Service Manual

BISTRO LINE / PHOENIX

Stone Hearth Oven

Gas-Fired, Gas/Wood Combination Models

BISTRO/PHOENIX 3030
WS-BL-3030-RFG, WS-PX-3030-RFG

BISTRO/PHOENIX 4343
WS-BL-4343-RFG-(W), WS-PX-4343-RFG-(W)

BISTRO/PHOENIX 4355
WS-BL-4355-RFG-(W), WS-PX-4355-RFG-(W)

BISTRO/PHOENIX 4836
WS-BL-4836-RFG, WS-PX-4836-RFG

BISTRO/PHOENIX DUAL BURNER
WS-BL-4343-RFG-LR, WS-BL-4355-RFG-LR,
WS-BL-4836-RFG-LR

Wood Stone

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SERVICE MANUAL FOR THE WOOD STONE BISTRO / PHOENIX OVEN

NATURAL GAS OR PROPANE FUELED STONE HEARTH OVEN

COMMERCIAL MODELS

WS-BL-(3030, 4343, 4355, 4836)

WS-PX-(3030, 4343, 4355, 4836)

WS-BL-(4343, 4355, 4836)-LR DUAL BURNER

WS-PX-(4343, 4355, 4836)-LR DUAL BURNER

DO NOT THROW THIS MANUAL AWAY

M0008.09 DECEMBER 2017

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

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SERVICE MANUAL FOR WOOD STONE BISTRO/PHOENIX MODEL OVENS
NATURAL GAS (NG) OR PROPANE (LP) FUELED STONE HEARTH OVEN

RETAIN THIS MANUAL FOR FUTURE REFERENCE

Additional copies of this manual and prompt responses to service/maintenance questions are available from Wood Stone @ 1-800-988-8103.

READ ALL INSTRUCTIONS BEFORE INSTALLING AND USING THIS APPLIANCE

Please read this entire manual before you install the oven. Failure to follow instructions may result in property damage, bodily injury or even death. Contact your local building or fire officials about restrictions and installation inspection in your area.

IMPORTANT: Consult your local gas supplier for a statement outlining a procedure to be followed in the event you smell gas. Post the statement in a prominent location.

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.

AVERTISSEMENT: L'installation, le réglage, la modification, la réparation ou l'entretien incorrect de cet appareil peut causer des dommages matériels, de blessures ou la mort. Lire attentivement les instructions d'installation, de fonctionement et d'entretien avant de procéder à son installation ou entretien.

CAUTION: Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start of freshen a fire in this oven. Keep all such liquids well away from the oven when in use.

DO NOT USE PRODUCTS NOT SPECIFIED FOR USE WITH THIS OVEN.

FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

POUR VOTRE SÉCURITÉ: Ne pas entreposer ni utiliser d'essence ou d'autres vapeurs de liquides inflammables ou des liquides dans les environs de ce ou de tout autre appareil.

When this oven is not properly installed, a fire may result. To reduce the risk of fire, follow the installation instructions. It is recommended that this oven be installed, maintained and serviced by authorized professionals.

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A MAJOR CAUSE OF OVEN RELATED FIRES IS A FAILURE TO MAINTAIN REQUIRED CLEARANCES TO COMBUSTIBLE MATERIAL. IT IS OF UTMOST IMPORTANCE THAT THIS OVEN BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.

DISCONNECT POWER TO THE OVEN BEFORE SERVICING OR CLEANING.
NO ATTEMPT SHOULD BE MADE TO OPERATE THIS APPLIANCE DURING A POWER FAILURE

This appliance is for professional use by qualified personnel. This appliance must be installed by qualified persons in accordance with the regulations in force. This appliance must be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of substances harmful to health in the room in which it is installed. This appliance needs an unobstructed flow of fresh air for satisfactory combustion and must be installed in a suitably ventilated room in accordance with current regulations. This appliance should be serviced by qualified personnel at least every 12 months, or sooner if heavy use is expected.

This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts.

SAVE THE INSTRUCTIONS

Wood Stone's Gas-Fired Bistro ovens have been tested and approved by Intertek Testing Services and are ETL listed to ANSI Z83.11:2016 Ed. 4 / CSA 1.8:2016 Ed. 4, ULC Subject 1482-M1990, UL Subject 2162, ULC-S627-00, UL 737, CSA 2.17-M91 and to NSF/ANSI Standard 4:2016

