If burners did not ignite, replace fault timer. If burners did ignite and unit heating, check for short to ground in the white wire connected to the fault indicator lamp.
H	Heat light not on	If griddle is warming up or regulating at a set point, replace indicator lamp. If griddle is not warming up or regulating at a set point, check to see if temp demand ice cube (24VDC) relay is engaged. If ice cube relay is not engaged, check for 24VDC at terminals 7 & 8 from temperature controller. If voltage is at relay coil, replace relay. If voltage is not at relay coil, replace temperature controller. If ice cube relay is engaged, check for poor connections or broken wires. Blue wires coming from ignition module or brown wire coming from OT thermostat. If connections are good, replace relay.
I	Unit not heating up	Check for 24 VAC to the gas valve. If no voltage to the gas valve check for poor or loose connections or broken red wire between the “heat” lamp and the gas valve. If there is voltage to the red wire of the gas valve, check for voltage at the brown wire of the gas valve. If there is 24VAC to the brown wire at the gas valve and the valve has not turned on, replace the gas valve. If there is 24VAC to the brown wire at the gas valve and the valve has turned on, check for proper gas supply and pressures. If there is no 24VAC on the brown wire at the gas valve, check for poor or loose connections or broken brown wire at the gas valve, the “OT” indicator lamp and the OT thermostat and the demand relay. Repair as necessary.
J	Inaccurate Temperature	If display temperature is greater than 50 degrees different than measurement device, verify measurement device. If measurement device appears to be accurate, measure RTD. If RTD measures normally, replace temperature controller. If RTD measures out of specifications (temp/resistance), replace RTD.

Digital Controller



When power is applied to the control, the control will configure itself to operate in accordance with the parameters stored in memory. These parameters may be adjusted using Manager's Mode.

NOTE:
Unplug griddle from wall receptacle before replacing the control board in order to prevent damage to equipment.

Change Cooking/ Default/ Preset Temperatures

1. Turn the griddle on by pressing the **ON/OFF** (S5) button.
2. Hold the **UP** (S1) arrow in for 3 seconds until all 3 lights start to flash.
3. Press the **UP** (S1) or **DOWN** (S4) arrow until desired temp is displayed.*
4. Once the desired temp is displayed it can be saved as a preset temperature by immediately holding down **PRESET TEMP 1** (S2) or **PRESET TEMP 2** (S3), until unit shuts off. It can also be save as the default on temp by turning off the griddle

Lock/Unlocked Note*

If temperature is unable to be adjusted, user may need to unlock the system by holding down the **ON/OFF** (S5) button and **Temp** (S6) button together for 8 seconds or until "ULOC" is displayed. Once the temperatures are saved, it is recommend the user locks the system by holding down the **ON/OFF** (S5) button and **Temp** (S6) button together for 8 seconds or until "LOC" is displayed. This will allow the cooks to only use the preferred settings.

Digital Controller

Operating Mode

When power is applied to the control, the control will configure itself to operate in accordance with the parameters stored in memory. These parameters may be adjusted using Manager's Mode.

Reset

Pressing and holding the **DOWN** (S4) arrow key and the **ON/OFF** (S5) key for five seconds will reset the software back to the factory default settings.

