Service Manual

MOUNTAIN SERIES

Commercial & Residential Stone Hearth Oven

Gas-Fired, Wood-Fired and
Gas/Wood Combination Models

MOUNTAIN SERIES WS-MS-(4, 5, 6, 7)

MOUNTAIN HOME WS-MH-(4, 5)

TRADITIONAL SERIES WS-TS-(5,6)

Wood Stone

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WOOD STONE OVEN SERVICE MANUAL FOR GAS-FIRED AND WOOD-FIRED MOUNTAIN SERIES OVENS

FOR WS-MS-(4, 5, 6 AND 7) MODELS

TS-(5, 6) MODELS

ADDITIONAL COPIES AVAILABLE UPON REQUEST

This manual is for use only by qualified service personnel. It is recommended that this oven be installed, maintained and serviced by qualified professionals. Warning: Improper installation, adjustment, alteration, service or maintenance can result in property damage, injury or death. Read the installation, operation and maintenance instructions thoroughly before installing or servicing this equipment.

M0014.09 APRIL 2019

An ongoing program of product improvement may require us to change specifications without notice.

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INTRODUCTION

This manual primarily covers the Mountain Series (MS) gas-fired, wood-fired and wood/gas ovens. Most of the general and troubleshooting information applies to other Wood Stone models as well. For specific information regarding other models, please contact the Wood Stone Service Department. This manual is for use only by Trained and Qualified Service Personnel.

WARNING: Improper installation adjustment, alteration, service or maintenance can result in property damage, injury or death. Please read and understand all pertinent instructions before attempting to install or perform any kind of service on this equipment. **BE SAFE.**

SERVICE DEPARTMENT AND WARRANTY INFORMATION

If you have any questions please call the Wood Stone Service Dept. at 1-800-988-8103. Normal hours are 8 a.m. to 5p.m. Pacific Standard Time Monday through Friday. After hours and on weekends call and follow the instructions to leave a message on the emergency service voice mail. A Wood Stone technician will be paged and return your call promptly.

YOU MUST CONTACT WOOD STONE BEFORE PROCEEDING WITH ANY WARRANTY SERVICE.

We encourage you to call whenever any service is performed. By doing this we can direct you toward the best solution to the problem. It also allows us to check and update the service history we keep for each oven. Our goal is to help you service the equipment correctly and as efficiently as possible.

Parts are available through Wood Stone. Please contact the factory for pricing. Additional Service Manuals and Installation and Operation Manual are also available.

The Installation and Operation Manual may also be downloaded from the Wood Stone web site at: www.woodstone-corp.com.

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THE FOUR CATEGORIES OF THE MOUNTAIN SERIES OVENS

-W MODELS

Wood-only models use wood as the only heat source. See the Installation and Operation Manual for specific information regarding the burning of wood.

RFG MODELS

These models have a Radiant flame burner located at the rear or, optionally, on either side of the oven. This burner is designed to give the appearance of a wood-fire type flame. The burner runs continuously when the oven is turned on. The oven has a manually controlled Throttle Valve, the Flame Height Control Knob, to raise and lower the flame to control the oven temperature.

RFG-IR MODELS

These models have a Radiant flame burner as well as a thermostatically controlled, Underfloor Infrared (IR) burner. The Radiant burner is the main heat source in this oven. This burner is designed to give the appearance of a wood-fire type flame. The burner runs continuously when the oven is turned on. The oven has a manually controlled Throttle Valve to raise and lower the flame to control the oven temperature. The Underfloor IR Burner is designed to assist in initial heat-up and periods of high production.

W-IR

These are wood-fired models with a thermostatically controlled Underfloor Infrared (IR) burner. The wood fire is the main heat source. The underfloor burner is designed to assist in initial heat-up and periods of high production.

Gas-fired ovens that include a "-W" in the model number are configured to allow the burning of wood in addition to the gas burners. See the Installation and Operation Manual for specific information regarding the burning of wood.

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VENTING AND INSTALLATION INFORMATION

Complete installation and venting information can be found in the Installation and Operation Manual supplied with the oven. Additional copies are available online at: woodstone-corp.com or call Wood Stone. Below is a brief overview.

OVEN VENTING

The Wood Stone Mountain Series ovens may be installed under a hood, or direct connected. All ductwork must be constructed and installed to the specifications of a grease duct. If a hood is used it must be a Type 1 hood (grease-rated). A power ventilator listed for restaurant exhaust applications must be provided. If fire suppression is required by the local jurisdiction, the oven must then be vented with a Type 1 hood.

It is never appropriate to use “B vent” in any part of an exhaust system connected to a Wood Stone oven.

Submit your venting plans to your local authorities before proceeding with your installation, as there may be additional requirements in your area.

All non-solid fuel venting systems should be inspected and cleaned at least every 3 months.

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WOOD-FIRED OVENS

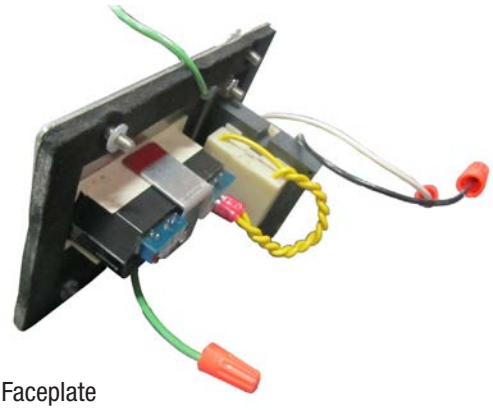
TEMPERATURE READOUT

The only electrical components on the wood-fired ovens are in the Temperature Readout Display at the front of the oven. Be aware that these displays are often relocated to an area beside the oven to accomodate kitchen design requirements. The assembly is made up of three components:

1. A Thermocouple that is installed into the floor of the oven from below.
2. A Temperature Readout Assembly, with settings adjustable between Fahrenheit and Centigrade.
3. A Transformer, available as 120 VAC or 240 VAC. Outputs 12 VAC to power the Readout Display.

TEMPERATURE READOUT COMPONENTS

Readout Assembly



Faceplate

Readout Display

Thermocouple

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Symptom	Probable Cause and/or Solution
Display does not light	**1.** Breaker to oven tripped or turned off **2.** If the breaker is fine, verify proper incoming power at input side of Transformer. If incoming power is present, verify 12 VAC at output of Transformer. If 12 VAC present replace temperature readout. If 12 VAC is not present, replace the Transformer.
Display lights but readout is erratic or displays "EEE"	Check that the Thermocouple connections on the readout module are correct: Red to TC- (negative), yellow to TC+ (positive). If the connections are good, remove the Thermocouple wires from the display. Jumper between TC+ and TC- on the display; the display should show the ambient temperature. If it does not display the ambient temperature, replace the readout. If the readout displays the ambient temperature (when jumpered), replace the Thermocouple. **Note:** Some models may include a plug connection between the readout box and the Thermocouple. If applicable, check this connection. If this connection is defective, remove and wire the Thermocouple directly.

CRACKING IN THE FLOOR OR DOME OF THE OVEN

Some cracking of the oven refractory, especially hairline cracking, is completely normal and in no way degrades the performance of the oven. Any abnormal or extreme cracking (larger than 1/8 inch) should be brought to the attention of the Wood Stone Service Department. Do not attempt any type of repair to the oven refractory unless specifically instructed to do so by the factory, and then, only with materials supplied by Wood Stone.

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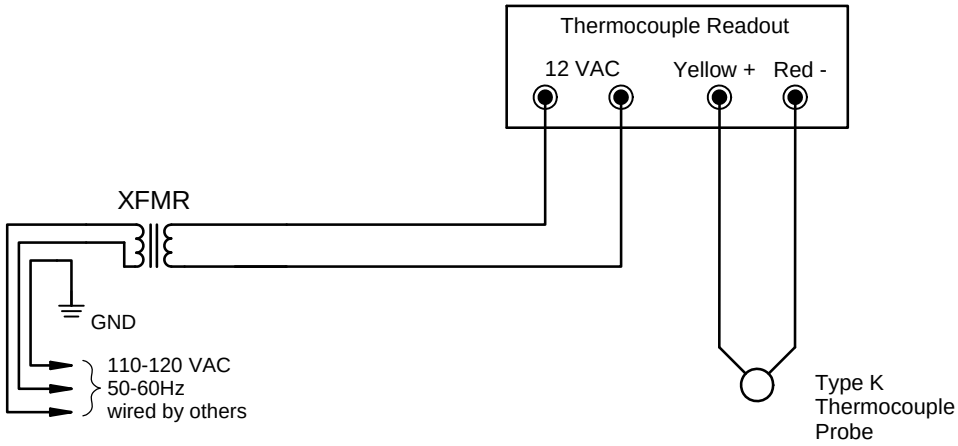
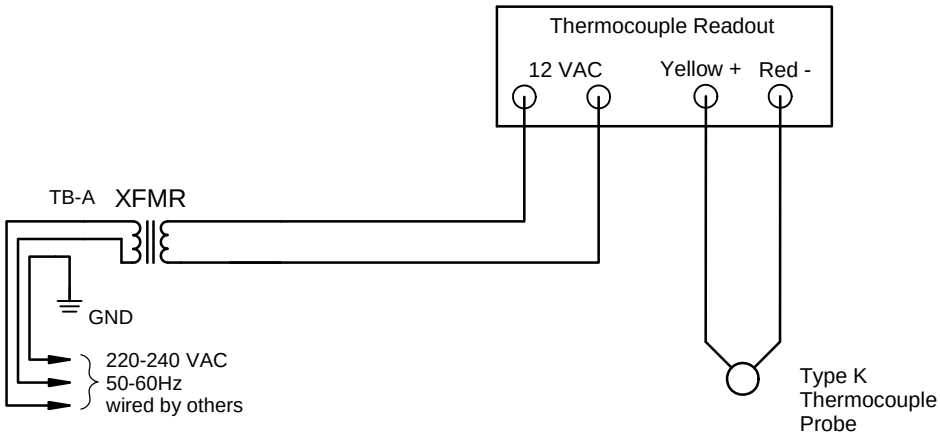
120 VAC



DIAG #: WD051 Rev. 0
DATE: 3/27/2014

240 VAC



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DATE: 3/27/2014

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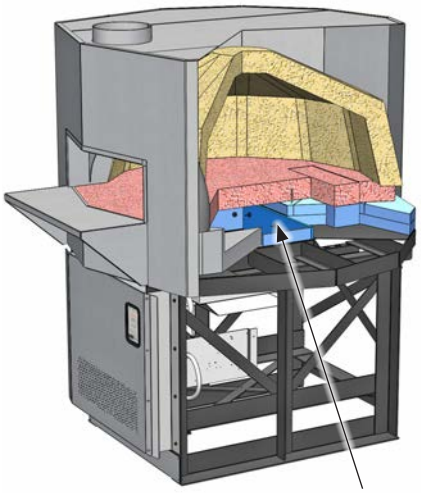
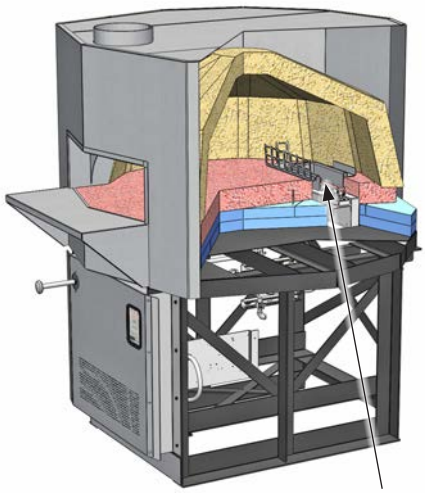
GAS OVENS - OPERATIONAL OVERVIEW AND COMPONENTS

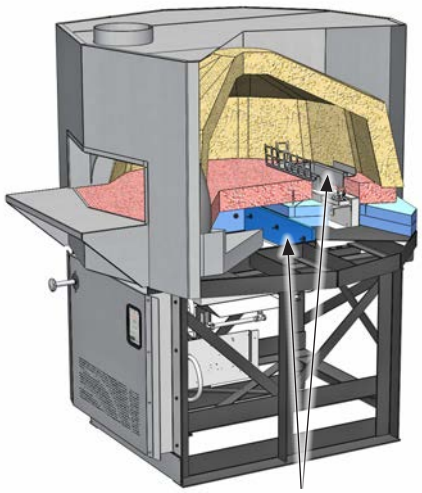
W-IR



RFG



RFG-IR



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GAS-FIRED OVENS OPERATIONAL OVERVIEW

Wood Stone manufactures three different model types of gas-fired ovens.

RFG MODELS

RFG models have a Radiant flame burner located at the rear or either side of the oven. This burner is designed to give the appearance of a wood-fire type flame. The burner runs continuously when the oven is turned on. The oven has a manual Control Throttle Valve to raise and lower the flame to control the oven temperature.

RFG-IR MODELS

These models have a radiant flame burner as well as a thermostatically controlled Underfloor Infrared (IR) burner. The Radiant burner is the main heat source in this oven. The Radiant burner is designed to give the appearance of a wood-fire type flame. The burner runs continuously when the oven is turned on. The oven has a manually Controlled Throttle Valve, the Flame Height Control Knob, to raise and lower the flame to control the oven temperature. The Underfloor burner is designed to assist in initial heat-up and during periods of high production.

W-IR MODELS

These are wood-fired models with a thermostatically controlled Underfloor Infrared (IR) burner. The wood fire is the main heat source. The IR burner is designed to assist in initial heat-up and during periods of high production.

Gas fired ovens that include a "-W" in the model number are configured to allow the burning of wood in addition to the gas burners. See the Installation and Operation manual for further details.

BURNER FUNCTION

RADIANT FLAME BURNER

The Radiant burner is the main heat source for the oven, and it runs continuously when the oven is turned on. The control for this burner is the Flame Height Control Knob located on the front of the oven, generally on the left side. There is no thermostatic control for the Radiant burner—the operator manually adjusts the flame height with the Flame Height Control Knob to control the temperature of the oven.

UNDERFLOOR INFRARED (IR) BURNER

The IR burner is installed beneath the floor of the oven. It is controlled independently of the Radiant burner by a temperature control located in the oven Control Box. This box is usually located on the front of the oven on the right side, but sometimes this might be moved to a different spot to accommodate the type of installation. The Controller incorporates a programmable Hearth Set Point and a Hearth (floor) Temperature display. Remember the IR is not the primary heat source for the oven.

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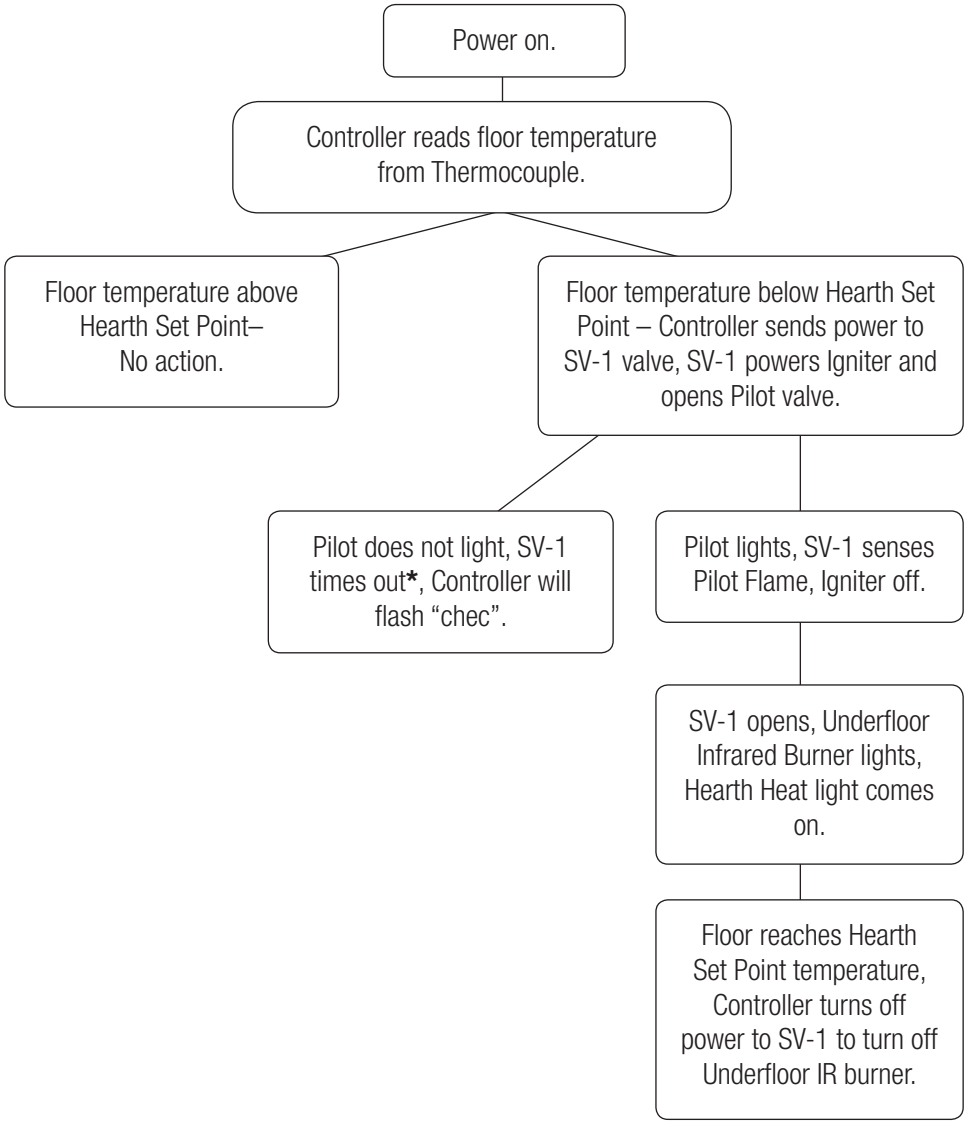
BURNER OPERATION SEQUENCE
W-IR OVEN - TYPE 2 CONTROLLER



*** NOTE:** On ovens equipped with the Honeywell Smart Valves that have a round on/off control knob (instead of a slide switch), the valve will not time out if the pilot fails to light. The valve will remain powered and the Igniter will remain on indefinitely until the pilot lights or power is turned off.