Intertek
ANSI Z83.11:2016 Ed.4
CSA 1.8:2016 Ed.4

Intertek
ANSI/NSF 4:2016

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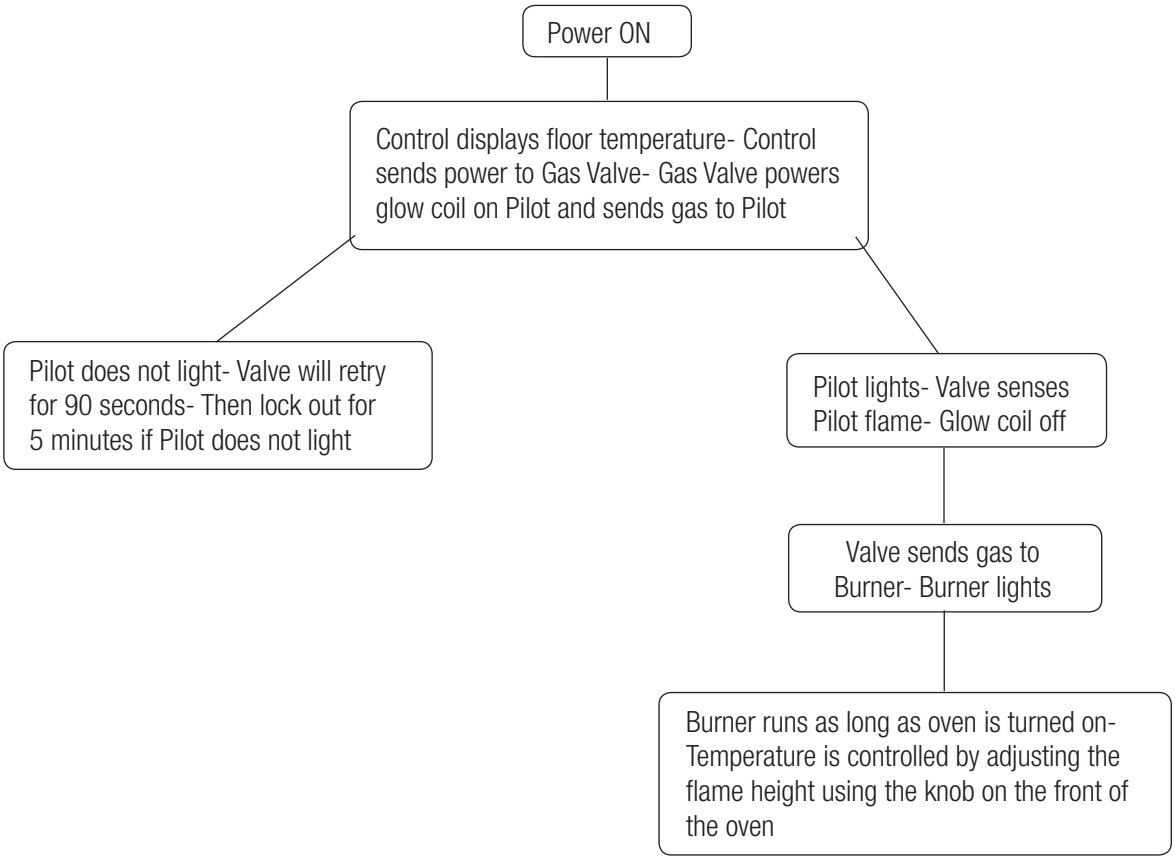
WOOD STONE BISTRO / PHOENIX OVEN
OPERATION SEQUENCE

COMMERCIAL (BL/PX) MODELS



Note: Ovens equipped with 2 Radiant Burners will have a second Valve, SV-3, which will be powered at the same time as the SV-2 Valve described above. The operation sequence is identical to that of SV-2.

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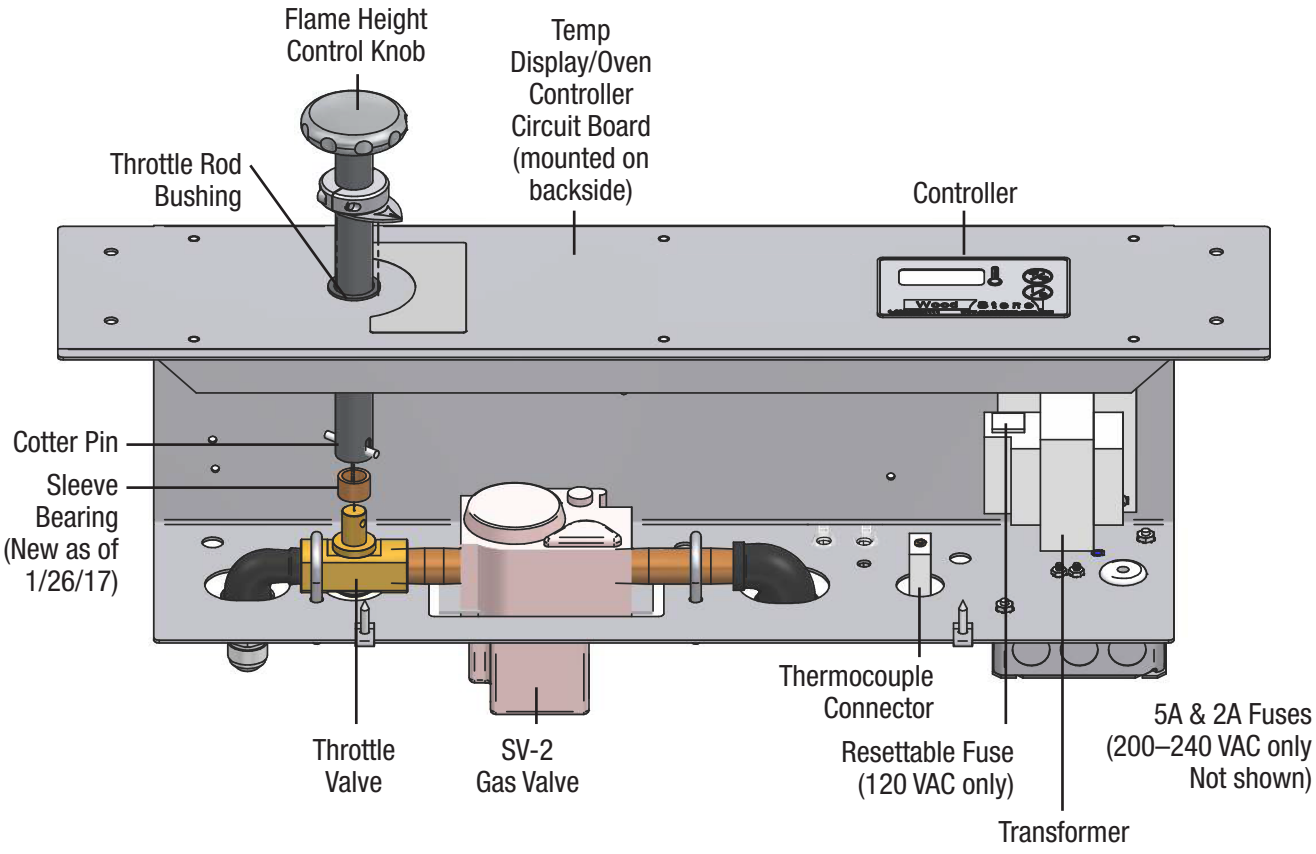
COMPONENT LAYOUT
CONTROL PANEL — SINGLE BURNER, VIEWED FROM BELOW