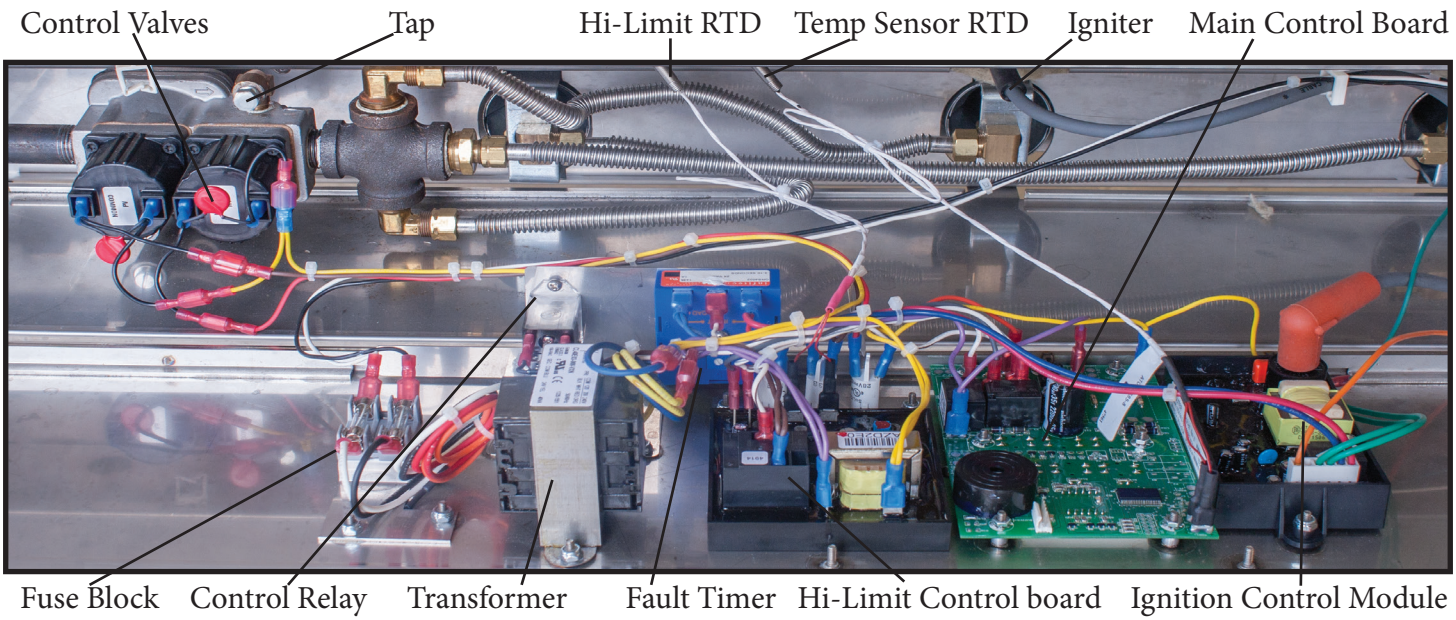
Error Codes

The control will display error codes for the following conditions:
E001 Displays when controller detects an Open Sensor
E002 Displays when controller detects a Shorted Sensor
9999 No calibration data stored or invalid calibration data detected
To reset from any error, unit must be turned OFF, repaired, and then turned ON.
When any error is displayed, outputs are forced open. The following chart illustrates the programming logic and program level indication:

Main Components and Purpose Reference

Transformer AT0E-2662-5	-Steps down the line voltage to approximately 24VAC nominal
Timer, Ignition Fault AT0E-2500-3	-Controls fault light. -If signal is lost from the ignition module the timer causes ignition fault light to turn on
Control Relay, 24vdc AT0E-2625-6	-Controls input signal to ignition module. -Coil side of relay is energized by digital control board.
Infrared Burner - Gas (36" & 48") AT2B-2099-2	-Supplies heat to the griddles steam chamber - Supplies flame for flame sensor
Flame Sensor AT2E-4717-2	-When in direct contact with the flame, the sensors gives off a DC Millivolt or DC Micro amp signal to the ignition module.
Igniter A22E-4716-1	-Receives voltage from ignition module. - Ignites burners. (1/8"-3/16" Gap)
Natural Gas Valve, 5" WC (H20) AT2E-1806-2	-Regulates incoming gas pressure (1/2lb or 14"WC max unregulated incoming pressure) -First valve opens when control board is powered on and the second valve opens and supplies gas to the burners when the control board calls for heat.
Ignition Control Module AT2E-1807-1	-Takes reading from the flame sensor. -Receives input from temperature Controller and Hi-Limit. -Sends voltage to the igniter. -Controls gas valve and heat lamp
Digital Control Board AT0E-3625-5	-Receives input signal from RTD Temperature Sensor. -Pulls in relay which controls the ignition module.
Fuse .75 Amp 250v AT0E-2731-4	-The .75A fuse is to provide protection to the control circuitry in case of a short in the system.
Hi-Limit Control Board AT0E-3880-1	-Receives input signal from Hi-Limit RTD temperature sensor -Cuts power to ignition module when unsafe signal is met from Hi-Limit RTD (approximatively 425° or 182Ω)
Temperature Sensor RTD AT0E-2885-8 (Black heat shrink sleeve for 1000Ω identification)	- The RTD provide temperature reference information to the Temperature Control. This RTD is a 1000Ω.
Hi-Limit Temperature Sensor, RTD AT0E-2885-7 (Red heat shrink sleeve for 100Ω identification)	- The RTD provide temperature reference information to the Hi-Limit Board. This RTD is a 100Ω.
Heat Lamp 24v Red AT0E-1800-2	-Receives 24VAC power from the ignition module and indicates the valve is open.

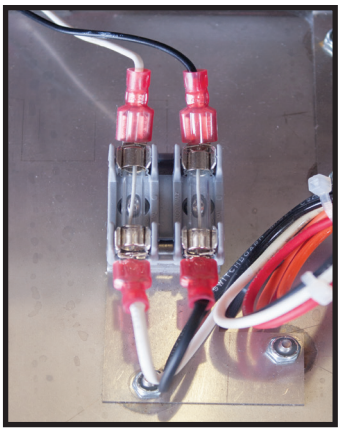
Parts Identification, Removal and Installation



Fuse .75 Amp 250V

AT0E-2731-4

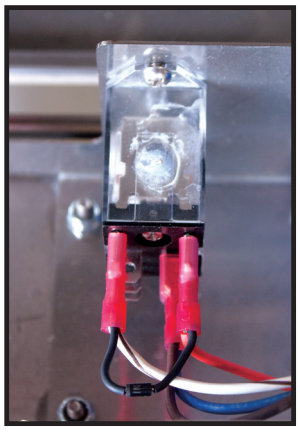
1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Replace fuse.



Control Relay

AT0E-2825-6

1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Take note of wire location
4. Remove wires and hardware securing relay.
5. Reinstall in reverse order.