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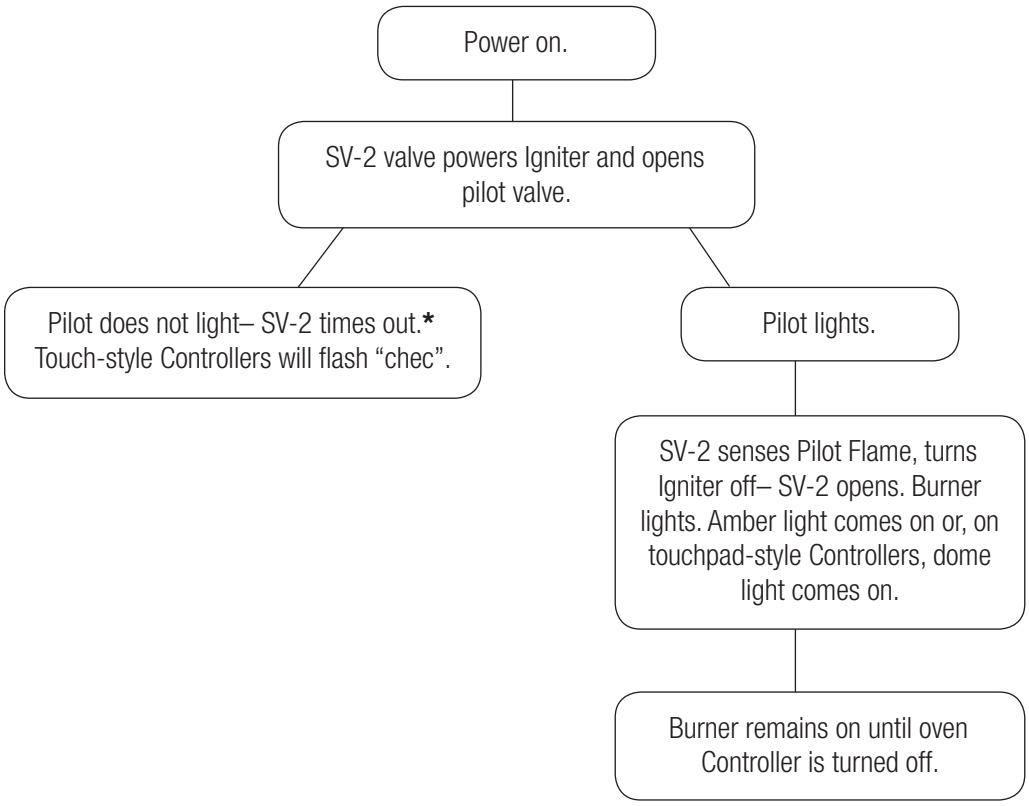
BURNER OPERATION SEQUENCE
RFG OVEN - ALL CONTROLLERS



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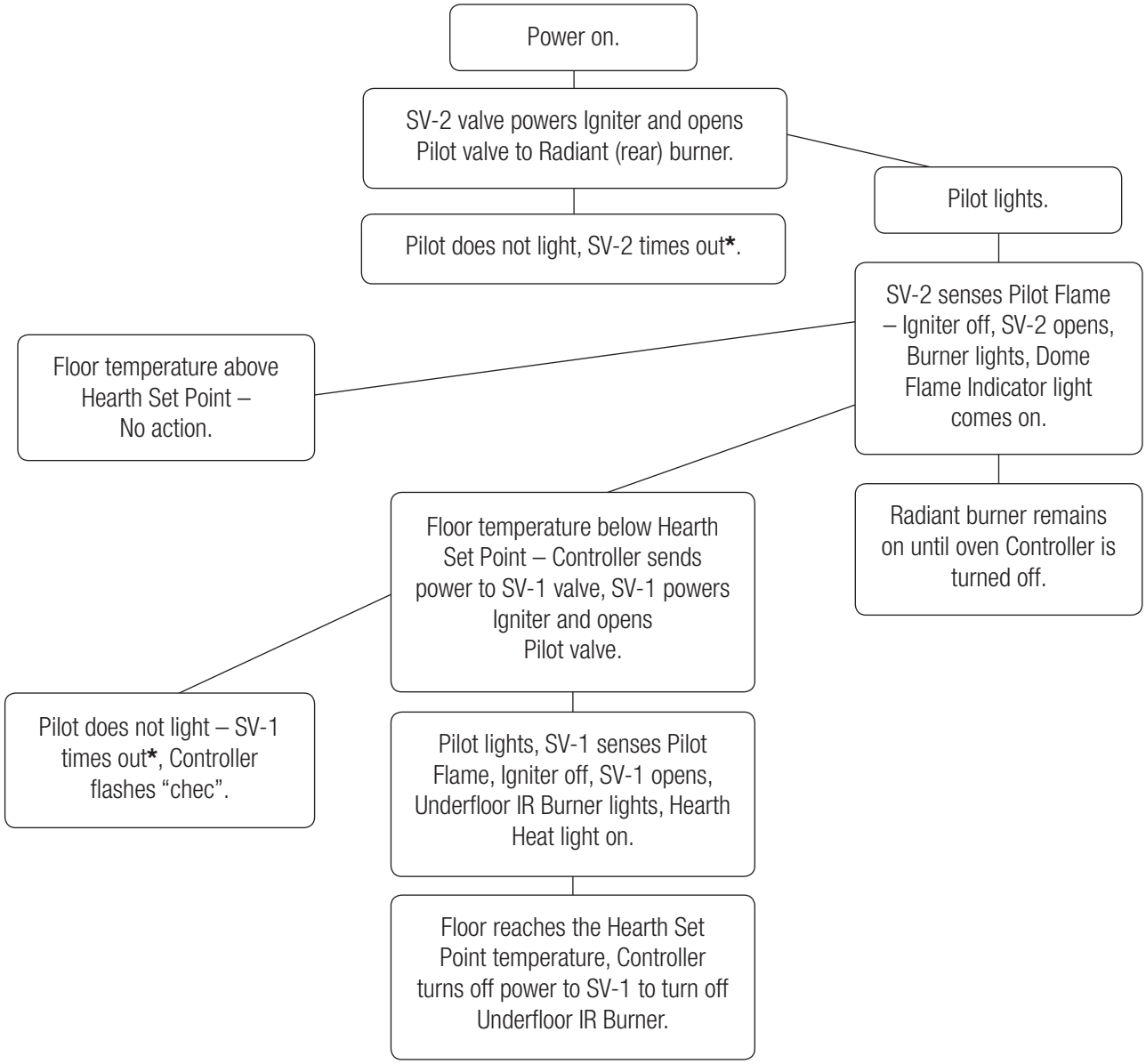
BURNER OPERATION SEQUENCE
RFG-IR-(W) OVEN - TYPE 2 CONTROLLER



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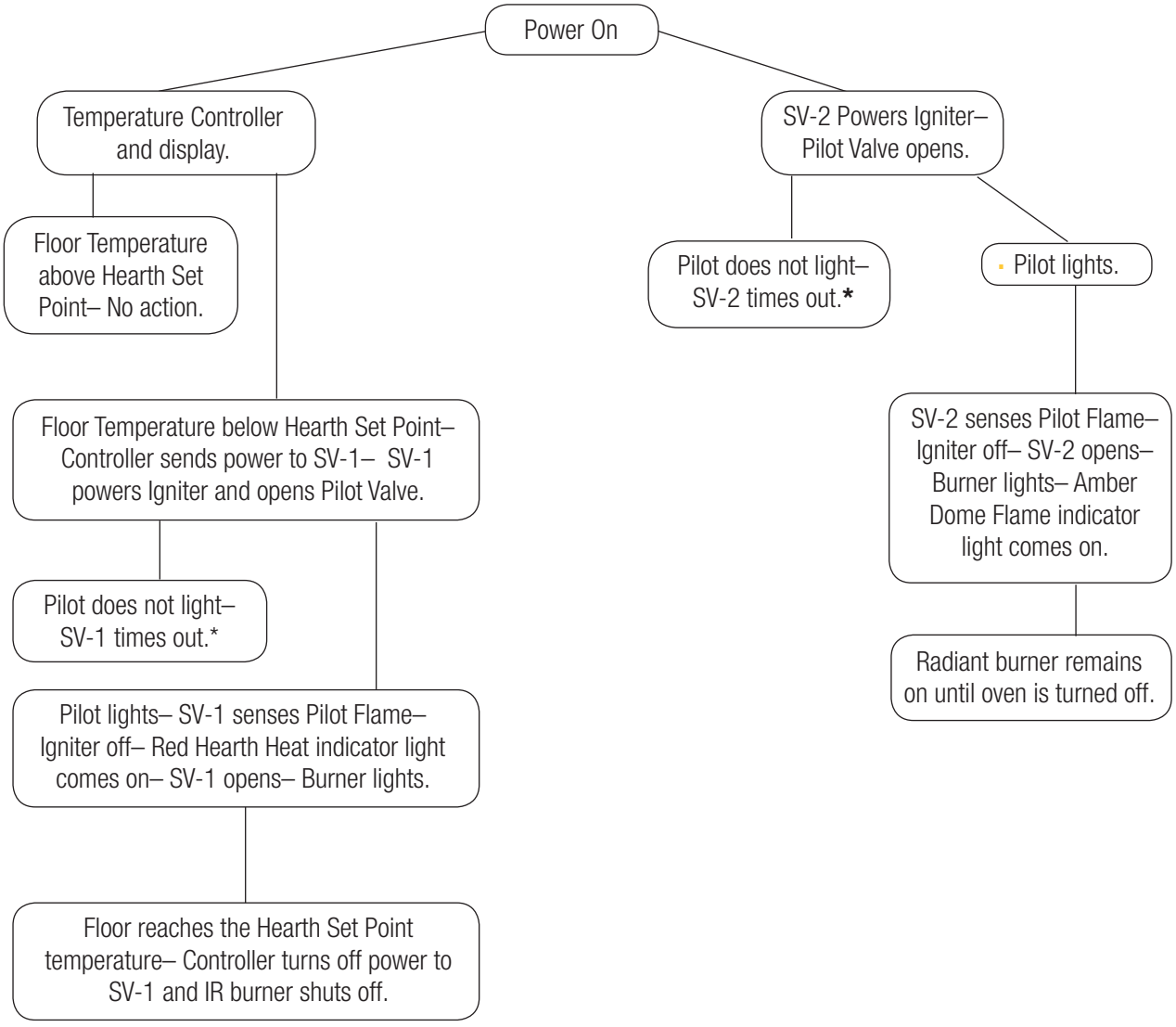
BURNER OPERATION SEQUENCES
RFG-IR OVEN - TYPE I CONTROLLER



*** NOTE:** On ovens equipped with the Honeywell Smart Valves that have a round ON/OFF control knob (instead of a slide switch), the valve will not time out if the pilot fails to light. The valve will remain powered and the Igniter will remain on indefinitely until the pilot lights or power is turned off.

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GAS OVEN COMPONENTS

The following is a list of the key electrical and gas components found in Wood Stone gas-fired ovens, accompanied by information about the individual parts.

24 VOLT TRANSFORMERS

This is the power supply for all of the electrical components on the oven. Here are two styles in use:

ACME MULTI-TAP TRANSFORMER

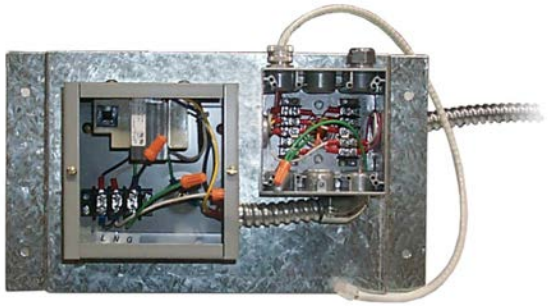
Wiring is pre-configured at the factory for the correct voltages. The incoming power connection is made to the red and white taped leads and the green ground wire that are found inside the Transformer case. Do not alter any of the other wiring within the Transformer case. 24 VAC output can be tested in the adjacent junction box. 24 VAC should be present between terminal P (pink wire) and terminal 8 (white wire). Some models may have a fuse mounted on this Transformer.

CLASS 2 TRANSFORMER

This Transformer that incorporates a circuit breaker on its output. This unit is installed inside a junction box on the left side of the Transformer Plate. Incoming power is connected to the terminal strip (marked L N G) inside this box. L=line. N=neutral. G=ground. 24 VAC output can be measured in the adjacent junction box. 24 VAC should be present between terminal P (pink wire) and terminal 8 (white wire).

TRANSFORMER PLATE ASSEMBLY (PRIOR TO MAY 2015)

The Transformer Plate is located beneath the oven on the back stand. It consists of one of the two types of Transformers and a Junction Box. All wiring within this 4x4" Junction Box is low voltage. It allows easy voltage testing to various oven components for troubleshooting. All wiring harnesses and the Thermocouple are routed through terminal strips within this box.



Do not alter any wiring within this box or on the oven. Under no circumstances is high voltage (120 VAC) wiring to be connected within this box. No external equipment should be connected to the low voltage wiring of the oven. This may affect the operation of the oven and will void the oven warranty. High voltage connections are to be made only within the Transformer case—ACME, or the Transformer junction box –Class 2. The Class 2 Transformer may only be used where the incoming power is 120 VAC. **Never connect 240 VAC to the Class 2 Transformer.**

TRANSFORMER PLATE ASSEMBLY (AFTER MAY 2015)

The Transformer Plate is located beneath the oven on the back stand. It consists of one of the two types of Transformers within an 8x12" Junction Box. It allows easy voltage testing to various oven components for troubleshooting. All wiring harnesses and the Thermocouple are routed through terminal strips within this box.

Do not alter any wiring within this box or on the oven. No external equipment should be connected to the low voltage wiring of the oven. This may affect the operation of the oven and will void the oven warranty. **Incoming power must be 120 VAC when configured with the Class 2 Transformer. Do not connect to 240 VAC!**

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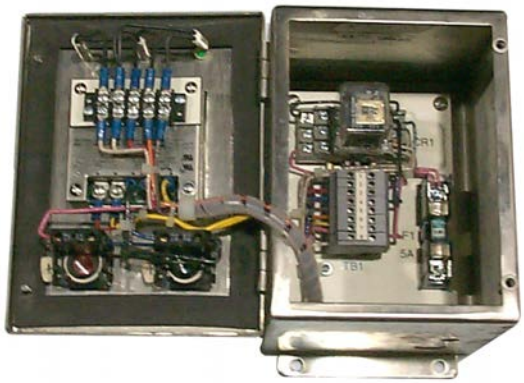
OVEN CONTROLLERS

There are currently five types of Controllers found on Wood Stone gas-fired ovens. A brief overview for each of them follows. Detailed troubleshooting instructions will be found in the Troubleshooting section of this manual.

TYPE 1 CONTROLLER

This Controller was used on gas and wood/gas combination ovens built prior to March 2000. This unit is comprised of a Control Box that has one green and one red push button on the front. There are two or three indicator lights across the top, and a digital display with four touch pads: **PROG**, **ARROW UP**, **ARROW DOWN** followed either by **TEMP/ADV** or **FLOOR TEMP**.



The green button is a “normally open” switch that turns the oven ON. The red button is a “normally closed” switch that shuts the oven OFF. The lights across the top indicate the following: Green: Power ON, Amber: Unit is sensing flame rectification at the Radiant burner inside the oven, Red: Unit is sensing flame rectification at the Underfloor IR burner.

The digital display is the Temperature Control Module for the Underfloor IR burner. **It does not control the Radiant burner.** The red **HEAT ON** light indicates that the control is calling for IR burner operation. The number shown on the display when the oven is running is the thermostatic Hearth Set Point for the IR burner. To display the actual floor temperature press the right-most pad marked either **TEMP/ADV OR FLOOR TEMP**, (depending on the unit). To change the Hearth Set Point, press and hold the **PROG** button until the display flashes “Set”, then “Pnt”. At this time, adjust to the desired Hearth Set Point using the **UP OR DOWN ARROWS**; when the desired Hearth Set Point is reached, press the **PROG** button again to “lock in” the new temperature

There are actually two slightly different versions of this Temperature Control Module. One will have “NCC National Controls Corporation” written on the front and the right most button reads **TEMP/ADV**. The second version reads “Wood Stone Corp.” on the front and the right most button reads **FLOOR TEMP**. The only difference is that the unit that reads “NCC” has programmable hysteresis parameters and the Wood Stone version has these locked. It is critical that the factory settings on the NCC model are not altered. See the Troubleshooting section for information on the hysteresis settings.

ADDITIONAL COMPONENTS

Located inside the Control Box are a 5 A fuse, an “ice cube” relay, a terminal strip and a wiring diagram for the oven.

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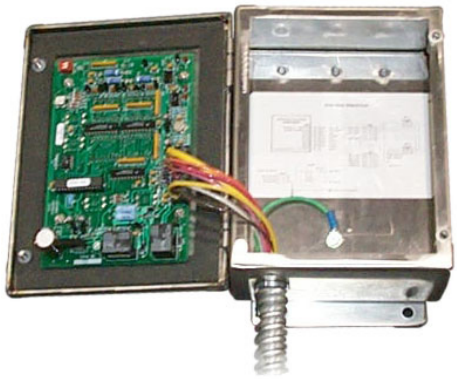
TYPE 2 (TOUCHPAD) RFG-IR, W-IR CONTROLLER

This style of Controller is the standard on all gas ovens produced after March 2000. RFG models produced after August 2005 use the Type 4 control. On the front of the control is a touch-pad overlay with a Hearth Temperature display, and depending on the oven model – a Hearth Set Point display, and Dome flame and Hearth Heat indicator lights.

Also included on the touch-pad are on/off, F/C and up and down adjustment arrows. Other than the Controller board there are no other parts inside the box. The DIP switches on the Controller board are preset at the factory and are used to configure the board for the type of oven—RFG-IR, W-IR or RFG. There should be no reason to alter these settings.