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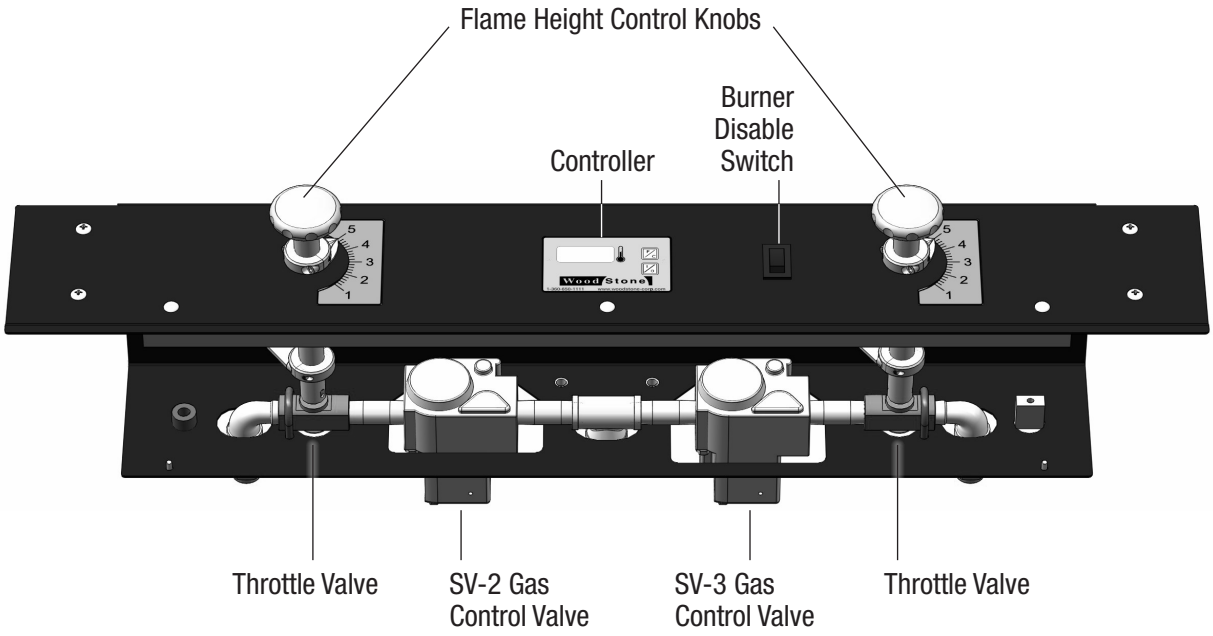
COMPONENT LAYOUT
CONTROL PANEL — DUAL BURNER, VIEWED FROM BELOW



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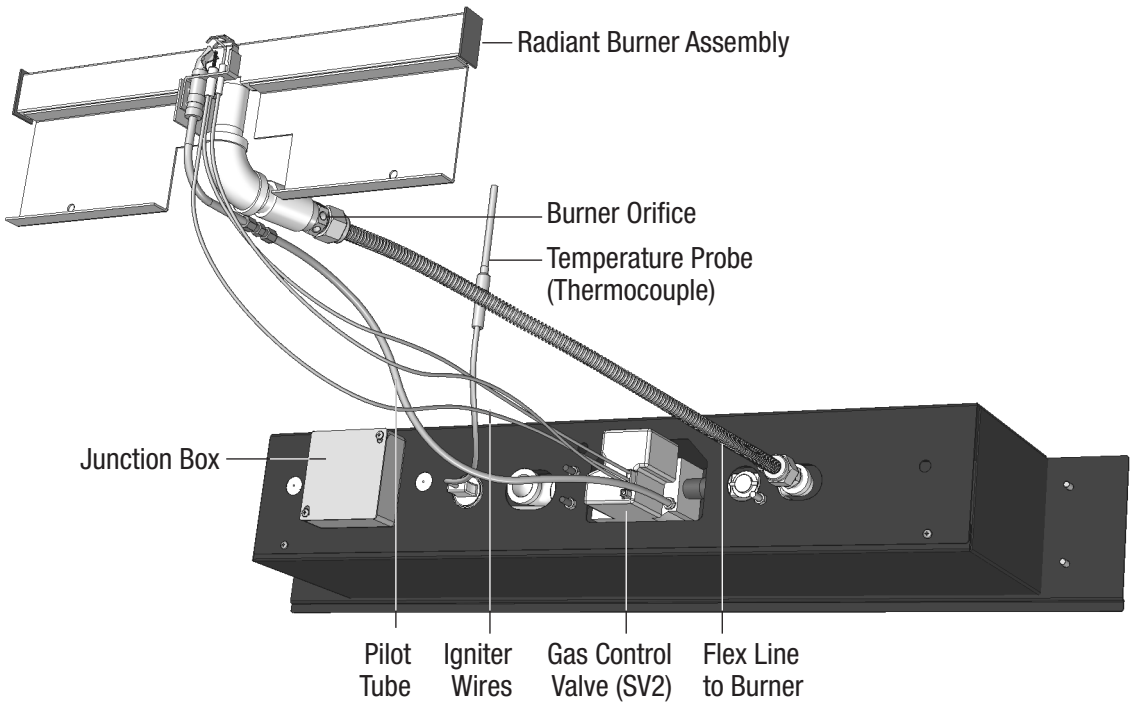
CONTROL PANEL, PIPING AND RADIANT BURNER VIEW — "T" STYLE BURNER