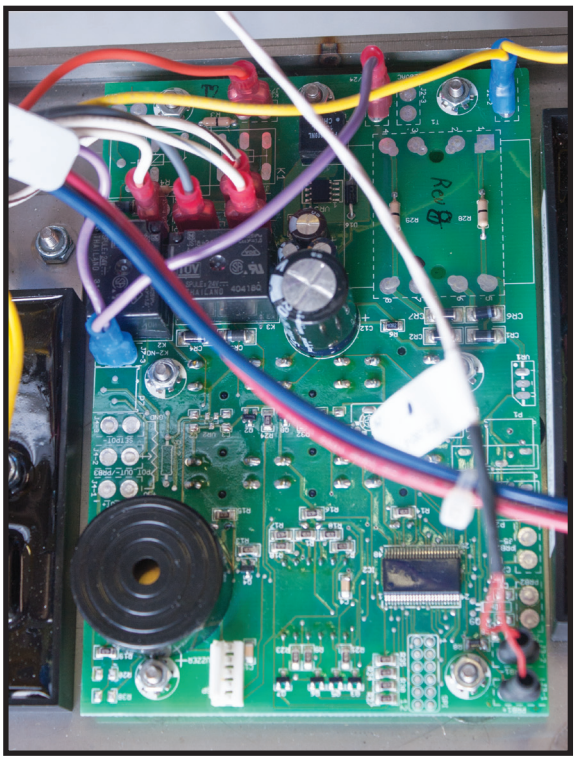


Parts Identification, Removal and Installation

Digital Control Board

AT0E-3625-5

1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Locate the main control board. Take note of wires and their terminals, remove wires.
4. Remove nuts and washers securing board to panel, remove panel.
5. Reinstall in reverse order.

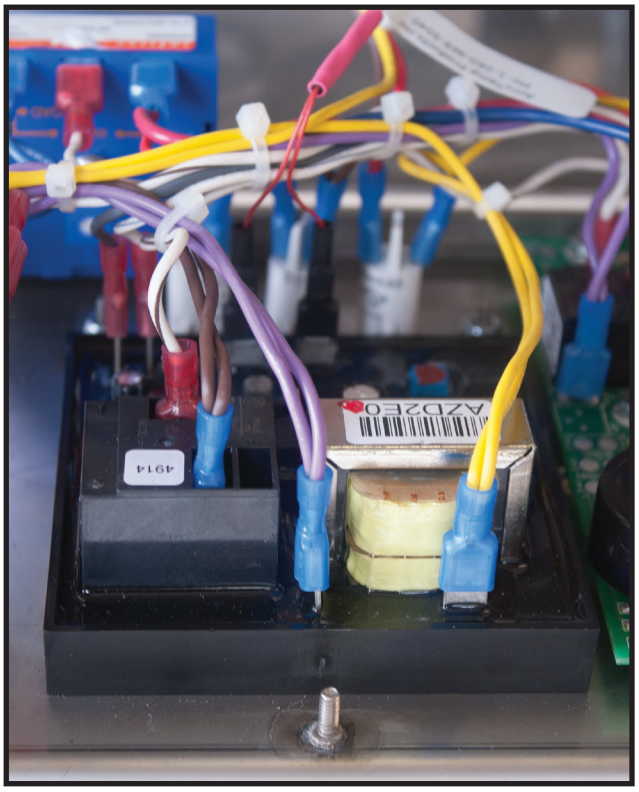


IMPORTANT NOTICE: Failure to unplug the unit before pulling wires from the board could result in fatal damage to the controller.

Hi-Limit Control Board

AT0E-3880-1

1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Locate the Hi-Limit control board. Take note of wires and their terminals, remove wires.
4. Remove nuts and washers securing board to panel, remove panel.
5. Reinstall in reverse order.

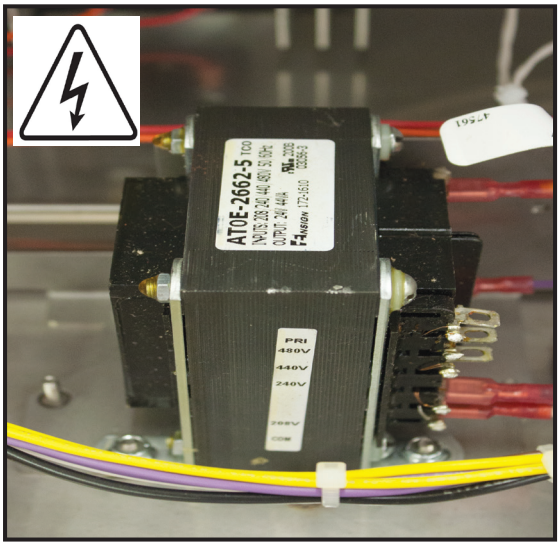


Parts Identification, Removal and Installation

Transformer

AT0E-2662-5

1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Locate transformer and note the location of the wires and their terminals, disconnect wires.
4. Removed nuts securing transformer.
5. Remove transformer.
6. Reinstall in reverse order.