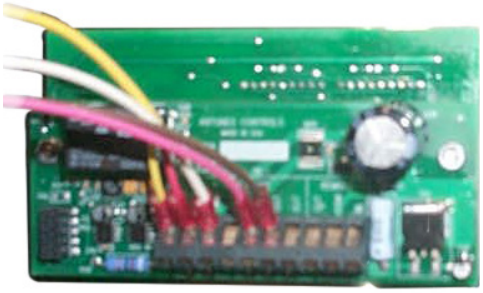


DIP SWITCH SETTINGS

RFG-IR - Both ON
W-IR - #1 OFF, #2 ON
RFG - Both OFF

TYPE 4 RFG CONTROLLER

This control is used on RFG models produced after August 2005, Bistro series ovens, and some field conversion ovens. It has a Temperature display, ON/OFF and F/C functions.



RFG CONTROLLER (LEGACY)

This Controller is found on the RFG type ovens manufactured prior to March of 2000, and on previously installed ovens that have been converted from wood-fired only (-W) to RFG gas by Wood Stone. Ovens built after March of 2000 use the Type 2 or Type 4 Controller. The function of this Controller is to turn the Radiant burner on or off, and to display the current floor temperature. RFG ovens are equipped with only a Radiant flame burner, which runs at all times when the oven is turned on. This Controller housing is smaller than the Type 1 or the Touchpad. On the front it has a temperature display, ON button, OFF button, green power indicator light, and an amber flame rectification indicator light. Mounted to a bracket on the back of the faceplate are a relay and a terminal strip. It should be noted that on this Controller **the Temperature Readout only** is powered by 12 VAC output of the ACME Transformer. The readout remains on as long as incoming power is supplied to the oven. The other components in the Controller and on the oven are still powered by the 24 VAC output of the ACME Transformer. When this Controller is used, it is accompanied by a 3 A fuse mounted to the Transformer box.

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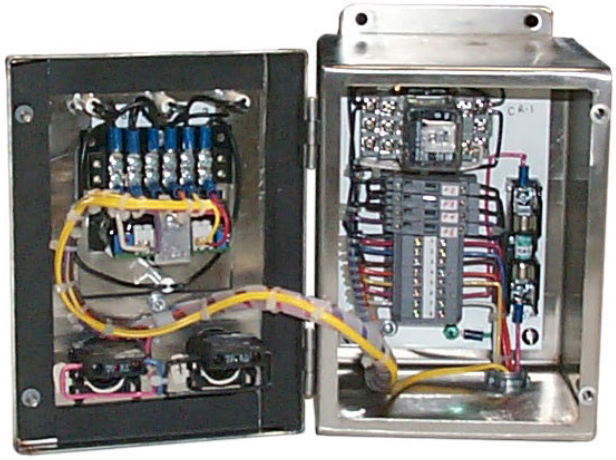
8-FOOT RFG CONTROLLER

This Controller differs slightly from the standard RFG Controller because this oven is equipped with three Radiant burners. It utilizes a larger box than the Controller described above. It does not have a power **ON** indicator light. The three lights across the top are indicators for each of the three burners. They are on when the respective burner has lit and is running. This unit uses a Temperature Readout that is powered by 12 VAC coming from a tap on the ACME Transformer. This display is lit whenever incoming power is supplied to the oven, regardless of whether the oven is turned ON or not.



8-Foot RFG Controller

Just below this display is a red Over-Temperature light. This light indicates that the over temperature module located in the junction box on the Transformer Plate has tripped and shut off 24 VAC power to the relay and start switch. All of the other components on the oven and Controller are powered by the 24 VAC output of the ACME Transformer. Additional parts inside the Control Box are a relay, terminal block, four 2 A fuses (one for each Gas Valve and one for the temperature readout) and a 5 A fuse for the entire 24 volt circuit. **NOTE:** The over temperature module will trip if the oven temperature exceeds 800 °F and the red indicator below the temperature readout will light. To reset, the oven floor temperature must drop below 800 °F. Then turn the Controller off, then back on to reset and run the oven.

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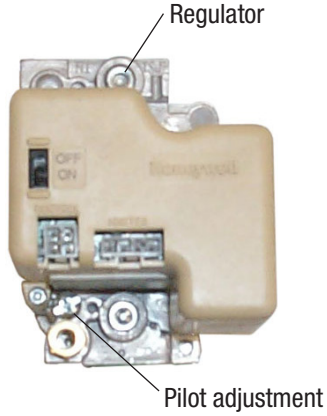
GAS VALVES

Wood Stone uses a "smart" type Gas Valve to control gas flow to each burner. These valves do not require the use of a separate ignition module, the ignition control system is integrated into the circuitry of the valve itself. Electrical connections are made via Molex connectors. The same valve is used regardless of oven size or model, IR or Radiant burner. When used on the IR burner it is referred to as SV-1. When used on the Radiant burner it is referred to as SV-2. An adjustable pressure regulator is incorporated into the valve. There is also an adjustment on the valve for the Pilot Flame height. **Note:** Maximum incoming line pressure must not exceed 14" W.C. (34.8mbar). Use an external regulator if line pressure exceeds 14" W.C.

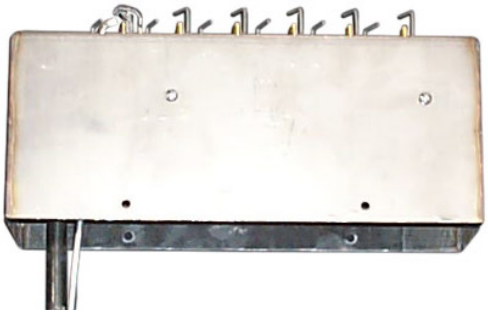


PILOT IGNITER ASSEMBLY

The Pilot/Igniter is used in conjunction with the smart valve to ignite the burner and provide flame sensing (flame rectification) for the Gas Valve. It uses a tungsten glow coil for hot surface ignition. This coil is fragile. Flame rectification is achieved from the Flame Rod to ground through the Pilot Tubing. The Pilot/ Igniter assembly wiring is connected to the Gas Valve via Molex connector. On the connector the two wires closest to each other supply power to the glow coil.

RADIANT BURNER ASSEMBLY

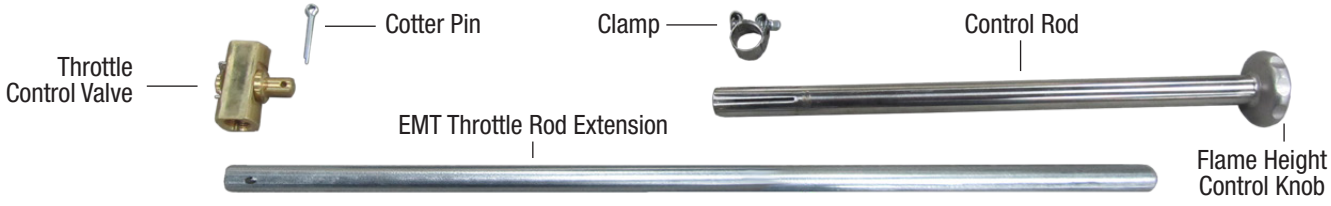
This is the burner typically located at the rear of the oven and produces the flames visible inside the dome, but may also be located on one or both sides. It consists of a stainless steel burner housing, a cast iron burner manifold, the burner jets and the Flame Retention Springs that are attached to each jet. There is an opening in the burner housing through which the Pilot/Igniter assembly is mounted.



THROTTLE CONTROL VALVE

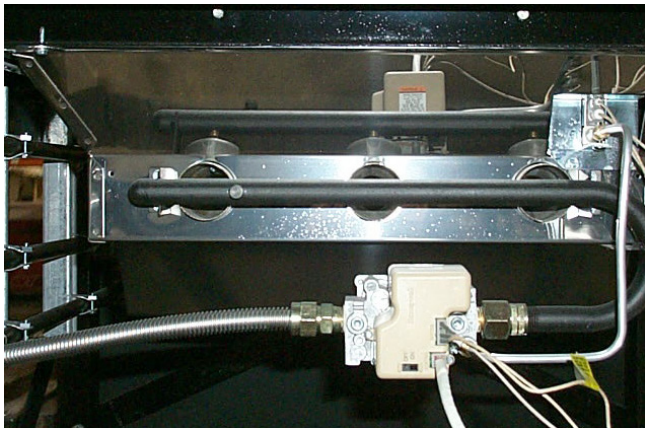
This Valve is located on the left side of the oven in front, or at the rear left. The Flame Height Control Knob is always at the front of the oven. This is what the operator uses to control the flame height of the Radiant burner only. It is not a shutoff Valve. Do not remove, or replace this Valve with anything but a Valve supplied by Wood Stone. Replacing this Valve with any part not supplied by Wood Stone could create a **DANGEROUS** operating condition. The Valve is shown below with the Control Rod and Cotter Pin.

Older ovens are equipped with a butterfly style Valve that does not require the Control Rod. The handle (wings) are cast as part of the Valve stem. On newer ovens the Throttle Valve is located at the rear of the oven above the SV-2 Gas Valve (shown). The knob assembly is clamped to an EMT extension beneath the oven, which is then in turn connected to the Valve with a cotter key.



INFRARED BURNER ASSEMBLY

This is the burner located beneath the floor of the oven. The tubes on the outside of the burner are used to supply air to the burner. You will not see flame in these tubes. **DO NOT ATTEMPT TO LIGHT THIS BURNER MANUALLY!** To visually verify that the burner is running, look through the gap next to the pilot assembly and you should see a reddish glow over the ceramic burner elements. This burner operates only when the hearth temperature is lower than the Controller's Hearth Set Point.

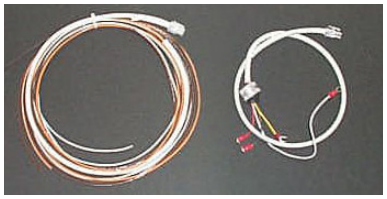


THERMOCOUPLE

A Type K Thermocouple is used to sense the temperature of the oven floor (hearth) about 1 inch beneath the hearth surface. It is located slightly to the rear of the center of the oven (behind the IR, on an IR equipped oven). It is mounted into the floor of the oven, but is easily replaceable.

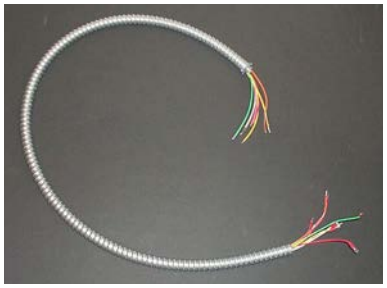
SV-1 AND SV-2 WIRE HARNESSES

These harnesses supply the voltage needed to activate and power the ignition system on the respective Valves. They also send flame verification voltage from the Valve back to the Controller.



CONTROLLER WIRE HARNESS

This harness carries low voltage to and from the oven Controller. It also contains the Thermocouple wires.



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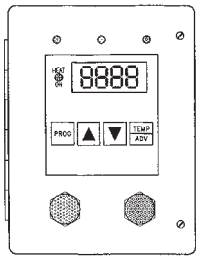
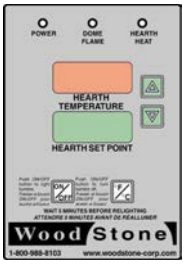
GAS OVEN TROUBLESHOOTING

CONTROLLERS

The Type 1 Controller is most easily identified by a large red button and a large green button on the face of the stainless steel Controller housing. In the center there will be a gray touch-pad that says “Temperature Controller”. You will also see either two or three indicator lights across the top. Additional information can be found in the previous Oven Components-Oven Controllers sections.

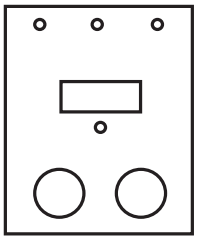


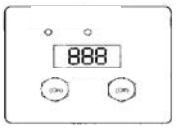
Type 1



Type 2

Type 4


Pre-March 2000 RFG Ovens



8 RFG

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TYPE 1 CONTROLLER TROUBLESHOOTING

Symptom	Probable Cause and/or Solution
Oven does not turn on. Display is blank and green power light is off. (Also see below)	**1.** Is incoming power turned off at breaker or wall switch etc? **2.** If incoming power supply to ovens is on, check fuse F-1 located in the Control Box, if the fuse is bad, find the short and replace fuse. The short may be outside the Control Box (i.e. a Gas Valve, Thermocouple, etc). **3.** If the fuse is good, verify 24 V between the fuse and the white wire (TB-1 terminal 8). If 24 V is present, proceed to step 4. If there is no voltage, go to the J-box located below the oven on the Transformer Plate. Test between the pink and the white wires (terminal 8 and terminal P). **If 24 V present:** Fix loose connection at Controller or J-box. **If no voltage:** Recheck incoming power at Transformer. **If 120 VAC present:** Check for loose wires and replace Transformer if necessary. **4.** If voltage present between pink and white wires in Control Box, verify that "ice cube" relay is seated in its socket. If oven still does not come on check that the NO and NC (start and stop) switches are functioning correctly. Verify that all wiring connections to the switches, relay socket and terminal block are good. If this all checks out replace relay.
Oven does not turn on, no display, and no power on light. But if start button is held in oven and display come on.	Loose "ice cube" relay in Control Box—push in on relay to re-seat it. Loose connection in Control Box—Bad relay.
Oven intermittently shuts off, display goes blank, and power light goes off.	See above Loose wire (pink or white) in junction box on Transformer Plate below oven. Problem with 120 VAC circuit supplying oven
Power light comes on, radiant flame comes on (if equipped), but display is blank.	Check for 24 V at the input on the NCC control module. If 24 V present—Controller is bad. If 24 V not present—Find bad wire connection.
Display reads "PROB"	This indicates an open Thermocouple. Check connections on Controller and in J-box below oven before replacing
Display reads "FAIL"	Turn the oven off then back on, if display still reads 'FAIL', replace the temperature control module.

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TYPE 1 CONTROLLER TROUBLESHOOTING (CONTINUED)

Symptom	Probable Cause and/or Solution
Display scrambles and/or is erratic when displaying the actual floor temperature, an audible hum may be noticed at the Transformer	The Thermocouple is grounding out. there should be no continuity to ground from either of the Thermocouple leads. Check Thermocouple connections in Control Box and J-box below the oven. Remove Thermocouple leads at J-box and retest to verify that it's bad, and not a damaged Thermocouple wire in the control harness.
Product is over cooking. Controller is displaying a floor temperature that is considerably lower than the Hearth Set Point and the IR burner is running.	**1.** Thermocouple may be shorted. When this happens the Controller reads the temperature at the point where the two Thermocouple wires are shorted together. Look for damage to the Thermocouple wire. If there is heat damage to the Thermocouple wire, it is usually caused by negative airflow under the oven that pulls the heat from the IR back onto the wiring. This needs to be corrected. **2.** Operational Problem. Call Wood Stone.
Product is cooking inconsistently, under and/or over. The gray label on the Controller says "NCC" not "Wood Stone". Controller is calling for heat and IR is running and floor temperature is above the Hearth Set Point. Floor temperature is more than two degrees below the Hearth Set Point and the Controller is not calling for heat.	Hysteresis settings on the Controller have been changed from the factory settings. To enter the correct parameters do the following: Hold the PROG button in until the words "SET and PNT" are displayed. It will then flash the current Hearth Set Point. Now press the TEMP/ADV button. The display will now flash "dead band", then "on" then "-1" (minus 1). If this number is other than "-1" (minus 1), use the arrows to change it. Press TEMP/ADV again. The display will read "OFF" and then "0". If it's other than zero use the arrows to set it to zero. Press TEMP/ADV again. The display will read "OFF" and "SET". This number should be "0" also. With some units the parameters may appear in a different sequence than above. Make sure that the setting for each of the three parameters is correct. Press the PROG button to save these changes. This must be done within 15 seconds or the Controller will default back to the previous settings.
Controller displays in degrees Celsius rather than Fahrenheit or vice versa.	Press both arrows on the Controller simultaneously to change the display between Fahrenheit and Celsius.

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TYPE 2 (TOUCHPAD CONTROLLERS) TROUBLESHOOTING

Type 2 Controllers have been in use as gas oven Controllers since mid-2000. There are no push button switches on the outside of this Controller. All versions of this Controller use a touch-pad (overlay) on the face of the Controller to operate the unit. It has power and flame indicator lights and a hearth temperature display. IR equipped ovens will also have a Hearth Set Point display. Additional information can be found in the Oven Components-Oven Controllers section of this manual.

Symptom	Probable Cause and/or Solution
Oven does not turn on, control is blank	**1.** Is the breaker and/or wall switch supplying power to the oven ON? **2.** Is the circuit breaker on the 24 V Transformer tripped? The Transformer is located in the rear-most junction box located on the Transformer Plate, beneath the oven in the front on the right side. If the breaker on the Transformer is tripped, eliminate the short and reset the breaker. In addition to a bad Gas Valve, wiring etc., a Thermocouple that is grounding out can also cause the breaker to trip. Check for 24 V between the pink and the white wires at the terminal block on the oven control board-inside the Control Box. If 24 V is present, make sure that the four nuts attaching the circuit board to the face of the box are tight. **DO NOT OVERTIGHTEN;** they should be snug enough that pressure on the touch pad activates the switches on the circuit board. If the Controller is still not coming on, carefully remove all wires except the pink and white from the circuit board terminal block. If the Controller comes on, it is OK but there is a defective component or damaged and/or incorrect wiring elsewhere. If with just the pink and white wires connected (and 24 V present), the Controller still does not come on, replace the Controller circuit board. Turn off the incoming power to the oven before removing the wires to prevent damage to the board. Replace the overlay as well if it is damaged.
Temperature display reads “open”	Indicates an open Thermocouple. Check for loose Thermocouple connections at the control board and at the J-box on the Transformer Plate below the oven before replacing. Check for continuity between the 2 Thermocouple wires. There should be NO continuity to ground through either Thermocouple lead. If there is heat damage to the Thermocouple it is usually caused by negative airflow beneath the oven that pulls the heat from the IR back onto the Thermocouple wire. This should be corrected - call Wood Stone.