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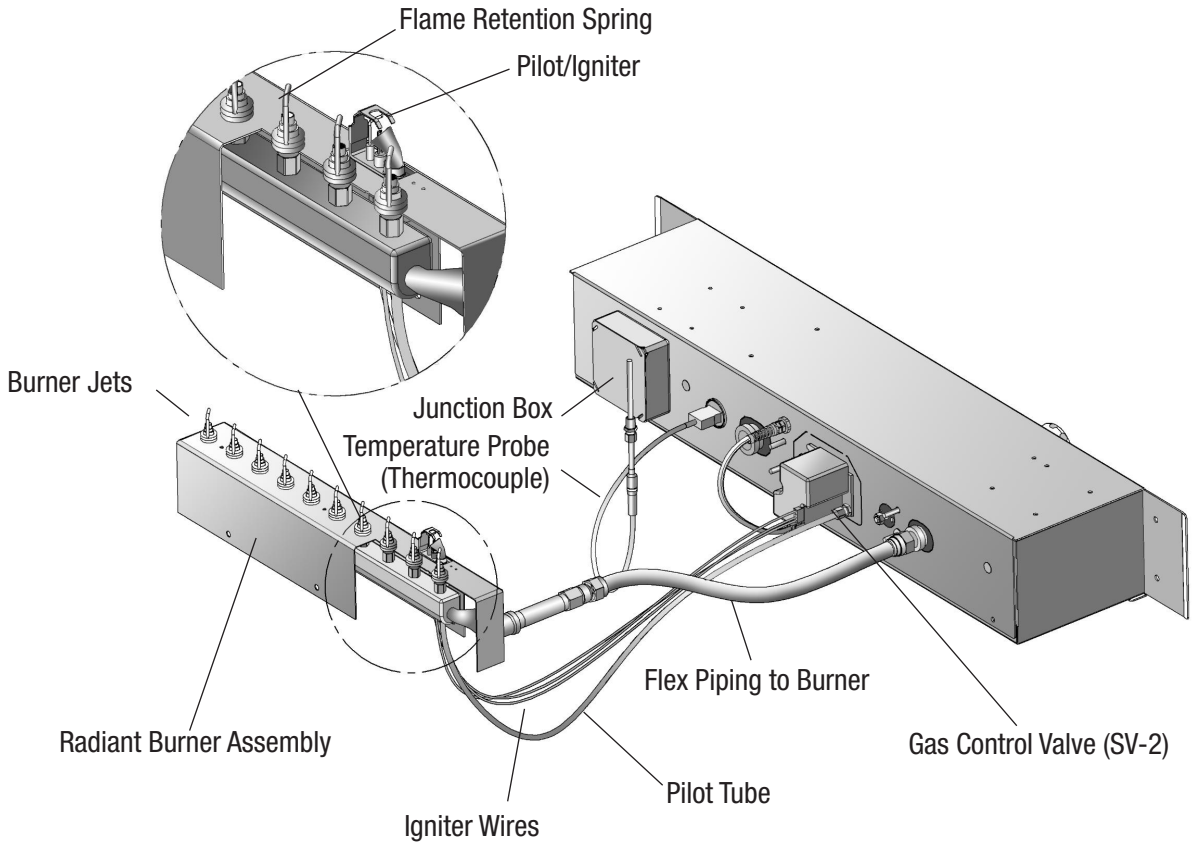
CONTROL PANEL, PIPING AND RADIANT BURNER VIEW - "JET" BURNER



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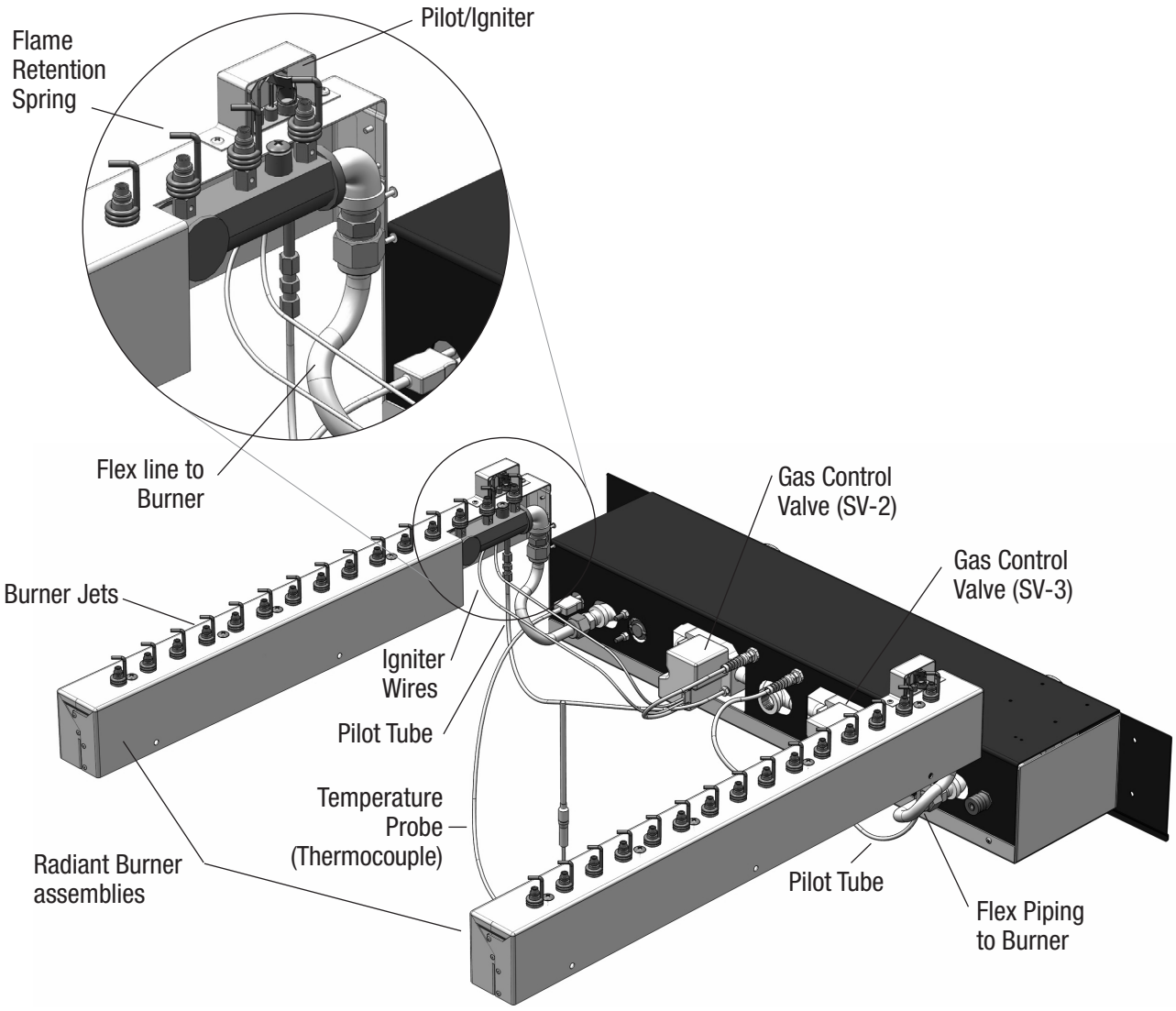
CONTROL PANEL, PIPING AND RADIANT BURNER VIEW - DUAL BURNER