Heat Lamp

AT0E-1800-2

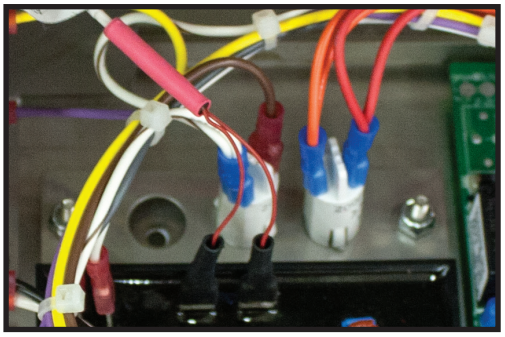
Hi-Limit Lamp

AT0E-1800-2

Fault Lamp

AT0E-1800-2

1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Locate the light bar and remove wires from lamp.
4. Remove nuts securing the light bar to the front panel.
5. Remove lamp.
6. Reinstall in reverse order.



Fault Timer

ATOE-2500-3

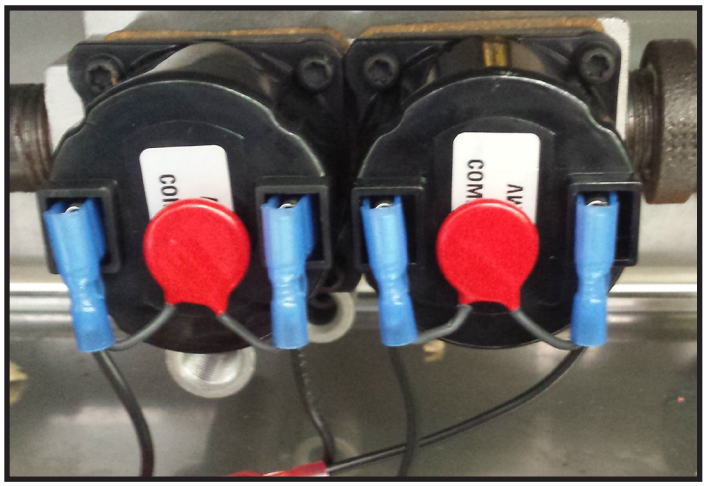
1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Locate the Fault timer, take note of wire location and remove wires.
4. Remove hardware securing timer.
5. Remove timer.
6. Reinstall in reverse order.
7. Set timer pot to 6 seconds.

Parts Identification, Removal and Installation

Gas Valve

AT2E-1806-2

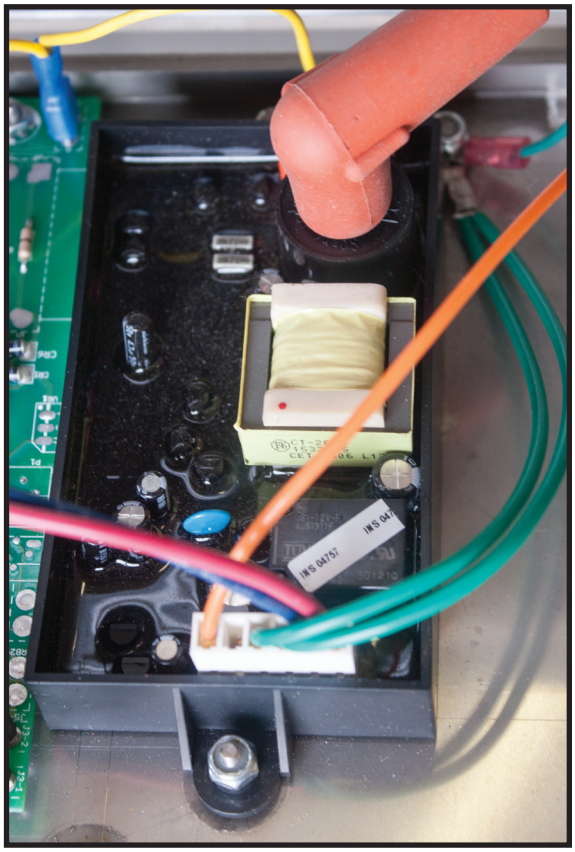
1. Unplug from wall receptacle.
2. Turn off gas supply and disconnect the unit from supply hose.
3. Lower front access panel by removing the screws in the upper corners of the panel.
4. Take note of or mark wire location and remove wires.
5. Disconnect brass gas lines from cross fitting
6. Disconnect union and remove assembly
7. Remove cross fitting
8. Reinstall in revers order; applying new pipe dope to fittings



Ignition Control Module

AT2E-1807-1

1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Locate the module and remove wires.
4. Remove hardware securing module.
5. Remove module.
6. Reinstall in reverse order.