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TYPE 2 (TOUCHPAD CONTROLLERS) TROUBLESHOOTING (CONTINUED)

Type 2 Controllers have been in use as gas oven Controllers since mid-2000. There are no push button switches on the outside of this control. All versions of this control use a touch-pad (overlay) on the face of the control to operate the unit. It has power and flame indicator lights and a hearth temperature display. IR equipped ovens will also have a set point display. Additional information can be found in the Oven Components-Oven Controllers section of this manual.

Symptom	Probable Cause and/or Solution
Temperature display scrambles and/or is erratic (may precede the Transformer circuit breaker tripping). Display is fine, but the Transformer circuit breaker trips instantly and/or intermittently.	Thermocouple is shorting to ground. There should be no continuity between the Thermocouple leads and ground. Check Thermocouple connections at control board and J-box below the oven. Remove Thermocouple leads at J-box and retest to confirm damaged Thermocouple and not bad wire in the control harness.
Product is overcooking and the control is displaying a hearth temperature that is considerably lower than the Hearth Set Point and the IR burner is running.	1. Thermocouple may be shorted causing it to read the temperature at the point of the short. Look for damage to the Thermocouple wire. If there is heat damage it is usually caused by negative airflow under the oven pulling heat from the IR back onto the wiring. This needs to be corrected. 2. Operational problem. Contact Wood Stone.
Product is overcooking and the floor temperature is higher than the set point. The IR burner is not running.	Operational problem. The operator is leaving the radiant at too high a setting for too long and as a result, is driving up the oven temperature by using too high of a radiant flame. The radiant flame by itself can easily drive the oven temperature well above the Hearth Set Point if it is turned up too high. Call Wood Stone for operational assistance.
RFG-IR OVEN: Controller is on, but dome flame does not come on, IR burner does not come on. **RFG OVEN:** Controller is on, but dome flame is not coming on. **WOOD-GAS OVEN:** Controller is on but IR is not coming on.	Controller is fine, See Radiant and Infrared Burner Troubleshooting section of this manual. **Note:** On RFG-IR ovens with this Controller, the Controller will not signal the infrared burner to light until after the dome flame has lit.
RFG-IR OVEN: Dome flame comes on, a short time later the display flashes “check” and the Hearth Heat Indicator Light flashes.	Controller is fine. It is indicating that the Controller called for IR heat, but the IR burner did not fire within the time allowed by the Controller. See Radiant and Infrared Burner Troubleshooting section of this manual.

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The Type 4 Controller is used on RFG models shipped after August 2005 and ovens converted in the field to gas from wood. Additional information can be found in the Oven Components-Oven Controllers section of this manual.

Symptom	Probable Cause and/or Solution
Oven does not turn on, Controller is blank.	1. Is the breaker and/or wall switch supplying power to the oven on? 2. Is the circuit breaker on the 24 V Transformer tripped? The Transformer is located in the rear-most junction box located on the Transformer Plate, beneath the oven in the front on the right side. If the breaker on the Transformer is tripped, eliminate the short and reset the breaker. In addition to a bad Gas Valve, wiring etc., a Thermocouple that is grounding out can also cause the breaker to trip. **Check for 24 V between the pink and the white wires at the terminal block on the oven control board inside the Control Box.** If the Controller is still not coming on, carefully remove all wires except the pink and white from the circuit board terminal block. If the Controller comes on, it is OK but there is a defective component or damaged and/or incorrect wiring elsewhere. If with just the pink and white wires connected (and 24 V present), the Controller still does not come on, replace the Controller circuit board. Turn off the incoming power to the oven before removing the wires to prevent damage to the board. Replace the overlay as well if it is damaged.
Temperature display reads “open”.	Indicates an open Thermocouple. Check for loose Thermocouple connections at the control board and at the J-box on the Transformer Plate below the oven before replacing. Check for continuity between the 2 Thermocouple wires. There should be NO continuity to ground through either Thermocouple lead.
Temperature display scrambles and/or is erratic (may precede the Transformer circuit breaker tripping). Display is fine, but the Transformer circuit breaker trips instantly and/or intermittently.	Thermocouple is shorting to ground. There should be no continuity between the Thermocouple leads and ground. Check Thermocouple connections at control board and J-box below the oven. Remove Thermocouple leads at J-box and retest to confirm damaged Thermocouple and not bad wire in the control harness.
Product is overcooking or undercooking.	Operational issue. Temperature in the oven is controlled using the Flame Height Control Knob on the front of the oven. Flame height should be adjusted accordingly. Call Wood Stone for assistance. Installation and Operation Manuals can be found online at: www.woodstone-corp.com
Display reads “LO”.	This is normal. Controller will display “LO” whenever the oven floor temperature is below 100 °F.

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PRE-MARCH 2000 RFG CONTROLLERS AND 8 FOOT RFG CONTROLLERS

These Controllers are found on ovens that are equipped with a Radiant burner only. This includes ovens that have been converted by Wood Stone from wood burning to gas. RFG ovens built after March 2000 utilize the Type 2 or Type 4 Controllers discussed previously in this manual. Additional information can be found in the Oven Components-Oven Controllers section of this manual.

Symptom	Probable Cause and/or Solution
Temperature Readout is blank, no green or amber light, flame does not come on.	Incoming power has been turned off, i.e. breaker, wall switch etc. Fuse on Transformer has blown, replace fuse. Find short and correct. Loose wire in J-box on Transformer Plate or in Control Box. Look at the white wire especially, and the pink and the purple wires. Check for power from Transformer. First check for incoming power at the connections to the Transformer. Then, measure 24 V between pink and white in J Box. Measure 12 V between purple and white. If there is no voltage, replace the Transformer.
Temperature Readout is blank, but oven comes on normally.	Check for 12 V going in to the temperature display module. If 12 V present, replace the temperature display. If not check for loose wire connection (purple and white wires) in Control Box and J Box on Transformer Plate. On 8 Foot RFG only: Check Temperature Readout fuse in Control Box
Temperature Readout remains lit even when oven is turned off.	This is normal. The readout is lit whenever incoming power is supplied to the oven.
Temperature Readout is lit, but no green power on light and oven is not turning on. **NOTE:** There is no power ON light on the 8 Foot RFG Controllers.	Verify that 24 V is being supplied to the Controller (pink and white wires). If 24 V is not present, find bad wire connection. If 24 V is present, check that the rubber boot on the stop switch has not caused the switch to remain depressed. Check all wire connections and make sure that the relay is securely seated. On 8 Foot RFG Only: Check 5 A fuse in Control Box. If the fuse is blown correct the short and replace fuse. Check wire connections at each switch.
Temperature Readout is lit, oven will only come on if start button is held in.	Check that rubber boot on stop switch is not causing the switch to remain depressed. Check for loose wires and check that relay is securely seated in its socket. Verify that the start (NO) and stop (NC) switches are functioning correctly. If all above check out ok, replace relay.
Oven will not turn off when stop switch is depressed.	Rubber boot on start switch is causing the start switch to remain depressed or defective stop switch.

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Symptom	Probable Cause and/or Solution
Temperature Readout displays 'EEE' or is erratic.	Check Thermocouple connections on the back of readout-red to TC-(negative), yellow to TC+(positive). If connections are good, remove the Thermocouple wires from the Temperature Readout. Jumper between TC+ and TC-, Display should show ambient temperature. If it does not, replace the readout. If readout is good, reconnect Thermocouple and check Thermocouple connections at readout and in the J box on the Transformer Plate. Check for continuity and that the Thermocouple leads are not shorted to ground. If a break or short is found determine if it is in the harness lead or the wire coming directly from the Thermocouple.
No burners are lighting, none of the 3 indicator lights across the top of the Controller are lit. The red light below the temperature readout is lit.	The temperature of the oven floor has exceeded 800 °F and the overtemp limit switch has shut off the oven. Once the temperature drops below 800 °F, press the stop button to reset the limit switch, then restart the oven.
One of the three burners is not lighting.	Check Gas Valve fuses in the Control Box. Check the Burner Troubleshooting section of this manual.

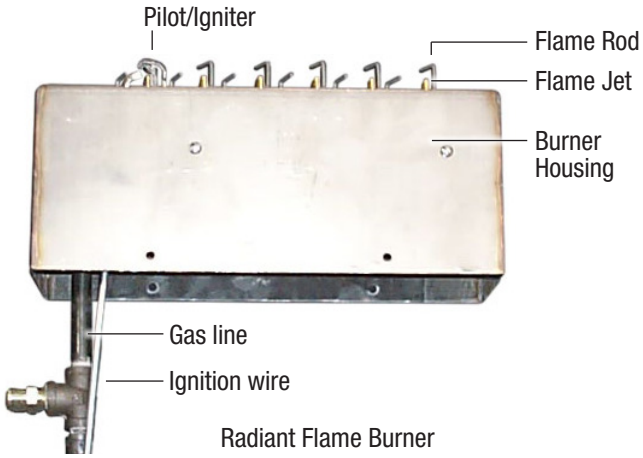
RADIANT FLAME BURNER TROUBLESHOOTING

The Radiant flame burner is the burner located at the rear of the oven (in some cases, this burner is located on the side of the oven chamber. It is the main heat source for all non-wood burning ovens. The flame height is adjustable by means of the throttle control valve located on the front of the oven on the left side.

The Radiant flame burner is the burner located at the rear of the oven (in some cases on the side of the oven). It is the main heat source in all ovens equipped with this burner. Flame height is controlled at the throttle control (valve) on the front of the oven, left side.

OPERATIONAL OVERVIEW

Wood Stone gas ovens utilize "smart" type Gas Valves. With these valves the ignition module circuitry is incorporated into the valve itself—there is no separate ignition module. Burner ignition is achieved via a hot surface (glow coil) to pilot ignition system. The unit will attempt pilot ignition for 90 seconds – 30 seconds glow, 30 seconds purge and then 30 seconds with the glow coil again. Pilot gas will flow for the entire 90-second trial. The system will then lockout and retry after 5 minutes. Flame rectification is sensed through the Flame Rod on the Pilot/Igniter to ground via the Pilot Tube.



Radiant Flame Burner

An ongoing program of product improvement may require us to change specifications without notice.

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Symptom	Probable Cause and/or Solution
Burner does not light, oven Controller is on, and switch on the Gas Valve (SV-2) is in the ON position, no visible glow from the side of the burner. **Note:** On any call where the complaint is that the Radiant burner will not light, stay lit or is going out intermittently, the Radiant burner should be removed for inspection and cleaning. The majority of Radiant burner problems can be traced to debris in the burner. See the "Common Repair Procedures" section of this manual.	1. **Wire connections at the SV-2 Gas Valve are loose or unplugged.** Verify that the MOLEX connectors for the SV-2 wire harness and the Igniter wires are securely plugged into the Gas Valve. Make sure that the pins are locked into the connector body. 2. **Moisture.** If the valve has gotten wet replace it. Also, the Pilot/Igniter will not function correctly if Igniter wires have gotten wet. If the Igniter wires are wet, turn the oven off and carefully uncoil the wires and separate them so there is as little contact between them as possible, then restart oven. 3. **Abrasion of the Pilot/Igniter wires.** If there is a wire tie on the Igniter wires, carefully remove it and uncoil the wires and separate them so there is as little contact as possible between them. 4. **Broken glow coil on the Pilot/Igniter.** Test for continuity at the Igniter MOLEX connector. Between the two adjacent wires on the connector you should read about 3.5 ohms. If circuit is open replace the Igniter. If this is the case, the burner should be removed for cleaning and inspection. See the Common Repair Procedures section of this manual. If Igniter tests ok, verify 24 volts going to the Gas Valve. This can be tested at the MOLEX connector on the wiring harness. Disconnect the wiring harness from the Gas Valve before checking voltage. Do not attempt to check for voltage while it is connected to the Gas Valve. With the oven on you should read 24V between the brown and white wires. If the voltage is fine replace the Gas Valve. Warning- Do not attempt to read voltages at the connectors on the Honeywell Gas Valve; Doing so may damage the electronics in the valve. Any time it is necessary to replace a Gas Valve or Igniter, the burner should be removed for inspection and cleaned if necessary. Most valve and Igniter failures are caused by debris, either through physical damage to the Igniter or causing a short to the valve.
Burner is not lighting, Dome Flame Light is on or amber light on older Controllers. Pilot appears to be lighting.	1. Verify that gas is going to the burner using a manometer at the port below the burner. Check the Equipment Data Plate beneath the oven for the specified pressure. Adjust the regulator on the Gas Valve if necessary. If pressure is extremely low or non-existent, verify that there is sufficient pressure at the inlet side of the Gas Valve. If inlet pressure is good, check that all the pins are locked securely in the MOLEX connector attaching the wire harness to the Valve and that the connector is firmly in place. Check for damage to the wire harness. If these are all good, the Gas Valve is defective and needs to be replaced. 2. If proper gas pressure is found at the burner, drop the burner and clean, make sure all jets are clean and that Pilot/Igniter has not been knocked out of position. The base of the Pilot/Igniter assembly should be horizontal, even with the top of the burner. Check that Pilot Flame is not set too low, and that the oven is not over vented.

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Symptom	Probable Cause and/or Solution
Burner does not light, there is a visible glow on one side of the burner. Dome Flame Indicator Light on Controller is not lit. On older Controllers this will be the Amber Indicator Light.	1. **Gas supply to the oven has been turned off.** Check manual shutoffs, fire suppression system resets etc. 2. **There may be air in the gas line.** On a new oven start-up there may be air in the gas line. Turn the oven on for about 30 seconds. Turn it back off and then back on for 30 seconds. Repeat this up to five times. If you begin to smell gas and the oven is still not lighting, proceed to step 3. If oven does not light and you are not smelling gas continue with this step. It will be necessary to remove the Inlet Plug on the Gas Valve which will enable the air to be bled more quickly from the line. This can be done on the IR Gas Valve (if equipped). **TURN OFF THE OVEN AT THE CONTROLLER. EXTINGUISH ALL OPEN FLAMES BEFORE BLEEDING THE GAS LINE.** Remove the plug on the inlet side of the Gas Valve using a 3/16" hex key wrench. Allow the air to bleed out until you smell gas. Re-install plug. Allow the gas to dissipate and then turn the oven ON. If oven does not light after 30 seconds, turn it off and back on again, it may still be necessary to do this a few times. **DO NOT LEAVE THE OVEN UNATTENDED WHILE THE INLET PLUG IS REMOVED FROM THE Gas Valve!** 3. **Verify that the switch on the Gas Valve is in the ON position.** The valve will power the Igniter even if the switch is in the OFF position. 4. **Check for loose wire connections at the SV-2 Gas Valve.** Verify that the MOLEX connectors for the SV-2 wire harness and Igniter wires are securely plugged into the Gas Valve. Make sure that the pins are securely locked in to the connector body. If burner still does not light, proceed with the following step. 5. **Try to determine if the pilot is actually lighting. DO NOT CLIMB INTO THE OVEN OR PLACE FACE OVER BURNER.** It can be difficult to see and can be confused with the glow from the Igniter, so use an inspection mirror if possible. If the pilot is actually lighting, make sure Flame Rod is clean and that no debris is interfering with the flame. Make sure Pilot Gasket is in place. Pilot Flame should envelop 3/8" to 1/2" of the Flame Rod, and make continuous contact with the forked ground electrode. If the flame is not making good contact, gas pressure is low or Pilot Orifice is dirty. If flame is overshooting, the Pilot Orifice may be missing, or pilot may be adjusted too high at the Gas Valve. If pilot is not lighting make sure Pilot Orifice is not plugged. See the Common Repair Procedures section of this manual. If flame is good, recheck Igniter wires, make sure pins are seated etc. If rectification light still does not come on and burner is not lighting replace Pilot/Igniter. If after replacing Pilot/Igniter the burner still does not light, replace the Gas Valve.

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Symptom	Probable Cause and/or Solution
Burner goes out intermittently. **Note:** Do not run oven with night doors in place!	**1.** Debris in the burner causing the pilot to lose rectification. Remove the burner and clean, see the Common Repair Procedures section of this manual. Make sure the Igniter is not damaged and that the Flame Rod is clean. **2.** Gas supply to oven is being interrupted or is inadequate, or burner gas pressure is set incorrectly. Verify the burner gas pressure with all burners running. There should not be a significant pressure drop at the burner when the other burner(s) turn on. If a drop is noted, the gas supply to the oven is inadequate and needs to be increased. **3.** Check that the Igniter wires are not wire-tied, coiled, or wrapped together. Spread the Igniter wires apart to minimize contact between them. Check the MOLEX connectors on the wire harness and the Igniter. **4.** Incorrect pilot adjustment. Adjust pilot height at the Gas Valve. Turn the Adjustment Screw in until the pilot goes out. Then back the screw out to just beyond the point where the pilot relights. **5.** Excessive airflow from beneath the oven causing the Pilot Flame to lift away from the Flame Rod. Correct the airflow problem and make sure the Igniter gasket is in place. Ideally there should be no discernible draft below the oven. Make sure Pilot/Igniter gasket is in place. **6.** Defective Pilot/Igniter, replace. If the burner is still going out, replace the Gas Control Valve.
Flame height is low. The flame should be approximately 12-15 inches tall at full-throttle.	**1.** The burner gas pressure is low; adjust the regulator on the Gas Valve to obtain the specified pressure. If the specified pressure cannot be obtained, verify that incoming gas pressure is sufficient; check this with the oven running. **2.** Debris in the burner. Remove and clean; see Common Repair Procedures section of this manual.
Soot is forming near the burner. **Note:** Do not run oven with night doors in place!	**1.** Some sooting is normal when the oven is cold. This will burn away when the oven reaches operating temperature. **2.** Check for debris in the burner; remove burner and clean. See the Common Repair Procedures section. If a log set is installed, verify that it is positioned correctly. **3.** If burner is clean, check that the oven is properly configured for the gas being supplied. Call Wood Stone.
Burner does not light, but Igniter glows. Audible hissing sound from burner.	Incoming gas pressure too high. Incoming gas pressure must be regulated to less than 14" W.C. (1/2 psi).