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TROUBLESHOOTING AND REPAIR

SYMPTOM	PROBABLE CAUSE/SOLUTION
Oven does not turn on- Display is blank. **NOTE:** 200-240 VAC models are equipped with a 2 A fuse on the incoming power, and a 5 A fuse on the low voltage output of the Transformer. 100-120 VAC models have a resettable circuit breaker on the Transformer instead of fuses.	1. Power supplying oven is turned off, or the circuit breaker or fuse on the circuit supplying the oven has tripped or blown. Incorrect voltage being supplied to the oven. Incoming voltage should be as specified on the oven. **220-240 VAC models:** 2. One or both fuses on the oven Control Box has blown. Correct any shorts, repair or replace any damaged wiring or components. Replace the blown fuses. 3. Check for 24 VAC at the input to the Control Board. If 24 VAC is present at the Control Board and the unit will not turn on (display does not light) replace the Control Board. If 24 VAC is not present at the Control Board, check the 5 A fuse. If the fuse is blown, check for shorts. Also verify that neither of the Thermocouple leads is shorted to ground. If there is continuity to ground (earth) through either of the Thermocouple leads, the Thermocouple should be replaced. If the fuse is good, check for correct incoming power to the Transformer. If there is no power to the Transformer, recheck Step 1 and Step 2 above. If incoming voltage is correct to the Transformer, check for 24 VAC at the output of the Transformer. If 24 VAC is not present, TURN OFF INCOMING POWER TO THE OVEN. Then verify that all wiring connections on the Transformer are tight, and that the wires are connected as specified for the voltage supplied to the oven. Turn power back on and retry. If 24 VAC is still not present, replace the Transformer. If 24 VAC is present at the Transformer, but not at the Control Board, recheck 5 A fuse, wiring, and wire connections between the Transformer and Control Board. Continued on next page >

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SYMPTOM	PROBABLE CAUSE/SOLUTION
< Continued from previous page	**100-120 VAC models:** **1.** Circuit breaker on the Transformer has tripped. Correct any shorts, repair or replace any damaged wiring or components. Reset the circuit breaker. **2.** Check for 24 VAC at the input to the Control Board. If 24 VAC is present at the Control Board and the unit will not turn on (display does not light) replace the Control Board. If 24 VAC is not present at the Control Board, check the circuit breaker on the Transformer. If the circuit breaker has tripped, check for shorts. Also verify that neither of the Thermocouple leads is shorted to ground. If there is continuity to ground (earth) through either of the Thermocouple leads, the Thermocouple should be replaced. If the circuit breaker has not tripped, check for correct incoming power to the Transformer. If there is no power to the Transformer, recheck Step 1 and Step 2 above. If incoming voltage is correct to the Transformer, check for 24 VAC at the output of the Transformer. If 24 VAC is not present, TURN OFF INCOMING POWER TO THE OVEN. Then verify that all wiring connections to the Transformer are tight. Turn power back on and retry. If 24 VAC is still not present, replace the Transformer. If 24 VAC is present at the Transformer, but not at the Control Board, recheck circuit breaker on Transformer, wiring, and wire connections between the Transformer and Control Board.

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SYMPTOM	PROBABLE CAUSE/SOLUTION
Burner does not light, oven Controller is on, and switch on the Gas Valve (SV2) 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 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. **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. **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. **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 the Igniter tests ok, verify 24 VAC 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 24 VAC 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.**

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SYMPTOM	PROBABLE CAUSE/SOLUTION
Burner does not light, there is a visible glow on one side of the Burner, or at the center of the Burner on "T" Style Burners.	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 much more quickly from the line. 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 the pins are securely locked in to the connector body. **If Burner still does not light, proceed with the following:** 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—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. 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 the 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 Burner still does not light, 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/SOLUTION
Burner is not lighting, but Pilot appears to be lighting.	1. Verify that gas is going to the Burner using a manometer at the port outlet of the Honeywell Gas Valve. Check the Equipment Nameplate 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 the 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 the Pilot Orifice is not plugged. Check that Pilot flame is not set too low, and that the oven is not over vented.
Burner cuts out intermittently. **Note:** Do not run oven with Night Door(s) 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 the flame turned all the way up. If the correct pressure (as shown on the oven data plate) cannot be obtained, the gas supply is inadequate. Check for undersized Piping, shut off Valves, etc. 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 (clockwise) until the Pilot goes out. Then back the screw out to just beyond the point where the Pilot relights. 5. Excessive venting causing the Pilot flame to lift away from the Flame Rod. Correct the airflow problem and make sure the Igniter gasket is in place (gasket used only on Jet style Burners). Ideally there should be no discernible draft below the oven. 6. Defective Pilot/Igniter—replace. **If the Burner is still going out, replace the Gas Control Valve.**

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SYMPTOM	PROBABLE CAUSE/SOLUTION
Flame height is low. The flame should be approximately 10-12" inches tall when turned all the way up.	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. If the incoming pressure is good, there may be a blockage in the Throttle Control Valve. Disassemble and clean the Valve; see Common Repair Procedures section of this manual. 2. Debris in the Burner. Remove and clean; see COMMON REPAIR PROCEDURES section of this manual.