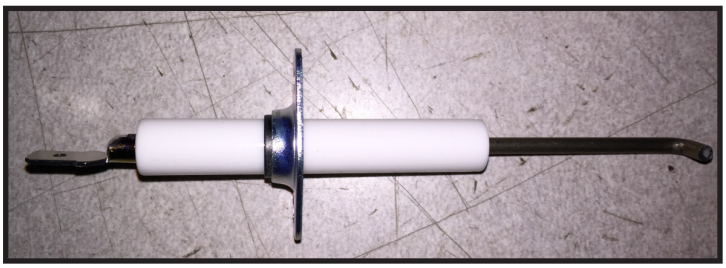


Parts Identification, Removal and Installation

Flame Sensor

AT2E-4717-1

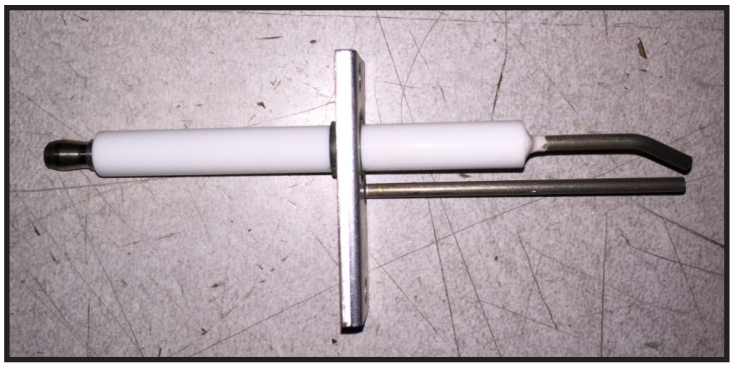
1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Remove orange flame sense wire.
4. Remove screws and flame sensor
5. Reinstall in reverse order.



Igniter

AT2E-4716-1

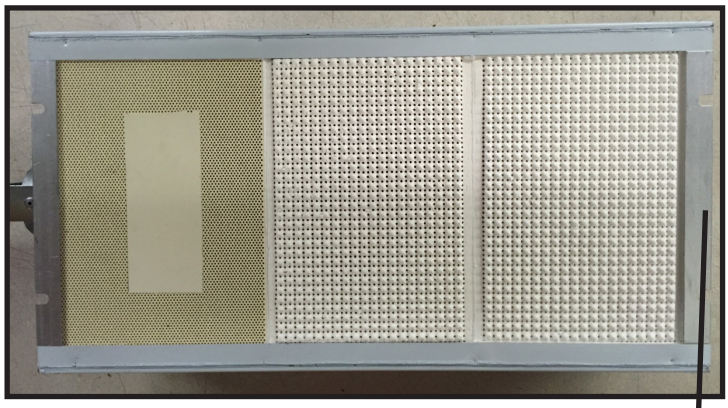
1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Remove igniter wire
4. Remove screws and igniter
5. Reinstall in reverse order.
6. Set new igniter gap between 1/8”-3/16’’



Infrared Burner

AT2B-2099-2

1. Unplug from wall receptacle.
2. Turn off gas supply and disconnect the unit from supply hose.
3. Remove gas line at venture
4. Remove front 2 nuts fully and loosen back 2 nuts securing burner
5. Remove Burner
6. Reinstall in reverse order.



Note: When diagnosing a bad burner, often times the exterior back side of the burner will have black or gray discoloration in a circular or half moon shaped pattern.

Parts Identification, Removal and Installation

Temperature Sensor, 1000 Ω RTD

AT0E-2885-8 (Black heat shrink)

1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Locate and remove RTD wires attached to the main control board .
4. Remove nut securing RTD to griddle .
5. Reinstall in reverse order.

Hi-Limit Sensor, 100 Ω RTD

AT0E-2885-7 (Red heat shrink)

1. Unplug from wall receptacle.
2. Lower front access panel by removing the screws in the upper corners of the panel.
3. Locate and remove RTD wires attached to the Hi-Limit control Board.
4. Remove nut securing RTD to griddle .
5. Reinstall in reverse order.

NOTICE: Failure to unplug the unit before pulling wires from the board could result in fatal damage to the control board.

RTD Testing

RTD Resistance Chart

Temp	Hi-Limit Sensor (100 Ohm)	Temp Sensor (1k Ohm)	Temp	Hi-Limit Sensor (100 Ohm)	Temp Sensor (1k Ohm)
70	108.22	1082.25			
100	114.68	1146.82	300	156.91	1569.10
125	120.03	1200.38	325	162.08	1620.88
150	125.37	1253.72	350	167.24	1672.44
175	130.68	1306.84	375	172.37	1723.77
200	135.97	1359.74	400	177.48	1774.89
225	141.24	1412.41	425	182.57	1825.78
250	146.48	1464.86	450	187.64	1876.45
275	151.7	1517.09	475	192.68	1926.89

Ignition System Testing

When trouble shooting ignition problems it is absolutely imperative to start off by taking incoming/outgoing gas pressure and to get a reading from the flame sensor. These three measurement are the most useful readings a technician can take when diagnosing AccuTemp gas equipment and are often the most neglected.

Flame Sense

The ACCU-STEAM G2 gas griddle has a flame sensing circuit to determine if the system has proper combustion. When the system is turned on gas is sent to the burner and an electronic ignition tries to ignite the griddle. The griddle then checks to see if flame is established in the burner. If the flame sense feedback is within the proper range the system will stay on until the digital temperature controller is satisfied. The griddles' ignition module continues to monitor the voltage and as long as its within the proper range the griddle will stay on. If the flame sense reading falls below the threshold (**13mV or .32uA**) the griddle will go into lock out and will stop heating. When a lock out occurs, the fault indicator light should illuminate.