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Symptom	Probable Cause and/or Solution
Burner doesn't light or goes out, and the Igniter wires are burned.	**1.** Loose Pilot Tube—tighten and replace Igniter. **2.** Inadequate venting or negative air—see oven installation instructions.
Flame Height Control Knob (throttle) difficult to turn.	**1.** Check that throttle rod is not binding. **2.** Replace throttle valve.
Radiant flame height is much higher on the Igniter side of the burner (usually the left side). The flame on this side does not decrease when the operator turns down the flame height.	Pilot Orifice is damaged or missing. Remove Pilot/Igniter. Orifice fits between the brass compression fitting attaching the Pilot Tube and the Igniter body. Replace with new Pilot Orifice.

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Many Wood Stone ovens are equipped with an Underfloor Infrared (IR) burner. **This is not the primary heat source for the oven.** The IR burner is designed to assist the Radiant burner or the wood fire during start-up and during times of heavy usage. It is thermostatically controlled. The IR burner's Gas Valve and Pilot/Igniter are identical to those used on the Radiant burner.

Symptom	Probable Cause and/or Solution
RFG-IR MODELS IR burner is not lighting. On touch-pad style Controllers, the display may be flashing "check". **NOTE:** You will not see flame at the black tubes on the front of the burner. **CAUTION:** Never attempt to light this burner manually. To visually confirm that the burner is lit, look through the gap next to the Pilot/Igniter. **NOTE:** On Type 1 Controllers, the red Heat On light next to the display indicates the IR burner should be on whenever the actual floor temperature is below the Hearth Set Point. The red indicator light above the display indicates that the Pilot Flame for the IR has been detected. If the light is not coming on, but visual confirmation shows burner is running, replace lamp or fix bad wire connection as necessary.	**Is the Radiant burner running? If not, proceed first with Radiant burner troubleshooting– See previous pages of this manual** **NOTE:** On RFG-IR ovens with the Touch-pad style Controller, (see Controllers section of this manual), the IR burner will not light until the Controller has verification that the Radiant burner has lit. If the Radiant burner is running, and the Controller is calling for IR heat, it will allow the IR burner 90 seconds to light. If the burner has not lit after this time the Controller will flash "check". Turn the oven off and then back on to reset. **1.** If the Radiant burner is running, is the Controller calling for heat? (Hearth Temperature lower than Hearth Set Point). **Note**: On Type 1 Controllers, the small Heat On light should be on if the actual hearth temperature is below the set point. **2.** Is the switch on the Honeywell Gas Control Valve in the ON position? **3.** Visually check for Igniter glow. If the Igniter does not come on when the IR burner is called for, check that the MOLEX connectors are securely plugged into the Gas Control Valve. Make sure that the pins are securely locked into the connector body. Remove any wire ties and uncoil the Igniter wires so that there is minimal contact between them. Check the continuity of the glow coil at the two adjacent wires on the Igniter connector—this should be approximately 3.5 ohms. If the circuit is open, replace the Igniter. If glow coil tests OK, disconnect the SV-1 wire harness from the Gas Valve and with the Controller calling for heat, test for 24 volts between the yellow and white wires, and brown and white wires. Do not test for voltage at the connectors on the Gas Valve; damage to the valve may result. If voltage is not present, see Controllers Troubleshooting section of this manual. If voltage is present replace the Igniter. If there is still no glow, replace the Gas Valve. **4.** Remove the Pilot/Igniter and check Pilot Orifice. If Pilot Orifice is not obstructed or damaged, replace Gas Valve.

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Symptom	Probable Cause and/or Solution
Heat damage to IR burner valve, burner does not light.	Remove IR burner and inspect for debris on burner. If there is a crack in oven deck above burner, patch from below using approved grout. Contact Wood Stone Service Department.
W-IR, RFG-IR-W MODELS IR burner does not come on. **NOTE:** On Type 1 Controllers the red "heat on" light next to the display indicates the IR burner should be on whenever the actual floor temperature is below the Hearth Set Point. The red indicator light above the display indicates that the Pilot Flame for the IR has been detected. If this light is not coming on, but visual confirmation shows burner is running, replace lamp or fix bad wire connection as necessary.	1. Verify that gas is being supplied to the oven and that all the air has been bled from the gas line. If necessary, the gas line may be bled by removing the inlet plug on the Gas Control Valve. Reinstall the plug when you smell that gas is present. **Allow gas to dissipate before restarting oven. Do not leave the oven unattended while the inlet plug is removed!** 2. Verify that the Hearth Set Point is above the hearth temperature. If the burner does not come on, proceed to step 3 of the RFG-IR / IR Troubleshooting section (previous pages).
IR burner goes out intermittently when Controller is calling for IR heat.	1. Check wire connections at the Gas Valve and the Igniter. Remove any wire ties and uncoil Igniter wires to minimize contact between the wires. Also check for loose connections at the Controller. 2. Inspect the Igniter and clean it if necessary; replace it if damaged. 3. Check for excessive air movement below the oven. This can cause the Pilot Flame to lift away from the Flame Rod and cause the burner to go out. Contact Wood Stone for assistance. 4. Check the Burner Gas Pressure, adjust the valve to achieve the specified pressure (Equipment Data Plate). Check the Incoming Gas Pressure with the burner running. If the incoming pressure is OK, but burner the pressure is low and will not adjust as high as the pressure specified on the Equipment Data Plate OR if the burner pressure is erratic, replace the Gas Control Valve. 5. If pressures are OK, replace the Igniter. If problem recurs, replace Gas Valve.
Burner will not light or shuts off sometimes, and the Igniter wires are burned.	1. Loose Pilot Tube; tighten and replace Igniter. 2. Inadequate oven venting or negative air pressure. See Installation and Operation Manual instructions. Contact Wood Stone for further assistance.

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NOTE: Remove the front panel on the oven to access all non-Controller components.

CHECKING BURNER GAS PRESSURES:

Proper gas pressure settings and an adequate incoming gas supply are critically important for any gas fired Wood Stone oven to operate correctly. All burner gas pressure measurements should be taken at the port on the respective burner manifold. When taking a measurement of Radiant burner manifold pressure, make sure that the throttle valve is fully open (maximum flame height). Pressure readings should be taken with both burners running—this will reveal if the incoming gas supply is adequate. Where it is suspected that the incoming pressure is inadequate, test the incoming pressure with the oven off and then with the oven on and all burners running. If the incoming pressure drops significantly with the oven running, and the proper pressures cannot be obtained at the burner(s), the gas supply is inadequate. Look for regulators external to the oven that are set too low, partially closed valves or undersized piping. The piping and shutoff valves supplying the oven must have a minimum I.D. the same as that of the inlet connection on the oven, and depending on the length of the run it may need to be larger. Depending on the model this will be 1" or 3/4". Consult a qualified gas piping installer to deal with any supply piping issues. Use of flex piping to supply gas to the oven is discouraged. The specified pressure for each burner may be found on the Equipment Data Plate, located beneath the oven.

REMOVAL AND CLEANING OF RADIANT BURNER.

This procedure may be performed while the oven is hot. We strongly recommend that the technician wear heat protective gloves and safety glasses/goggles when removing the burner.

1. Turn the oven off. Turn off the gas supply to the oven.
2. Unplug the MOLEX connector for the Igniter from the Gas Valve.
3. Disconnect the Pilot Tube at the Gas Valve, or union if equipped.
4. Disconnect the Flexible Gas Piping where it attaches below the Burner.
5. Carefully remove the four bolts holding the Burner Can in place and lower the Burner out of the well.
   CAUTION: Watch out for falling debris while removing the Burner.
6. Clean off any debris on the Burner.
7. Check that Burner jets are not blocked, and that Pilot/Igniter Assembly is not dirty or damaged. If removing Igniter, be aware of the Pilot Orifice, which slips into the Igniter where the Pilot Tube is attached and can fall out if you are not careful. Any Burner Jets that are clogged should be removed from the Burner Manifold to prevent debris entering the manifold while cleaning. To remove the jets, first remove the Flame Retention Spring attached to each jet by gripping the spring with a pair of pliers and pulling away from the Burner while turning the spring clockwise. Then remove the two brackets that hold the Burner Manifold in place. Remove the Manifold, then remove the individual jets. Make sure to reinstall so the hexagonal part of the jet is closest to the Burner Manifold. Make sure to reinstall the Flame Retention Spring.
8. To reinstall Burner follow the removal steps in reverse.
9. Check for gas leaks using soap solution with the Burner running. Avoid getting soap solution on valve or Igniter wires.

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PILOT/IGNITER REPLACEMENT – INFRARED BURNER

To replace the Pilot/Igniter assembly on an IR burner, first turn the oven off. Then remove the Pilot Tube from the Igniter–be careful not to lose the Pilot Orifice. Next remove the screw holding the Igniter in place. Slide the Igniter out of the burner. Install the new Igniter. New Igniters are shipped with the Pilot Orifice already installed between the Igniter and the brass compression fitting attached to the Igniter. Note that for the infrared burner, an Igniter gasket is not necessary

PILOT/IGNITER REPLACEMENT – RADIANT BURNER

If replacing an Igniter on a Radiant burner, we recommend removing the burner–see Removal and Cleaning of Radiant burner above. While the Igniter can be replaced without burner removal, we find that the cause for the Igniter failure is commonly debris in the burner. Be aware of the Pilot Orifice located between the brass compression fitting and the Igniter. The Igniter is attached to the Burner Can with a right angle bracket. Remove the screw holding the bracket to the Burner Can, and remove the Igniter. Remove the bracket from the old Igniter. Attach the bracket to the new Igniter and reinstall. Whenever you are removing or replacing the Radiant burner Igniter you should also replace the Igniter gasket.

GAS VALVE REPLACEMENT

Make certain that the replacement valve is properly configured for the gas being used.

To remove the SV-2 valve on old style manifolds, loosen and separate the union located forward of the valve. Rotate the valve in towards the center of the oven, it may be necessary to loosen some of the unistrut clamps, then remove the piping connected to the valve, then the valve itself.

To replace the SV-2 valve on a new style manifold. Disconnect the Flex Pipe and Pilot Tube, remove the unitstrut clamps and rotate the pipe towards the center of the oven. To replace the SV-1 valve a 1/2" Allen wrench is necessary for removing the union from the valve. After installing the new valve always check the burner gas pressure and make the proper adjustments as necessary. The specified manifold pressures for the SV-1 (IR), and SV-2 (radiant) can be found on the Equipment Nameplate beneath the oven. Leak check all joints and fittings with an approved soap solution.

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THERMOCOUPLE REPLACEMENT

1. Disconnect the Thermocouple wires at the junction box located on the Transformer Plate below the oven. These will be the red and yellow wires that have the brown sleeve. Note: Wood fired only, the Thermocouple wires are connected directly to the temperature readout at the front of the oven.
2. Cut the wire off at the base of the bad Thermocouple.
3. Mark the Thermocouple where it enters the fitting; use this mark as a reference for the depth of the new Thermocouple.
4. Loosen the retaining nut that secures the Thermocouple to the bottom of the oven.
5. Slide the Thermocouple out and remove the old fitting from the oven floor.
6. Using the compression fitting supplied with the new Thermocouple, slide the new unit in as far as it will go, then check your reference mark. Hold the Thermocouple so that it is bottomed out in the hole before tightening the compression fitting.
7. Retighten the nut to compress the fitting on to the Thermocouple. Again,make certain the Thermocouple is properly located before tightening the nut, as it will be impossible to relocate once the nut is tightened.

   NOTE: On models equipped with the Underfloor IR burner, the end of the Thermocouple will need to be bent slightly at the tip toward the Infrared Burner to fit into the floor casting.
8. Attach the wire end of the new Thermocouple to the cut wire of the old Thermocouple and pull the new wiring into the conduit as the old wire is pulled out at the J-Box (readout box on wood fired ovens) end. Connect the new Thermocouple leads.

TYPE 1 CONTROL MODULE REPLACEMENT

To remove the Type 1 Control Module, first turn off power to the oven.

1. Remove the 6 wires attached to the terminals at the bottom of the control module. Do not remove the wires from the terminal block at the top of the control module.
2. Detach the complete terminal block from the Controller by removing the two slotted screws in the upper corners of the Temperature Controller.
3. Remove the screw in the lower right corner of the temperature to detach the harness retaining clip and harness.
4. Remove the two Phillips head screws from the front of the control module and remove it by sliding it out of the Controller enclosure.
5. Replacement is the reverse of removal. Make sure the rubber gasket is properly installed between the Controller flange and the Control Box faceplate.
6. Restart the oven and confirm operation.

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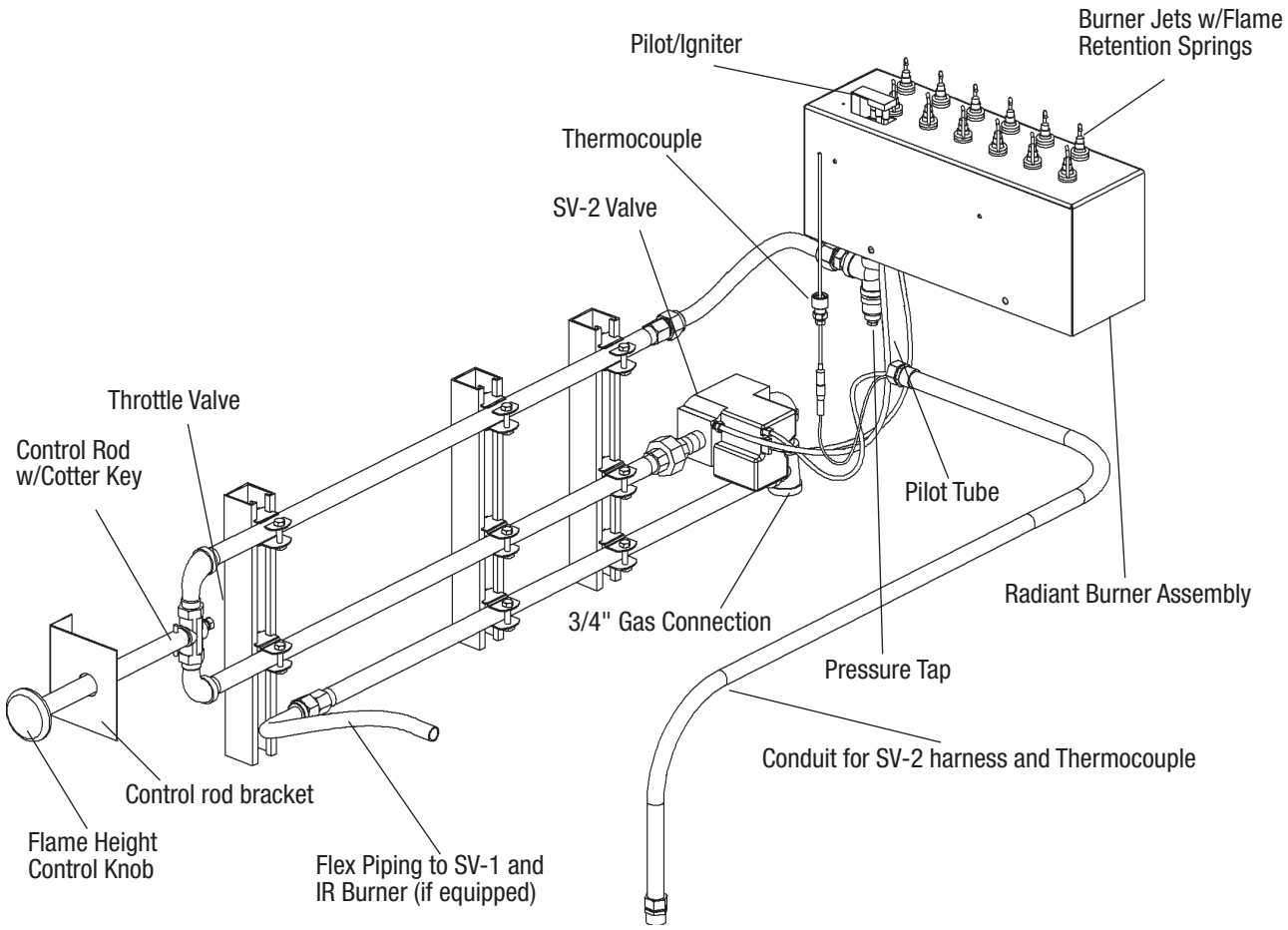
PIPING AND RADIANT BURNER