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SYMPTOM	PROBABLE CAUSE/SOLUTION
Soot is forming near the Burner. Note: Do not run oven with Night Door(s) 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. Contact your dealer.
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. Make sure Rear Panel has been installed on the oven.
Radiant Flame height is much higher on the Igniter side of the Burner, (usually the left side or center). 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.
Display reads "OPEN".	1. Check that Thermocouple is securely plugged into the receptacle on the oven Control Box. Check that wires are not loose or have been pulled out of the connector. Inspect Thermocouple wire for damage. 2. Damaged Thermocouple. Unplug the Thermocouple connector and check for continuity between the two leads. If there is no continuity replace the Thermocouple. **See the REPAIR PROCEDURES section of this manual.**

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COMMON REPAIR PROCEDURES

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

CHECKING BURNER GAS PRESSURES

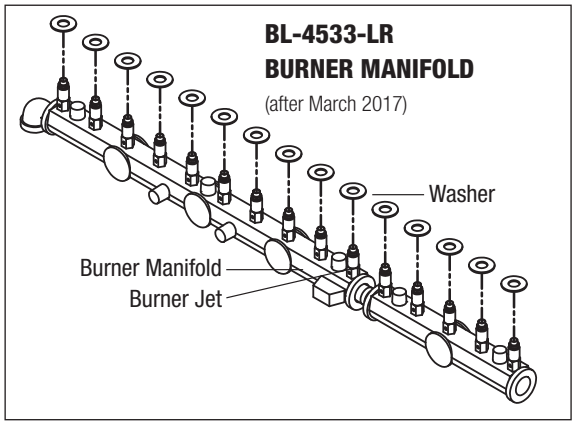
Proper gas pressure settings and an adequate incoming gas supply are critically important for any gas fired Wood Stone oven to operate correctly. Burner gas pressure measurements should be taken at the outlet port on the Gas Control Valve. Make sure that the Throttle Valve is fully open (maximum flame height) when taking the pressure reading. Where it is suspected that the incoming pressure is inadequate, test the incoming pressure (at the inlet port on the Gas Valve) with the oven off and then with the oven on and the Burner running. If the incoming pressure drops significantly with the oven running, and the proper pressures cannot be obtained at the Burner, 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 O.D. of 3/4" (19mm) - the same as that of the inlet connection on the oven. Depending on the length of the pipe run it may need to be larger in diameter. Consult a qualified gas Piping installer to deal with any supply Piping issues. The specified pressure for the Burner may be found on the Equipment Nameplate, located on the back of the Control Box, in the compartment below the oven.

REMOVAL AND CLEANING OF RADIANT JETTED 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. For Burner removal first 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.
4. Disconnect the Flexible Gas Piping where it attaches below the Burner.
5. From beneath the oven, 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 the 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. Clean out each Jet. 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.

   Note: On BL-4355-LR models built after March 2017, there will be a 7/16" SS Washer on the top of each Burner Jet. Make certain the washer is in place before reinstalling the Burner Manifold (see drawing below).
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.



REMOVAL AND CLEANING OF "T" 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. For Burner removal first turn the oven off. Turn off the gas supply to the oven.
2. Remove the Burner Tray from beneath the oven by removing the wing nut (towards the back of the oven), then pull the Tray slightly to clear the front tabs and lower it out.
3. Unplug the MOLEX connector for the Igniter from the Gas Valve.
4. Disconnect the Flexible Gas Piping where it attaches to the Burner.
5. Separate the Pilot Tube at the center union.
6. From beneath the oven, carefully remove the two 1/4" bolts and nuts holding the Burner in place and lower the Burner out of the well. **Caution:** Watch out for falling debris while removing the Burner.
7. Blow out Burner with air until debris is gone.
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.

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 on previous page. 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.

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GAS VALVE REPLACEMENT

Make certain that the replacement Valve is properly configured for the gas being used. Shut off the gas supply to the oven. Disconnect the gas supply at the Control Box. Unplug the wires from the Valve, and disconnect the Pilot Tube from the Valve. Remove the bottom cover from the Control Box. Remove the Cotter Key attaching the Throttle Control Rod to the Throttle Valve. Remove the Throttle Control Rod and Sleeve Bearing (Bearing new as of 1/26/17). Remove the "U" bolts that attach the Gas Valve Piping to the Control Box. Remove the Gas Valve and Piping. Remove the Piping from the Gas Valve and install it onto the new Valve, as it was on the old Valve. Reattach the Valve and Piping to the Control Box. Make sure that it is positioned so that the Throttle Control Rod will not bind. Install Sleeve Bearing and reconnect the Throttle Control Rod to the Throttle Valve, turn the Flame Height Control Knob to check for binding, reposition the Piping if necessary. Plug the Wire Harness and Igniter Wires into the new Valve. Reconnect the Pilot Tube. Reinstall the Control Box Cover and reconnect the gas supply. After installing the new Valve always check the Burner gas pressure and make the proper adjustments as necessary. The specified gas pressures can be found on the equipment data plate on the back of the Control Box.

THERMOCOUPLE REPLACEMENT

1. Unplug the Thermocouple wires from the back of the Control Box below the oven.
2. Loosen the Retaining Nut that secures the Thermocouple to the bottom of the oven.
3. Slide the Thermocouple out and remove the old fitting from the oven floor.
4. Using the original Thermocouple as a guide, mark the new Thermocouple, placing a mark on the sleeve at the same distance as the old fitting was locked on the original Thermocouple.
5. 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.
6. 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.
7. Plug the new Thermocouple into the back of the Control Box.

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DESCRIPTION	PART NUMBER
Controller (Control Board)	7000-0101
Control Overlay	7000-0928
Pilot / Igniter—Specify Gas Type	Contact Wood Stone
Pilot Gasket	7000-0777
Pilot Orifice—Specify Gas Type	Contact Wood Stone
SV-2 Gas Control Valve—Specify Gas Type	Contact Wood Stone
Transformer for 100-120 VAC input	7000-0734
Transformer for 200-240 VAC input	70CE-0081
2 A Fuse	70CE-0063
5 A Fuse	70CE-0061
Fuse Holder for either 5 A or 2 A Fuse	70CE-0065
Flame Height (Throttle) Control Valve	Contact Wood Stone
Control Rod Bushing	70ROC-0203
Burner Jet—Specify Gas Type (For Jet style Burners only)	Contact Wood Stone
Flame Retention Spring	RP-0017
Thermocouple	7000-0727-4343
Flex Piping (Connects to Burner—Specify # of Burners)	7000-0195
Pilot Tube—Specify Oven Model	7000-0250
Pilot Tube End Fittings	7000-0251
Sleeve Bearing	7000-1777

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SPECIFICATIONS

Electrical and gas service to this appliance should be installed in accordance with all relevant national and local codes and in a manner acceptable to the authority having jurisdiction.