Micro-amp flame sense reading

A meter with micro amp (<A) selection or a micro amp adapter must be place in series with the orange flame sense wire. To check micro amps, disconnect the orange wire from the flame rod and connect the amp meter in series by attaching one lead of the meter to the flame sense rod terminal and the other lead to the orange wire.

Millivolts flame sense reading

An Accutemp volt-measuring adapter P/N FT0003 (meter set for millivolts) is placed in parallel with the orange flame sense circuit. To check millivolts, attach one end of the adapter to the orange wire and the other to ground.

If the burner is lighting, determine if the sensing signal level is 30mV (1.38uA) or higher.

A. If the reading is less than 30mV (1.38uA), check for proper gas pressures to the dual valve. For natural gas, the pressures must be 5" water column for the main gas valve. For propane gas, the pressures must be 10" water column.

B. If the gas pressures are good but the sensing signal level is still poor, check burner orifice for obstruction. Clean or replace as necessary.

C. If the gas pressures are good, the pilot orifice is clean, the burner surface is glowing orange to bright orange but the signal level is still poor, clean or replace the flame sense probe.

Four types of meter readings are possible:

1) **0 millivolts or micro amps** – Look for an open or grounded sensor wire or flame rod, or a defective ignition module. The wire and rod can be diagnosed with an ohmmeter.

2) **Steady 30 DC millivolts or 1.38 micro amps or higher** – The system is operating within normal parameters.

3) **Fluctuating meter reading** – Check that the flame sensor probes are properly located. Also check for drafts that can cause an unstable flame. A dirty orifice can also cause an unstable flame.

4) **Less than 30 millivolts or 1.38 micro amps** – Verify the flame-sensing rod is properly engulfed in the flame. A flame sensor probe too close to the tile will not be in the proper part of the flame, with not enough ionized gas to allow a proper signal level to be conducted. Conversely, the same thing holds true if the flame sensor is too high. Also check the ground connection back to the ignition module. Check that the flame-sensing rod and ground plane are not oxidized. Clean both with a non aluminum oxide abrasive.

Ignition System Testing

When trouble shooting ignition problems it is absolutely imperative to start off by taking incoming/outgoing gas pressure and to get a reading from the flame sensor. These three measurement are the most useful readings a technician can take when diagnosing AccuTemp gas equipment and are often the most neglected.

Gas Pressures

The ACCU-STEAM G2 gas griddle requires the proper gas pressure setting to operate properly. All pressure readings should be taken after the unit has reached a temperature of at least 200°F and while it is running to ensure proper flow rates.

Required Material:
Manometer, 1/8" NPT barbed hose fitting one 2 inch long lengths of approx. 1/8" diameter flexible rubber hose (closed on one end).

Tasks:
1) Verify pressure regulator vent are clear before making any pressure adjustments.
2) Remove the 1/8" NPT pipe plug from the main gas valve and install the 1/8" NPT barbed hose fitting. Tighten and mount one length of the rubber hose.
3) Allow the appliance to heat up to at least 200°F. First, check the main burner regulator pressure. Remove the rubber hose and replace with the manometer tube. **The pressure should be 5" WC for natural gas and 10"WC for propane.** If the outgoing pressure does not meet this values, remove the cap on the main burner pressure regulator and adjust it to the necessary value.
4) Replace the hose fittings with original plug.

The internal dual gas valves are rated for a low pressure systems. Low pressure is 1/2lb (14" water column) or less. An external regulator should ONLY be used if incoming gas pressure exceeds this value. If incoming gas pressure does not meet 7" water column for Natural gas or 12" water column for propane then the Technion should first check to see if there is an external regulator installed and if there is not, the gas supply company should be contacted and asked to raise the supply pressure to the building. Another inspection point in the gas system is the gas supply lines. **The recommended gas supply hose is commercial grade (Dormant) 3/4" ID and not to exceed 4 feet in length from the main supply**. When inspecting the gas supply system, verify there are no restricting adapters or regulators (Unless on a high pressure system) .