OLD STYLE PIPING LAYOUT



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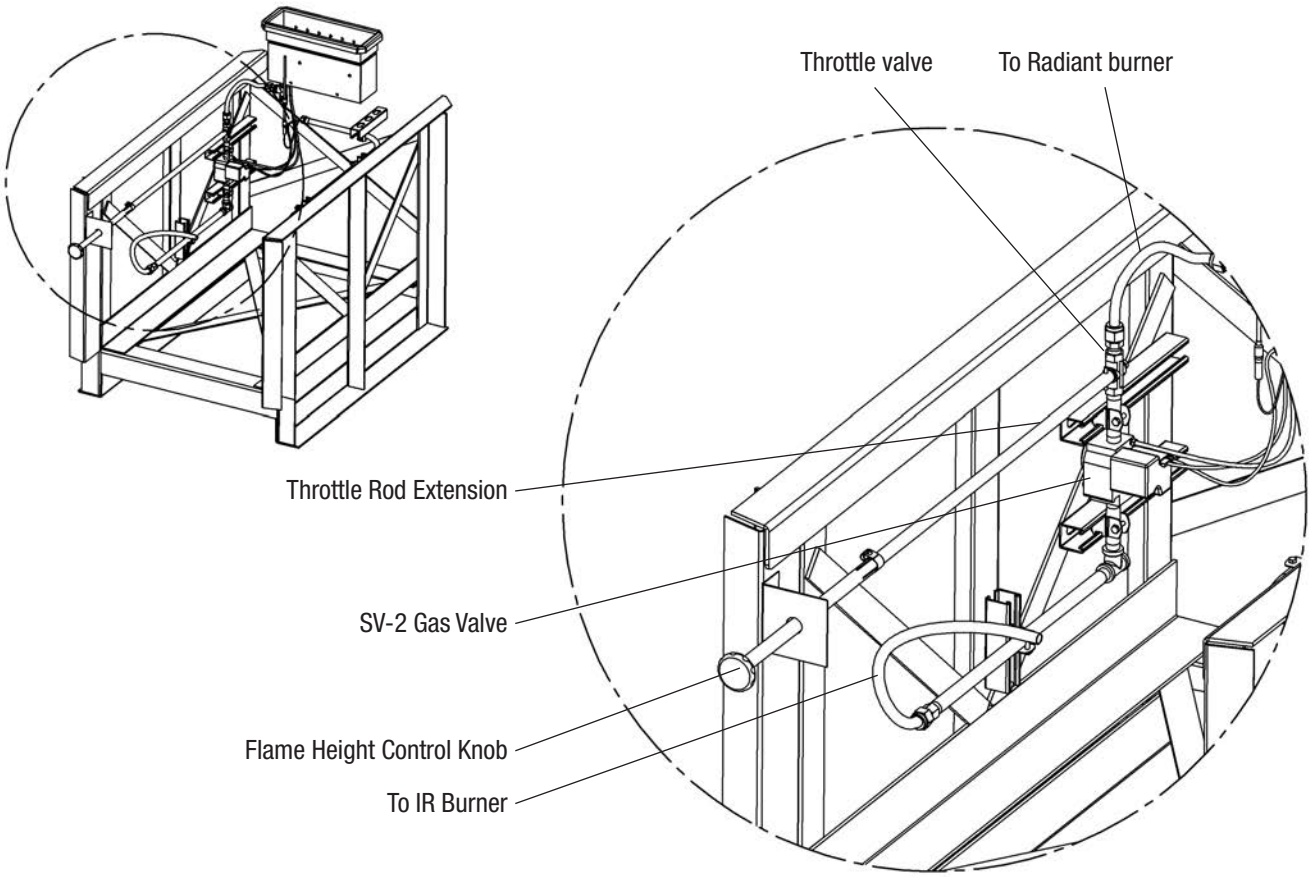
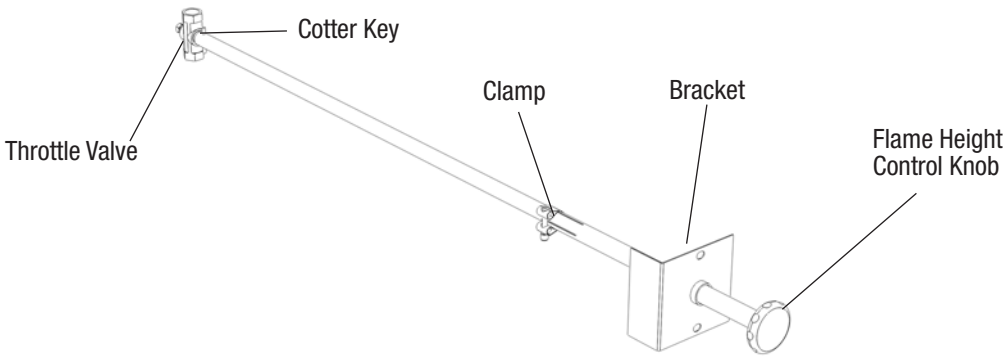
RFG MODELS PIPING LAYOUT

Note: Actual layouts may vary depending on the model and specific configuration of the unit.





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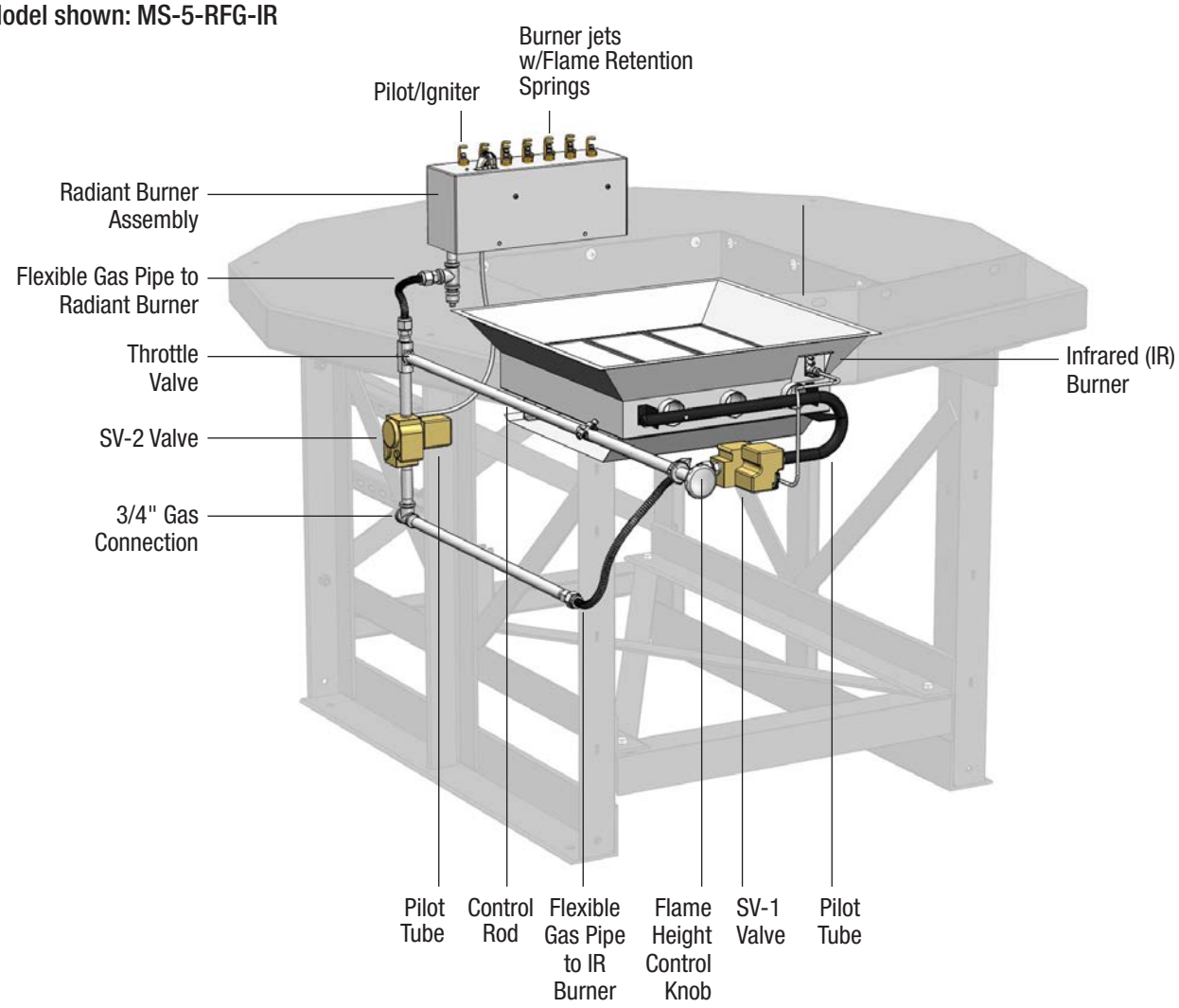
RFG-IR MODELS PIPING LAYOUT

Note: Actual layouts may vary depending on the model and specific configuration of the unit.

Model shown: MS-5-RFG-IR



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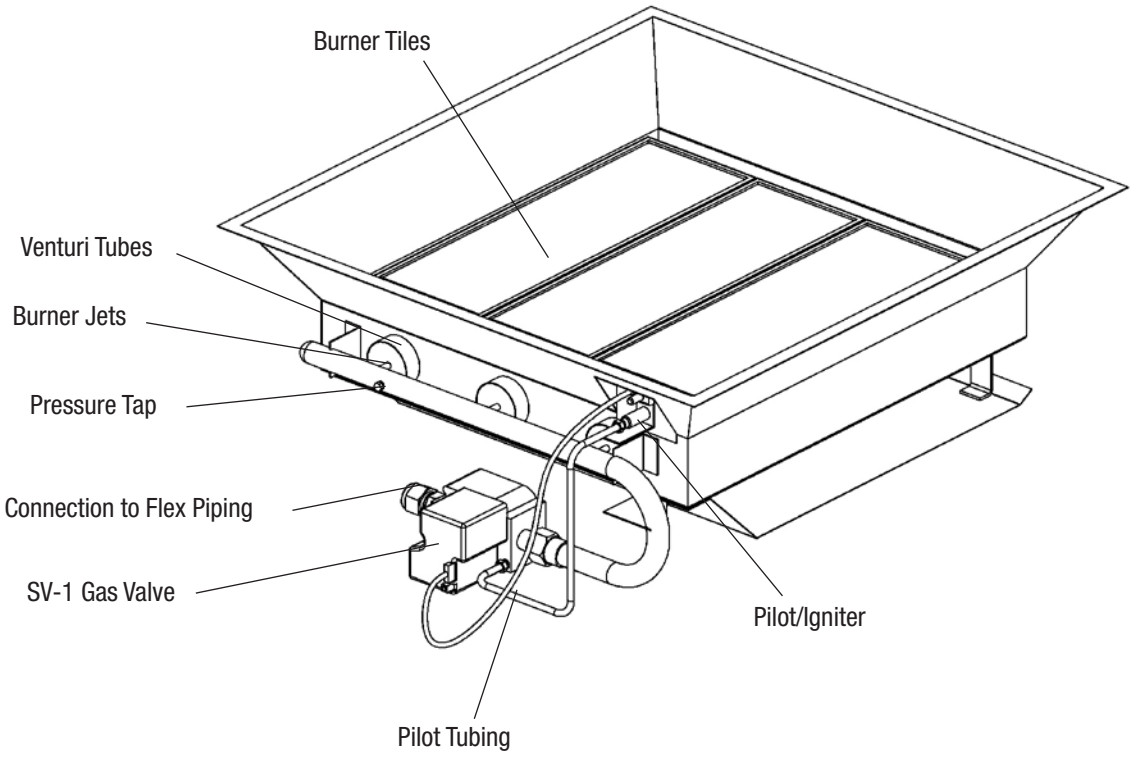
INFRARED BURNER



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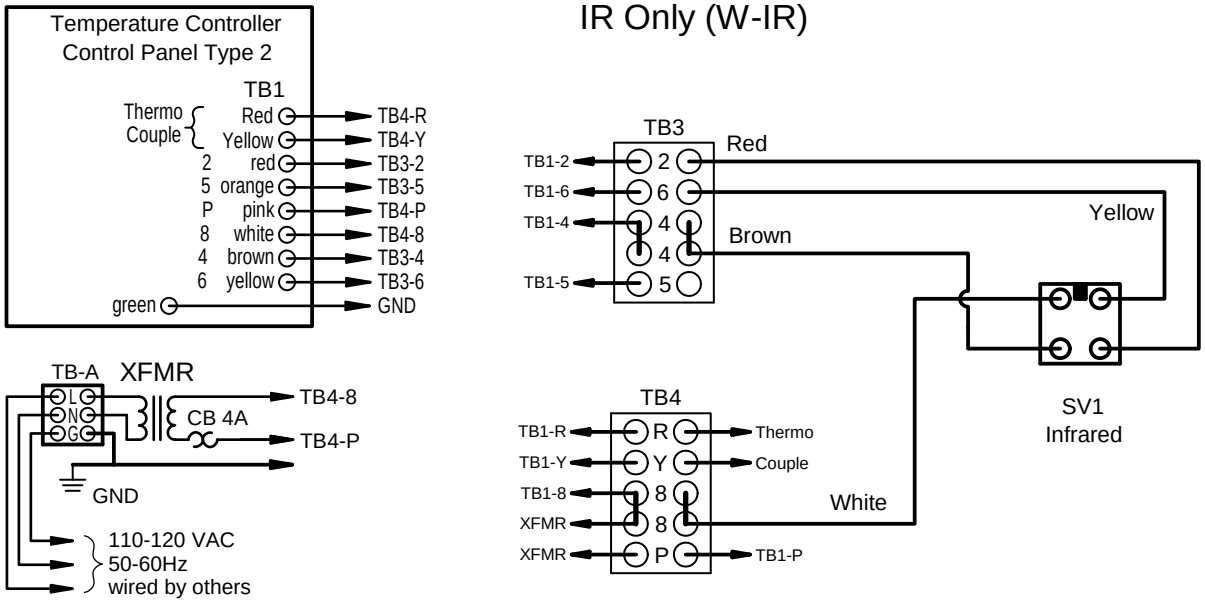
100/120 VAC W-IR, - TYPE 2 CONTROLLER



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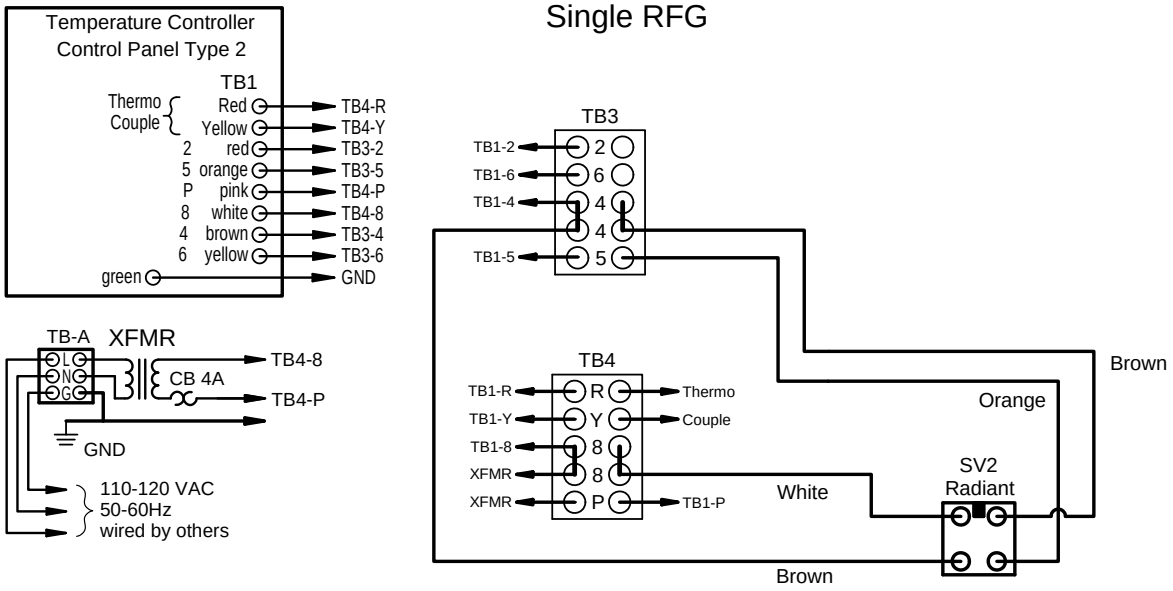
DIAG #: WD061 Rev. 0
DATE: 3/28/2014

100-120 VAC RFG OVENS - TYPE 2 CONTROLLER

Single RFG



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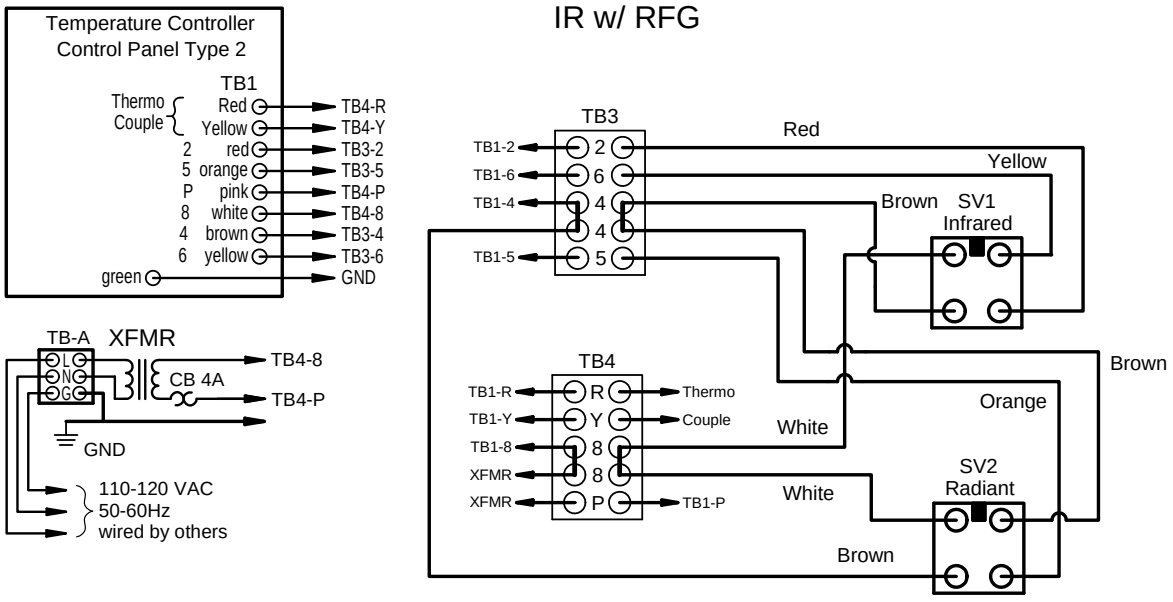
DIAG #: WD067 Rev. 0
DATE: 3/27/2014