ELECTRICAL REQUIREMENTS

Connection is made at the junction box on the back of the oven Control Box. See the wiring diagram located on the oven. Appliances must be electrically grounded.

For Bistro / Phoenix Models 3030, 4343, 4355, 4836
100-120 VAC: 2 A, 60 Hz
220-240 VAC: 1 A, 60 Hz (voltage specified on the oven data plate)

For Dual Burner Bistro / Custom Models 4343, 4355, 4836
100-120 VAC: 2 A, 60 Hz
220-240 VAC: 1 A, 60 Hz (voltage specified on the oven data plate)

This oven requires no modifications or adjustments for use at high altitudes.

The installation must conform with local codes, or in the absence of local codes with the National Fuel Gas Code, ANSI 223.1 or the Natural Gas Installation Code, CAN/CGA-B149.1, as applicable.

Single Burner Models: SV-2 is the gas control valve that operate the Radiant Burner. The manifold pressures are checked at the outlet port on the individual gas valves.

Dual Burner Models: SV-2 and SV-3 are the gas control valves that operate the Radiant Burners. The manifold pressures are checked at the outlet port on the individual gas valves.

The burner manifold pressures have been adjusted and tested at the factory. A variety of factors can influence these pressures, so be sure to test the individual burner manifold pressures and adjust the valves as necessary to achieve the required pressures.

NOTE: The gas valves are shipped in the **ON** position.

GAS CONNECTION

Bistro and Phoenix ovens are equipped with a 3/4" (19mm) FNPT gas connection. 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 A FLAME TO TEST FOR LEAKS!**

Wood Stone recommends that the oven be equipped with a manual, individual shutoff valve, located between the oven and the main gas supply, and that this shutoff valve (supplied by others) be left readily accessible. Wood Stone also recommends that inspection and maintenance of the burners and gas piping connections of this appliance be performed at regularly scheduled intervals and only by professional gas appliance service agencies.

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STANDARD BURNER TYPE CONFIGURATIONS

- BISTRO LINE (-RFG)
  - BL-3030, BL-4343 and BL-4355: T-Burner
  - BL-4836: 10-Jet Burner
- PHOENIX LINE (-RFG)
  - PX-3030: 7-Jet Burner
  - PX-4343, PX-4355-RFG, PX-4836: 10-Jet Burner
- DUAL BURNER MODELS: BISTRO & PHOENIX (-RFG-LR)
  - 4343, 4836: 10-Jet Burner
  - 4355: 15-Jet Burmer

MAXIMUM HOURLY INPUT RATES / FACTORY SPECIFIED BURNER MANIFOLD PRESSURES

		NG		LP		HLP	
Model	Burner Type	Input Rate (BTU/hr / kWh)	Manifold Pressure* (W.C. / mbar)	Input Rate (BTU/hr / kWh)	Manifold Pressure* (W.C. / mbar)	Input Rate (BTU/hr / kWh)	Manifold Pressure* (W.C. / mbar)
Single Burner							
3030-RFG	T-Burner	55,000 BTU/hr 16.1 kWh	4.5" W.C. / 11.2 mbar	42,000 BTU/hr 12.3 kWh	7" W.C. / 17.4 mbar	na	
	7-Jet		3.75" W.C. / 9.3 mbar	48,000 BTU/hr 14.0 kWh		55,000 BTU/hr 16.1 kWh	7" W.C. / 17.4 mbar
4343-RFG 4355-RFG	T-Burner	80,500 BTU/hr 23.3 kWh	4.5" W.C. / 11.2 mbar	68,000 BTU/hr 19.9 kWh	9" W.C. / 22.3 mbar	80,500 BTU/hr 23.3 kWh	na
	10-Jet			80,500 BTU/hr 23.3 kWh	7" W.C. / 17.4 mbar		5.25" W.C. / 13.0 mbar
4836-RFG	10-Jet	80,500 BTU/hr 23.3 kWh	4.5" W.C. / 11.2 mbar	80,500 BTU/hr 23.3 kWh	7" W.C. / 17.4 mbar	80,500 BTU/hr 23.3 kWh	5.25" W.C. / 13.0 mbar
Dual Burner							
4343-RFG-LR	10-Jet	105,000 BTU/hr 30.8 kWh	4.5" W.C. / 11.2 mbar	100,000 BTU/hr 29.3 kWh	10" W.C. / 24.9 mbar	100,000 BTU/hr 29.3 kWh	10" W.C. / 24.9 mbar
4355-RFG-LR	15-Jet	151,000 BTU/hr 44.3 kWh		151,000 BTU/hr 44.3 kWh		151,000 BTU/hr 44.3 kWh	10" W.C. / 24.9 mbar
4836-RFG-LR	10-Jet	105,000 BTU/hr 30.8 kWh		100,000 BTU/hr 29.3 kWh		100,000 BTU/hr 29.3 kWh	10" W.C. / 24.9 mbar

***** Burner Manifold pressure for other types of gas may vary - refer to the data plate on the oven.

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Maximum inlet gas pressure must not exceed 14" W.C. or 1/2 psi (34mbar)

GAS INLET PRESSURE

For ovens running on natural gas, an inlet pressure of 7 to 10" W.C. (17.5–25mbar) 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. or 1/2 psi (34mbar), 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. (25–30mbar) 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. or 1/2 psi (34mbar), 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 insure 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.

GAS CODE LIMITATIONS

The installation of this appliance must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 or The Natural Gas Installation Code CAN/CGA-B149.1 as applicable.

The appliance and its individual shutoff valve (supplied by others) must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.45 kPa).

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve (supplied by others) during any pressure testing of the gas supply piping system at test pressure, equal to or less than 1/2 psi (3.45 kPa).