Preventative Maintenance

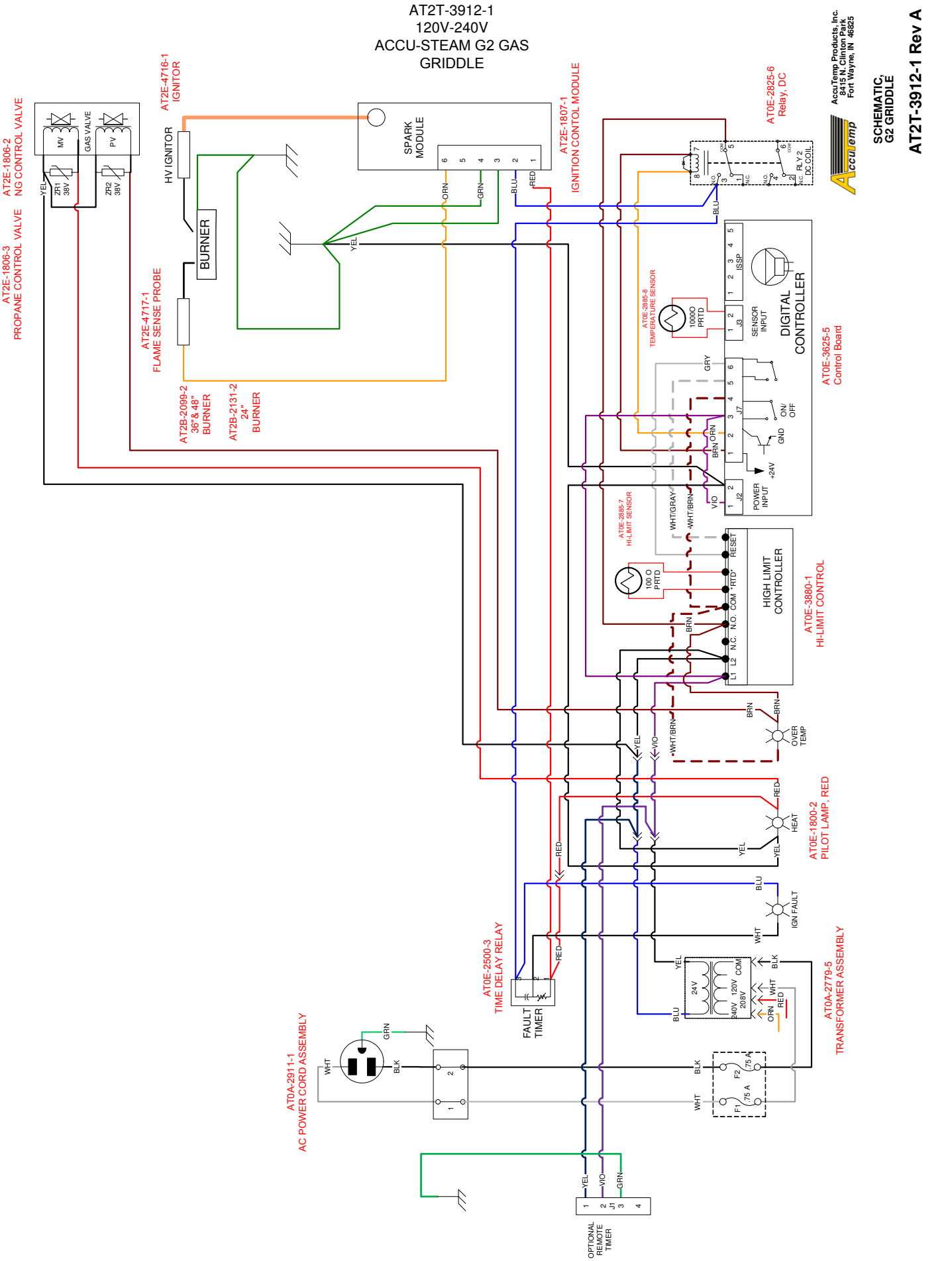
General Gas Appliance Periodic Maintenance (PM) Recommendations

AccuTemp Products, Inc.

PM TASK DESCRIPTION	GENERAL ITEMS	BI-ANNUAL ITEMS	ANNUAL ITEMS
Verify that the appliance is level and properly located under the hood.	X		
Verify that the temperature controller is working properly, that there are no rips in the label.	X		
Check that the splash shield at the top of the control panel is under the rail provided. If not water and or grease can migrate into control panel.	X		
Inspect the control compartment for foreign particulate and any loose wiring or connections.	X		
Daily. A back draft diverter has been installed at the factory this will keep scrapings from spatulas from dropping down the flue and will provide addition protection from back drafts that can effect burner operation. Check that flue has not been pushed in resulting in an uneven opening across the flue passage. Pull flue out so that flue opening is even across width of appliance.	X	X	X
Verify the operation and condition of the igniter probe assembly. Probes should be cleaned with a wire brush and/or emery cloth. . **Caution: DO NOT use any abrasive that contains aluminum oxide. This will leave a coating on the flame sensor that could cause the unit not to light.**		X	X
Clean all gas orifices, making sure the orifice is clear and unobstructed**.** It may be necessary to a drill the same size of the orifice, if very soiled**.**		X	X
Inspect the burner venturi tubes for foreign particulate. Wipe out with a mild detergent and warm water and rinse with clean water.		X	X
Inspect combustion chamber and the burner tiles. If water stains are present on tiles check that tiles have no cracks and haven't sunk into the burner. Replace burners if this condition is present.	X	X	X
Inspect the ignition wire harness for any evidence of high temperature degradation or grease build-up on harness connector. Spray contact cleaner into white connector and clean mating connector imbedded in ignition module.		X	X
Verify ignition module voltage output. Greater than 30 MV (1.38uA).Must have Accutemp adaptor ATR-FT003 to check millivolts. Install ground strap between stand-by burner and control panel to improve ground plane performance.		X	X
Verify internal gas pressure.			X
Check output of control transformer after unit has been running for several hours, the output of the secondary coil must be greater than 20 volts, if less than this replace transformer.		X	X

NOTES:

1) AccuTemp-approved service providers should complete these PM tasks.