100-120 VAC RFG-IR OVENS - TYPE 2 CONTROLLER

IR w/ RFG



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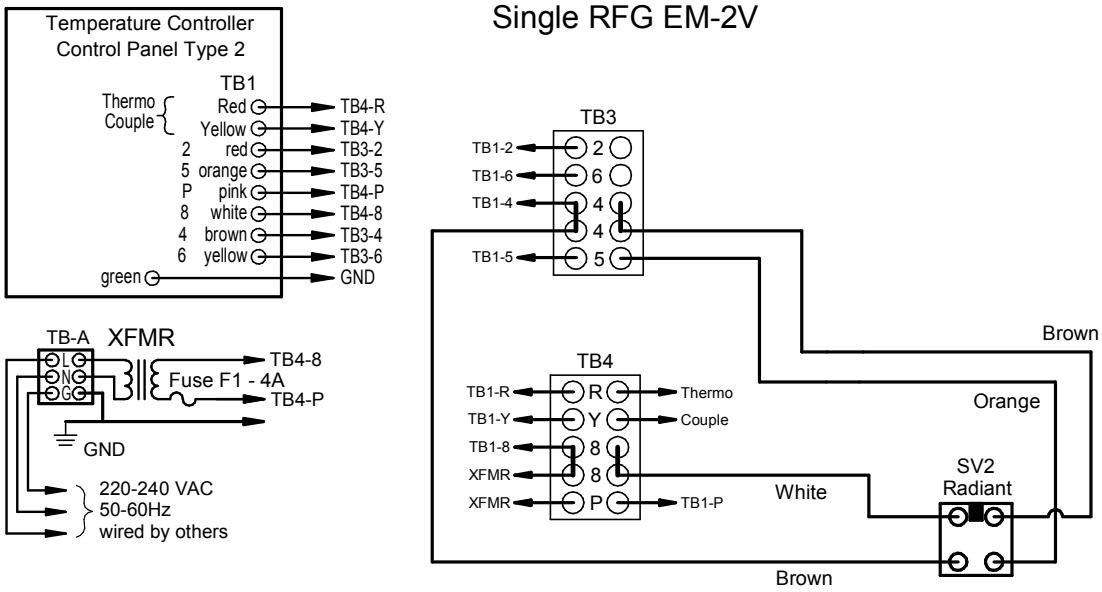
220-240 VAC RFG OVENS - TYPE 2 CONTROLLER
EXPORT MODELS

Single RFG EM-2V



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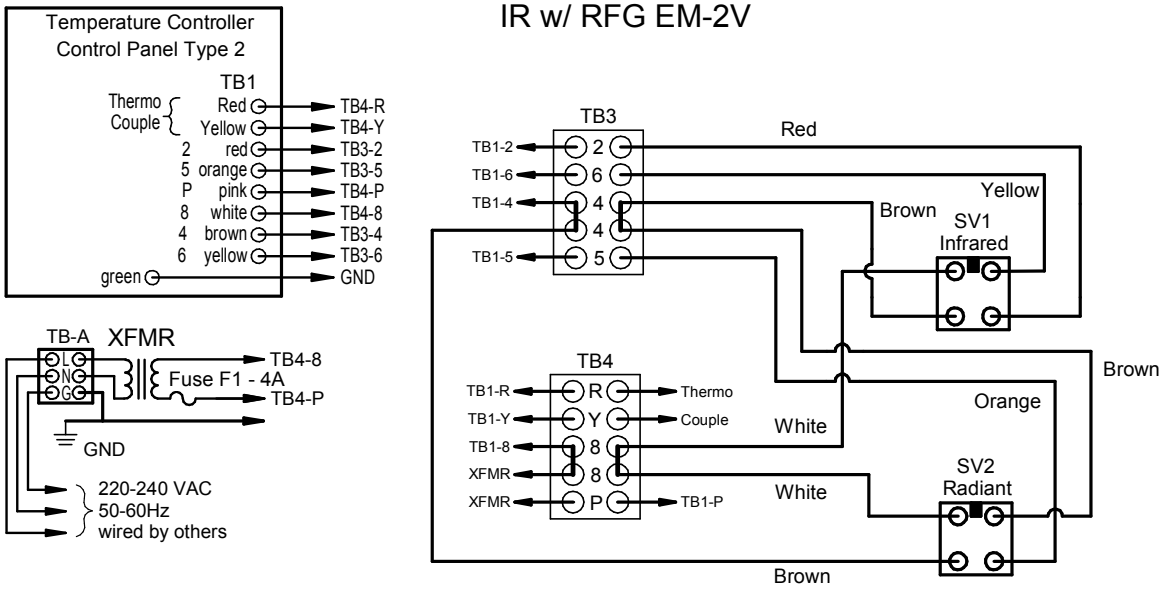
DIAG #: WD068 Rev. 1
DATE: 12/12/2018

220-240 VAC RFG-IR OVENS - TYPE 2 CONTROLLER
EXPORT MODELS

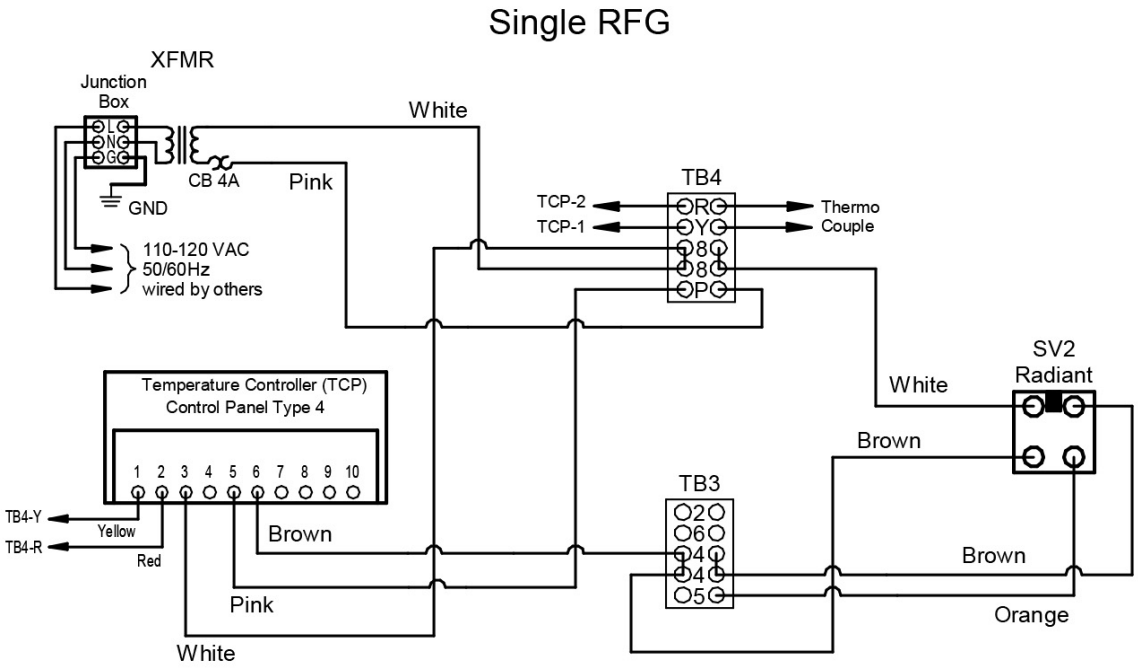
IR w/ RFG EM-2V



Wood Stone
Bellingham, WA +1(360)650-1111 www.woodstone-corp.com

DIAG #: WD065 Rev. 1
DATE: 12/12/2018

RFG OVEN - TYPE 4 CONTROLLER



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DIAG #: WD086 Rev. 1
DATE: 10/28/2015

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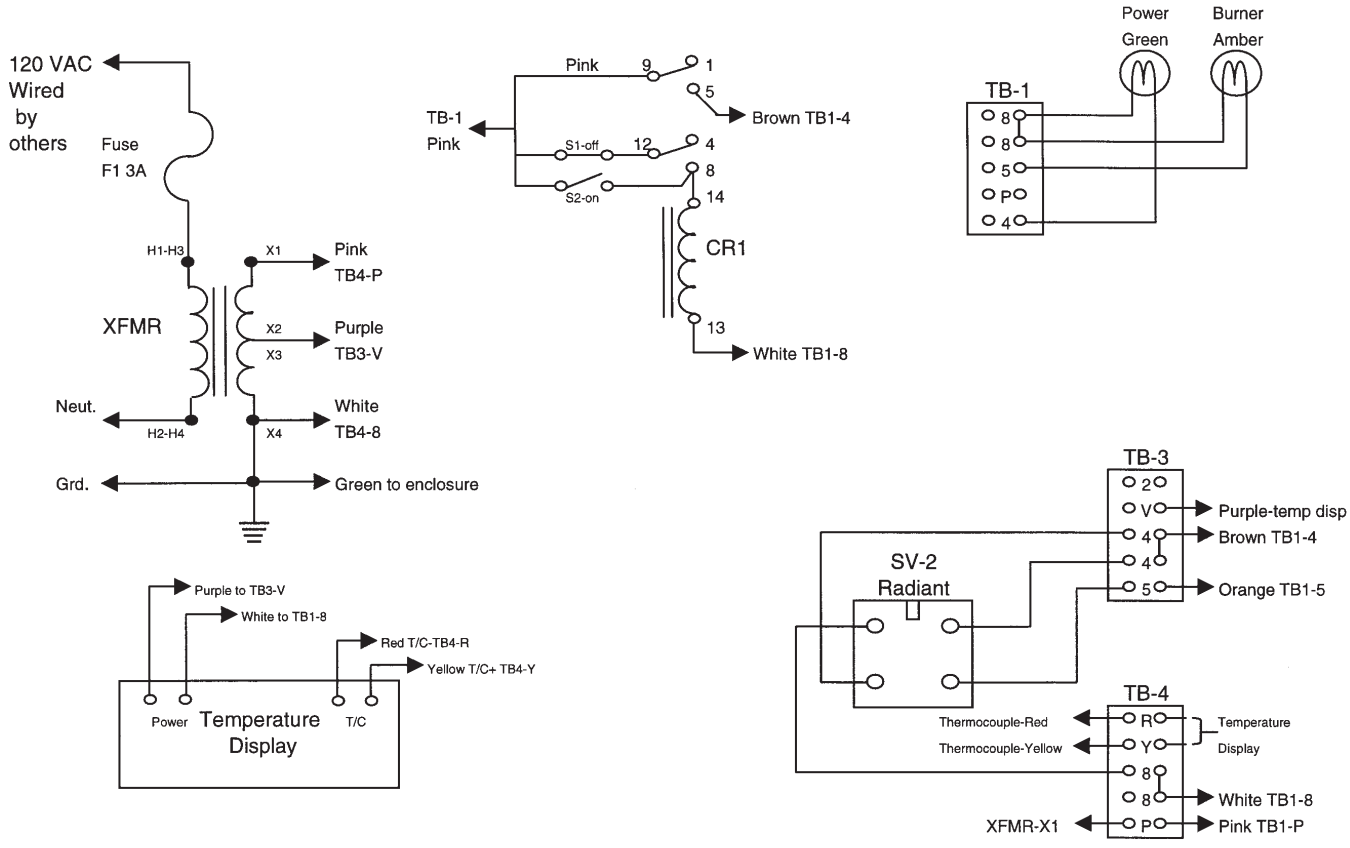
RFG CONTROLLER - NON TOUCHPAD STYLE
(USED ON PRE MARCH 2000 RFG OVENS AND SOME FIELD CONVERSIONS)



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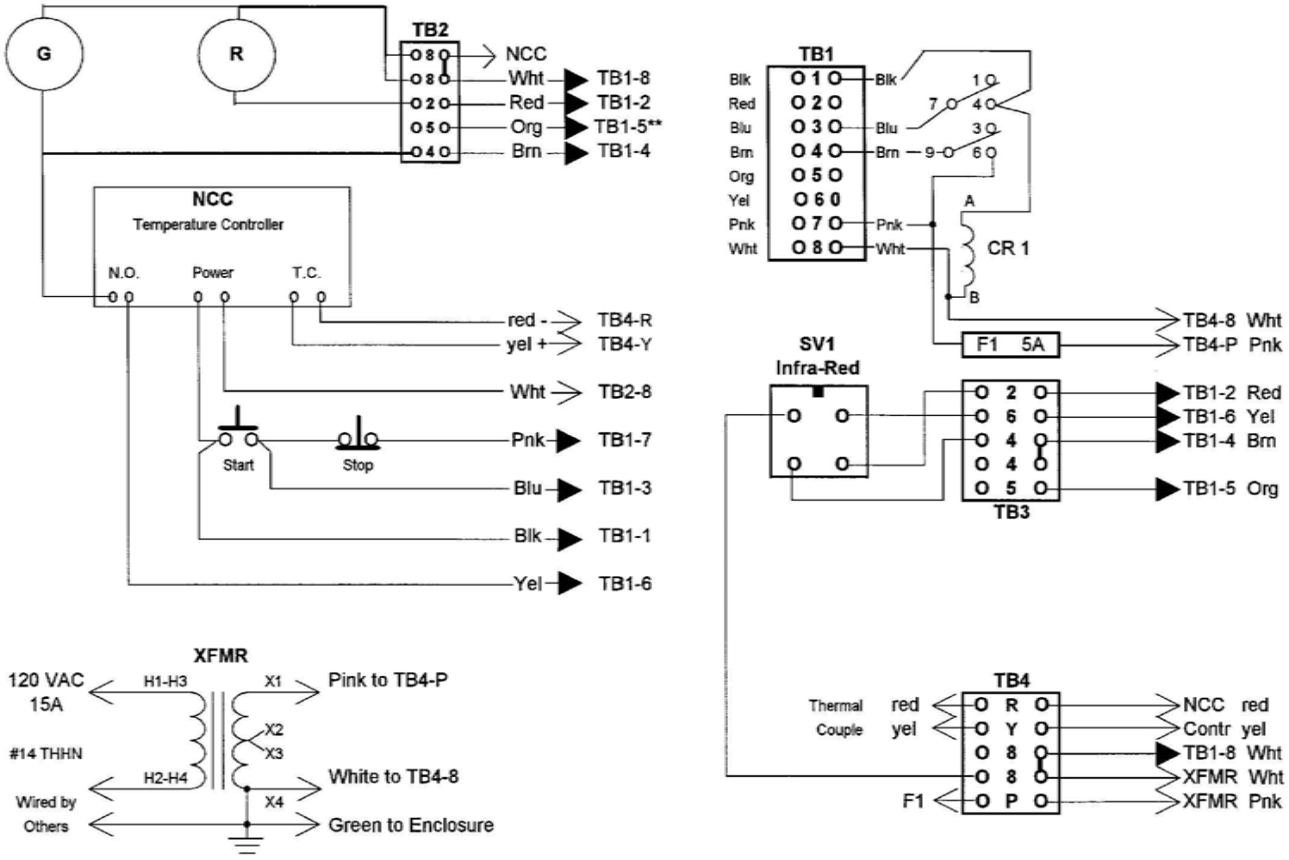
W-IR OVEN - TYPE 1 CONTROLLER



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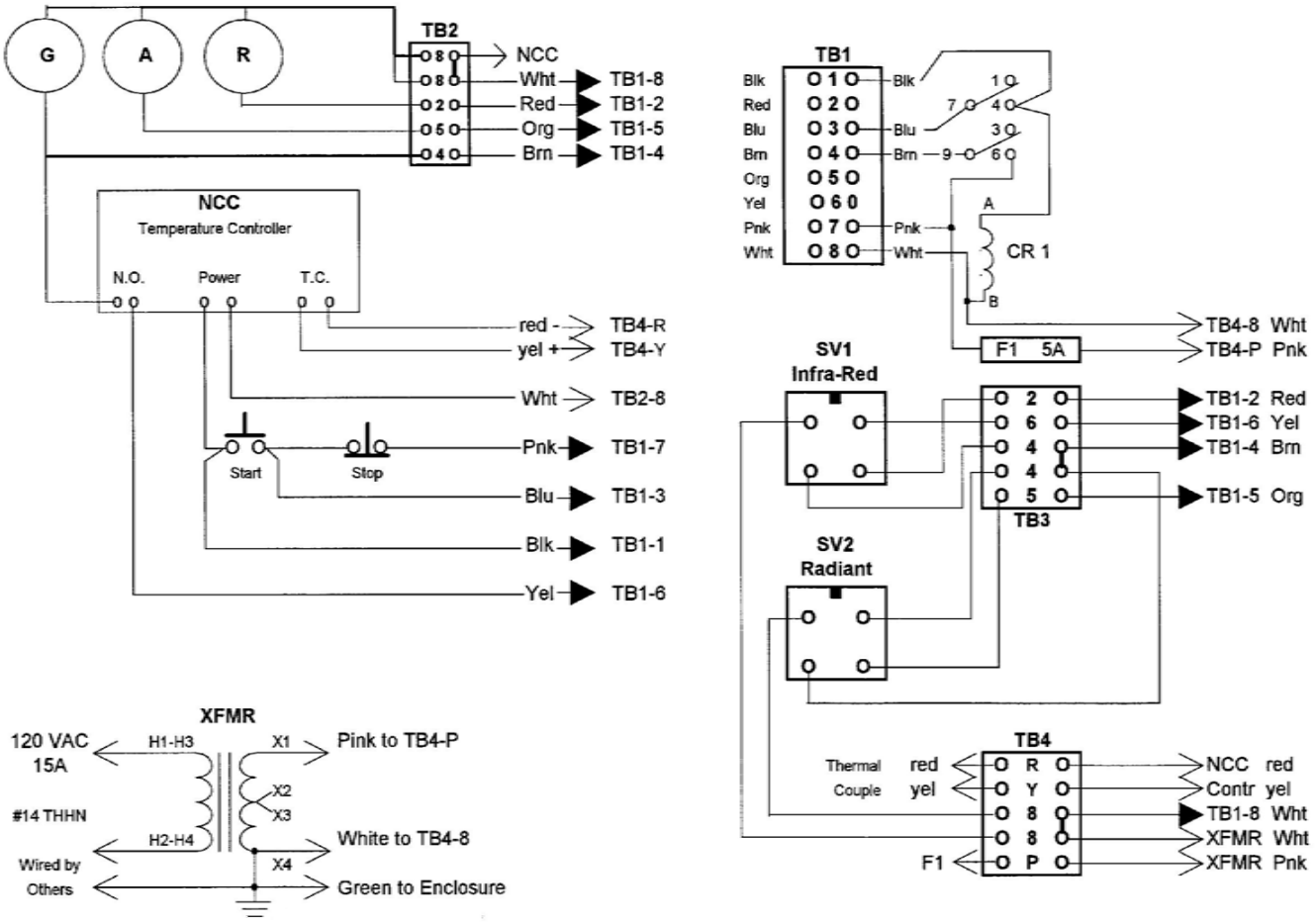
RFG-IR OVEN TYPE 1 CONTROLLER



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PARTS LIST

All information subject to change. Please contact Wood Stone to confirm part numbers and pricing.