AT2T-3912-1
120V-240V
ACCU-STEAM G2 GAS
GRIDDLE
AccuTemp Products, Inc.
4643 N. Clinton Street
Fort Wayne, IN 46825
SCHEMATIC,
G2 GRIDDLE
AT2T-3912-1 Rev A
AT2E-1806-2
NG CONTROL VALVE
AT2E-1806-3
PROPANE CONTROL VALVE
GAS VALVE
MV
PV
ZR1
38V
ZR2
38V
AT2E-4716-1
IGNITOR
HV IGNITOR
BURNER
AT2E-4717-1
FLAME SENSE PROBE
AT2B-2099-2
36" & 48"
BURNER
AT2B-2131-2
24"
BURNER
SPARK
MODULE
AT2E-1807-1
IGNITION CONTOL MODULE
AT0E-2825-6
Relay, DC
RLY 2
DC COIL
AT0E-2886-8
TEMPERATURE SENSOR
1000
PRTD
DIGITAL
CONTROLLER
SENSOR
INPUT
ISSP
J3
J7
ON/
OFF
GND
+24V
POWER
INPUT
J2
AT0E-3625-5
Control Board
AT0E-2885-7
HI-LIMIT SENSOR
100 O
PRTD
HIGH LIMIT
CONTROLLER
RESET
RTD
COM
N.O.
N.C.
L2
L1
AT0E-3880-1
HI-LIMIT CONTROL
OVER
TEMP
AT0E-1800-2
PILOT LAMP, RED
HEAT
IGN FAULT
AT0E-2500-3
TIME DELAY RELAY
FAULT
TIMER
AT0A-2779-5
TRANSFORMER ASSEMBLY
24V
120V
208V
240V
COM
AT0A-2911-1
AC POWER CORD ASSEMBLY
F1
F2
75 A
OPTIONAL
REMOTE
TIMER
J1
WHT
BLK
GRN
YEL
VIO
ORN
BRN
GRY
BLU
RED
WHT/GRAY
WHT/BRN

Product Warranty

U.S. & Canada Sales Only

LIMITED WARRANTY

One Year Parts and LaborOne Year Parts and Labor

AccuTemp Products, Inc. (AccuTemp) warrants that your AccuTemp equipment will be free of defects in material and workmanship under normal use for a period of twelve (12) months from installation or fifteen (15) months from date of shipment from AccuTemp, whichever date first occurs (the Warranty Period). Registration of AccuTemp equipment is required at time
of installation.

Damage to AccuTemp equipment that occurs during shipment must be reported to the carrier, and is not covered under this warranty. The reporting of any damage during shipment is the sole responsibility of the commercial purchaser/user of such AccuTemp equipment.

AccuTemp provides an active service department, which should be contacted and advised of service issues regardless of warranty period.

During the warranty period, AccuTemp agrees to repair or replace, at its option, F.O.B. factory, any part which proves to be defective due to defects in material or workmanship, provided the equipment has not been altered in any way and has been properly installed, maintained, and operated in accordance with the instructions in the AccuTemp Owners Manual.

During the warranty period, AccuTemp also agrees to pay for any factory authorized equipment service agency (within the continental United States and Canada) for reasonable labor required to repair or replace, at our option, F.O.B. factory, any part which proves to be defective due to defects in materials or workmanship, provided the service agency has received advance approval from AccuTemp factory service to perform the repair or replacement. This warranty includes travel time not to exceed two hours and mileage not to exceed 50 miles (100 miles round trip), but does not include post start-up assistance or training, tightening of loose fittings or external electrical connections, minor adjustments, gaskets, maintenance, or cleaning. AccuTemp will not reimburse the expense of labor required to replace parts after the expiration of the warranty period.

Proper installation is the responsibility of the dealer, owner-user, or installing contractor and is not covered by this warranty. While AccuTemp products are built to comply with applicable standards for manufacturers, including Underwriters Laboratories (UL) and National Sanitation Foundation (NSF), it is the responsibility of the owner and the installer to comply with any applicable local codes that may exist.

AccuTemp makes no other warranties or guarantees, whether expressed or implied, including any warranties of performance, merchantability, or fitness for any particular purpose. AccuTemp s liability on any claim of any kind, including negligence, with respect to the goods and services covered hereunder, shall in no case exceed the price of the goods and services, or parts thereof, which gives rise to the claim. In no event shall AccuTemp be liable for special, incidental, or consequential damages, or damages in the nature of penalties.

This constitutes the entire warranty, which supersedes and excludes all other warranties, whether written, oral, or implied.

IMPORTANT

Improper installation can affect your warranty. Installation is the responsibility of the Dealer, Owner/ User or the Installation Contractor. See: Section One, Installation of the Owner s Manual.

For Service Call 800-480-0415 or email: service@accutemp.net

NOTES