WOOD OVEN REPLACEMENT PARTS

Description	Part Number
Complete Readout Assembly 120 VAC / Fahrenheit	002-900
Complete Readout Assembly 120 VAC / Celsius	002-900-2
Digital Readout - Fahrenheit	7000-0726
Digital Readout - Celsius	7000-0774
Transformer - 120 VAC / 12 VDC	7000-0725
Transformer - 240 VAC / 12 VDC	7000-0775
Thermocouple	7000-0727

GAS OVEN REPLACEMENT PARTS

Please verify the Controller type and gas type on the oven before ordering parts.
Please contact Wood Stone if you have any questions.

Description	Part Number
Smart Valve, SV-1 or SV-2 - specify gas type	7000-0750
Pilot / Igniter Assembly for Natural Gas	7000-0749
Pilot / Igniter Assembly for Propane (LP)	7000-0749-LP
Pilot Gasket (for Radiant burner)	7000-0777
Pilot Tube - specify model and burner	Contact Wood Stone
Pilot Tube Compression Fitting	7000-0251
Pilot Orifice - LP	7000-0748
Pilot Orifice - NG	7000-0748-NG
IR Burner Jet - LP	Call Wood Stone
IR Burner Jet - NG	Call Wood Stone
Radiant burner Jet - LP	Call Wood Stone
Radiant burner Jet - NG	Call Wood Stone
Flame Retention Spring	RP-0017
Throttle (Flame Height) Control Valve - NG	7000-0182
Throttle (Flame Height) Control Valve - LP	7000-0183
LP Valve Conversion Kit	7000-0747
NG Valve Conversion Kit	7000-0747-NG

Parts list continued on next page.

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GAS OVEN REPLACEMENT PARTS (CONTINUED)

TYPE 1 CONTROLLER PARTS

Description	Part Number
Fuse - 5 A for Type 1 Controller	RP-7000-0711
Relay - for Type 1 Controller	RP-7000-0721
ON Switch (green) for Type 1 Controller	RP-0015
OFF Switch (red) for Type 1 Controller	RP-0016
Temperature Control Module for Type 1 Controller	RP-7000-0716
Power ON Lamp (green) Type 1 Controller	RP-7000-0714
IR Lamp (red) Type 1 Controller	RP-7000-0715
Radiant Lamp (amber) Type 1 Controller	RP-7000-0740
Non-Touchpad Control RFG Ovens	RP-7000-0732

TYPE 2 CONTROLLER PARTS

Description	Part Number
Control Circuit Board for Type 2 Controller	7000-0099
RFG-IR Keypad Overlay for Type 2 Controller	7000-0900
W-IR Keypad Overlay for Type 2 Controller	7000-0901
RFG Keypad Overlay for Type 2 Controller	7000-0902
Class 2 Transformer for Type 2, Type 4 Control Ovens	7000-0734

TYPE 4 CONTROLLER PARTS

Description	Part Number
Control Circuit Board for Type 4 Control	7000-0101
RFG Keypad Overlay for Type 4 Controller	7000-0928

MISCELLANEOUS ELECTRICAL PARTS

Description	Part Number
Thermocouple (All MS Models)	7000-0727
Thermocouple for 8-RFG Control	7000-0727-9690
Wire Harness for SV-1 Valve- MS 4, 5, 6, 7 Ovens	002-702
Wire Harness for SV-2 Valve- MS 4, 5, 6, 7 Ovens	002-701

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GAS SPECIFICATIONS

SV-1 is the gas control valve that operates the Underfloor Infrared (IR) Burner. The manifold pressure is checked at the outlet port on the SV-1 gas valve.

SV-2 is the gas control valve that operates the interior Radiant Burner. SV-2 is located at the rear left beneath the oven. The manifold pressure test port for the Radiant Burner is a 1/8" NPT plugged tap located at the base of the T-junction between the SV-2 and the Radiant Burner.

The burner manifold pressure has been adjusted and tested at the factory. A variety of factors can influence this pressure, so be sure to test the burner manifold pressure and adjust the valve as necessary to achieve the specified pressure.

NOTE: The gas valve is shipped in the **ON** position.

GAS CONNECTION

Mountain Series ovens are equipped with a 3/4" NPT gas connection located at the rear left of the oven. Have a licensed gas installer provide the hook-up and test all fittings and pipe connections for leaks. Use approved gas leak detectors (soap solutions or equivalent) over and around the fittings and pipe connections. **DO NOT USE FLAME TO TEST FOR LEAKS.**

All gas piping up to the oven must have a minimum inside diameter of 3/4", including all fittings and shut off valves, which should be of the full flow type.

Wood Stone recommends that the appliance's individual shutoff valve (supplied by others) be left readily accessible. Wood Stone also recommends that inspection and maintenance of the burner and gas piping connections of this appliance be performed at regularly scheduled intervals and only by professional gas appliance service agencies.

Maximum inlet gas pressure must not exceed 14" W.C. (1/2 psi)

GAS INLET PRESSURE

For ovens running on natural gas, an inlet pressure of 7 to 10" W.C. is recommended to ensure optimum oven performance. Incoming gas pressure below this range will affect oven performance, the lower the pressure the greater the negative impact. If the gas supply pressure is greater than 14" W.C. (1/2 psi), an external regulator, supplied by others, is REQUIRED to lower the gas pressure to the acceptable range. Issues caused by low or high gas pressure are installation issues, and will not be covered under the Warranty.

For ovens running on Propane (LP or HLP), the recommended inlet pressure to ensure optimum oven performance is 10 to 12" W.C. Incoming gas pressure below this range will affect oven performance, the lower the pressure the greater the negative impact. If the gas supply pressure is greater than 14" W.C. (1/2 psi), an external regulator, supplied by others, is REQUIRED to lower the gas pressure to the acceptable range. Issues caused by low or high gas pressure are installation issues, and will not be covered under the Warranty.

For all installations, follow best practices for proper gas line pipe sizing for the line serving the oven. To ensure proper operation, all gas piping and fittings leading up to the oven should have an inside diameter equal to or greater than that of the oven gas connection. Also make sure that a readily accessible shut off valve (supplied by others) is installed near the oven, and in accordance with all applicable codes. Shut off valves must be of the full-flow type, and not introduce any restriction into the gas line.

The connection to the oven should be hard-piped whenever feasible. If this is not possible, use a properly sized flexible connector approved for this application. When using a flexible connector make sure that its design does not present any reduction in pipe diameter or other restriction. Oven issues caused by improper pipe sizing, improper shut off valves, restrictive connectors, or any other deficiency in the gas supply design or installation will not be covered under the oven warranty.

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Factory specified burner manifold pressures and gas input rates for models equipped to burn Natural Gas (NG).

NOTE: RFG ovens are only equipped with the SV-2 valve; W-IR ovens are only equipped with the SV-1 valve; RFG-IR ovens are equipped with both SV-1 and SV-2.

The maximum Natural Gas orifice size(at sea level) for the Radiant (interior) burner is #55 (0.0520)
The maximum Natural Gas orifice size (at sea level) for the Underfloor Infrared (IR) burner is #42 (0.0935)

Model	SV-1	SV-2	RFG-IR BTU/hr Input Rate	RFG BTU/hr Input Rate	W-IR BTU/hr Input Rate
WS-MS-4-NG	3.5"	5"	115,000	68,000	47,000
WS-MS-5-NG	3.5"	4.75"	188,000	105,000	83,000
WS-MS-6-NG	3.5"	4.75"	188,000	105,000	83,000
WS-MS-7-NG	3.5"	4.6"	220,000	123,000	97,000

Factory specified burner manifold pressures and gas input rates for models equipped to burn Propane (LP).

NOTE: RFG ovens are only equipped with the SV-2 valve; W-IR ovens are only equipped with the SV-1 valve; RFG-IR ovens are equipped with both SV-1 and SV-2.

The maximum Propane (LP) orifice size (at sea level) for the Radiant (interior) burner is #65 (0.0350)
The maximum Propane (LP) orifice size (at sea level) for the Underfloor Infrared (IR) burner is #53 (0.0595).

Model	SV-1	SV-2	RFG-IR BTU/hr Input Rate	RFG BTU/hr Input Rate	W-IR BTU/hr Input Rate
WS-MS-4-LP	9"	7"	102,000	60,000	42,000
WS-MS-5-LP	9"	8"	159,000	94,000	65,000
WS-MS-6-LP	9"	8"	159,000	94,000	65,000
WS-MS-7-LP	9.2"	9.5"	227,000	142,000	85,000

If you are converting a Wood Stone oven from Propane to Natural Gas, or Natural Gas to Propane, CONTACT THE WOOD STONE SERVICE DEPARTMENT TO OBTAIN THE NECESSARY PARTS TO CARRY OUT THIS PROCEDURE!

This procedure entails changing the Burner Jets, Pilot Orifices and Gas Valve Regulator Springs, and adjusting the Burner Manifold Pressures as specified for the new gas type.

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All shutoffs and connections to the oven must have a minimum O.D. that measures the same as the inlet connection on the oven (3/4" or 1" depending on the model). For longer runs it may be necessary to use larger piping to supply the oven.

ELECTRICAL

The incoming 120 VAC, 15 A electrical connection is made at the terminal strip inside the Transformer box, or at the leads attached to the Transformer itself depending on the model. Electrical diagrams are located directly to the right, behind the removable service/intake panel, as well as inside the Control Box. Export models may have different electrical requirements, which will be clearly marked on the wiring diagrams and the Transformer Plate.

ELECTRICAL CODE LIMITATIONS

Electrical Grounding: This appliance must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical code, ANSI NFPA 70 or the Canadian Electrical Code, CSA C22.1 as applicable.

INTERLOCKING

If it is necessary to interlock the oven with an exhaust fan, Wood Stone recommends the following: Wire the installation in such a way that incoming 120 VAC power to the oven is supplied only when the exhaust fan is turned on. The easiest way to do this is to have the same switch that turns on the exhaust fan also turn on the power supplying the oven. A qualified electrician should do this. Do not attempt to wire into the oven Control Box or low voltage junction box. **ADDING TO OR ALTERING ANY OF THE WIRING IN THE OVEN Control Box OR LOW VOLTAGE JUNCTION BOX WILL VOID THE WARRANTY. Please call Wood Stone if you have any questions.**

Wood Stone ovens should not normally require any start-up procedures to be performed by a service technician. The gas installer is responsible for making sure the gas supply to the oven is properly purged (bled) and that the piping and pressure is adequate for the BTU requirements of the oven. Burner gas pressures are preset at the factory. The electrical connection to the oven should be made by a licensed electrician. A Wood Stone representative may be available to visit the site to verify that the oven is functioning correctly and address any questions the customer may have. We do understand that in some situations a customer may request a service technician to perform an additional start up on the oven for peace of mind etc. Typically this additional start up will not be covered by Wood Stone, unless it was necessary due to a defect on the oven itself. Problems arising from improper installation will be the owner's responsibility. See the complete warranty in this manual. It can also be found in the owner's manual. Please call the factory if you have any questions.

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Wood Stone TECH VERIFICATION CHECKLIST: MOUNTAIN SERIES OVENS

OVEN LOCATION: _____ **DATE** ___/___/___

SERVICE COMPANY: _____ **TECHNICIAN NAME:** _____

OVEN SERIAL NUMBER: M S _____

	CHECKLIST ITEMS
☐Yes ☐No	1. Is the Incoming Gas Piping properly sized—minimum 3/4" or 1" O.D. (depends on oven model & must be same size as inlet on oven–minimum) unrestricted to oven. ***Same ID as oven connection point.***
☐Yes ☐No	2. Gas Line Shut Off Valve is minimum 3/4" or 1" O.D. (depends on oven model and must be same size as inlet on oven–minimum). ***Same ID as oven connection point and all Piping to oven.***
☐Done	3. Static (no load) incoming gas pressure is: _____ W.C. ***Test at oven Gas Valve.***
☐Done	4. Verify that all Burners are lighting. Incoming gas pressure under load with all Burners running is: _____ W.C. ***Test at oven Gas Valve.***
☐Done	5. Radiant Burner Manifold Pressure (SV-2) with all Burners running and Throttle full on is: _____ W.C. ***Measured at Burner Drip Leg. Must match SV-2 on Data Plate. Adjust if necessary.***
☐Done	6. Radiant Burner Manifold Pressure with all other gas appliances fired (if possible) is: _____ W.C. ***Measured at Burner Drip Leg.***
☐Yes ☐No	7. **If equipped:** Is the Lower Surround properly installed and sealed to the floor and the oven?
☐Done	8. Check all Control Board Wires for tightness at the terminal strip.
☐Yes ☐No	9. **If Controller Wire Harness was lengthened by the installers:** Verify: ☐ Correct Color Coding was used ***AND*** ☐ Thermocouple wire was used to make the Thermocouple connection. ***Correct as necessary.***
☐Done	10. Verify all Controller functions working correctly.
☐Done	11. Visually inspect Igniter Wires and Wiring Harnesses for damage. ***Do not bundle Igniter wires.***
☐Done	12. ☐ Check Pilot/Igniter Mounting Screws are tight. ☐ Verify tightness of Pilot Tubes and check for Leaks.
☐Done	13. Leak check all Gas Fittings, including incoming gas connection.
☐Done	14. Check tightness of Burner Mounting Bolts and Screws.
☐Done	15. Verify all Leg Bolts & Nuts, X Brace Bolts & Nuts, Unistrut Mounting Bolts & Pipe Clamps are in place & tight.
☐Done	16. Verify Throttle Rod Pointer is properly oriented to the Index Scale.
☐Yes ☐No	17. **If equipped:** Are the Fire Log Set and Guard in place?
☐Done	18. Verify that the customer has the Installation & Operation Manual. Make sure the customer understands: ☐ To remove the Night Doors when the oven is running. ☐ The Throttle Control Knob operation and its use. ☐ Controller functions and programming. ☐ The importance of keeping debris out of the Radiant Burner, and that this is their responsibility. ☐ The Initial Oven Start-Up (break in) procedure as found in the manual. (It is not necessary for the technician to be present for this procedure.) ☐ The Warranty and what is and is not covered. ***Call Wood Stone if you have any questions.***

Fax this form to Wood Stone within 24 hours of service to 360.650.1166

Sales Order #
FOR OFFICE USE ONLY

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ALL WARRANTY SERVICE MUST BE PRE-APPROVED BY WOOD STONE

Wood Stone warrants its equipment to the original purchaser against defects in material or manufacture for a period of one year from the original date of purchase, subject to the following exclusions and limitations.

Please contact the factory first at 1.800.988.8103 or 1.360.650.1111, seven days a week. Our normal business hours are 8am to 5pm Pacific time Monday–Friday. If calling during non-business hours, follow the recorded instructions for emergency service and a Wood Stone technician will get back to you promptly.

EXCLUSIONS

The warranties provided by Wood Stone do not apply in the following instances:

1. In the event that the equipment is improperly installed. Proper installation is the responsibility of the installer; proper installation procedures are prescribed by the Wood Stone Installation and Operation Manual.
2. In the event the equipment is improperly or inadequately maintained. Proper maintenance is the responsibility of the user; proper maintenance procedures are prescribed in the Wood Stone Installation and Operation Manual. Burner problems resulting from debris or ash in the burner well will not be covered by the warranty. Call with questions regarding maintenance frequency.
3. In the event that the failure or malfunction of the appliance or any part thereof is caused by abnormal or improper use or is otherwise not attributable to defect in material or manufacture.
4. In the event that the appliance, by whatever cause, has been materially altered from the condition in which it left the factory.
5. In the event that the rating plate has been removed, altered or obliterated.
6. On parts that would be normally worn or replaced under normal conditions.
7. Normal cracking due to expansion and contraction stress relief in the ceramic firebox.
8. **In the event that pressed log products of any type have been burned in the equipment.**
9. Damage resulting from the use of chemical cleaning products in the oven, as well as any damage from liquids or chemicals, including water, being poured or sprayed into the oven.

If any oral statements have been made regarding this appliance, such statements do not constitute warranties and are not part of the contract of sale. This Limited Warranty constitutes the complete, final and exclusive statement with regard to warranties.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER WRITTEN, ORAL OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OR WARRANTY AGAINST LATENT DEFECTS.

LIMITATIONS OF LIABILITY

In the event of warranty claim or otherwise, the sole obligation of Wood Stone shall be the repair and/or replacement, at the option of Wood Stone, of the appliance or component or part thereof. Such repair or replacement shall be at the expense of Wood Stone with the exception of travel over 100 miles or two hours, overtime, and holiday charges which shall be at the expense of the purchaser. Any repair or replacement under this warranty does not constitute an extension of the original warranty for any period of the appliance or for any component or part thereof. Parts to be replaced under this warranty will be repaired or replaced at the option of Wood Stone with new or functionally operative parts. The liability of Wood Stone on any claim of any kind, including claims based on warranty, expressed or implied, contract, negligence, strict liability or any other theories shall be solely and exclusively the repair or replacement of the product as stated herein, and such liability shall not include, and purchaser specifically renounces any rights to recover, special, incidental, consequential or other damages of any kind whatsoever, including, but not limited to, injuries to persons or damage to property, loss of profits or anticipated profits, or loss of use of the product.

TO SECURE WARRANTY SERVICE

If you claim a defect covered by this Limited Warranty, contact:
Wood Stone Corporation, Attn: Service Department, 1801 W. Bakerview Rd., Bellingham, WA 98226 USA
Phone 1.800.988.8103 or 1.360.650.1111

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