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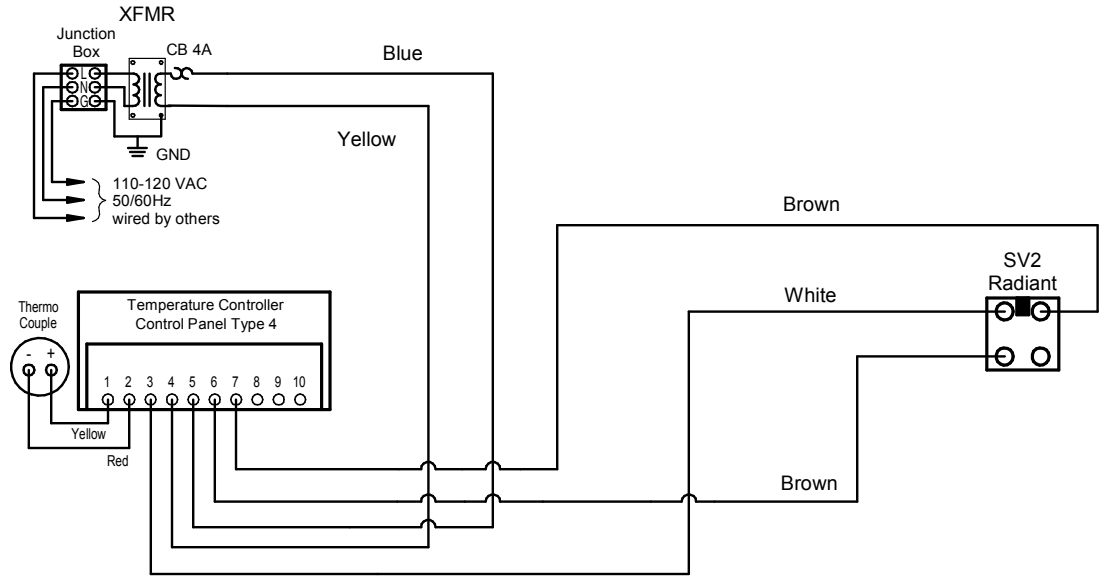
SINGLE BURNER MODELS

100-120 VAC



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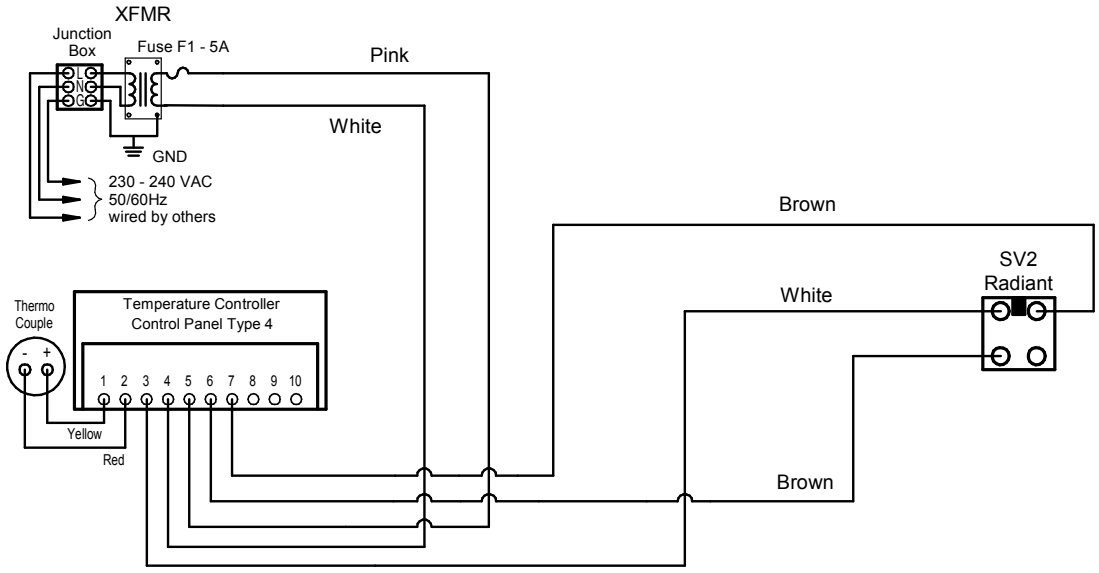
DIAG #: WD070 Rev. 1
DATE: 2/2/2017

230-240 VAC



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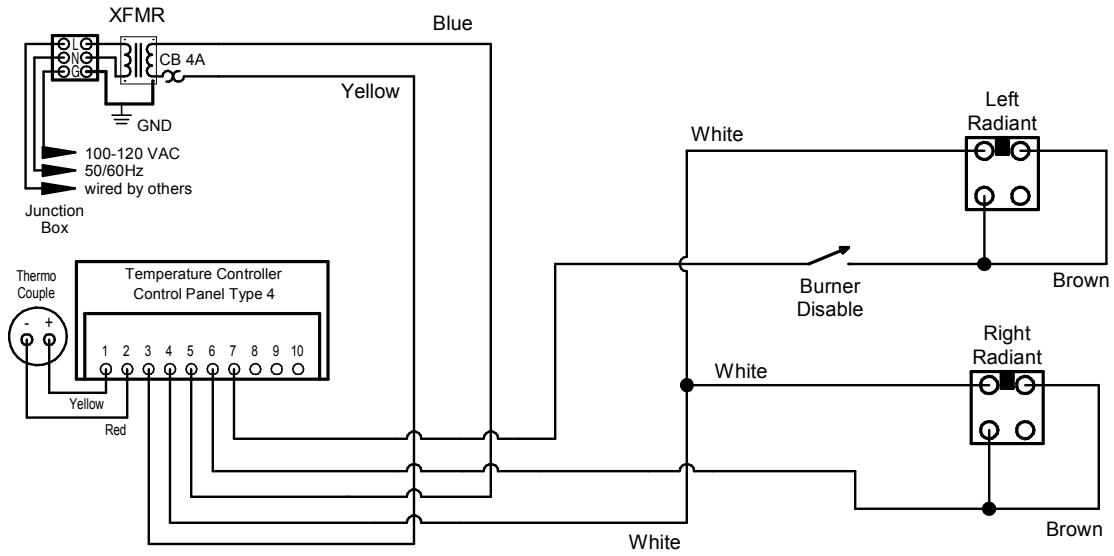
DIAG #: WD077 Rev. 1
DATE: 2/2/2017

DUAL BURNER MODELS

100-120 VAC



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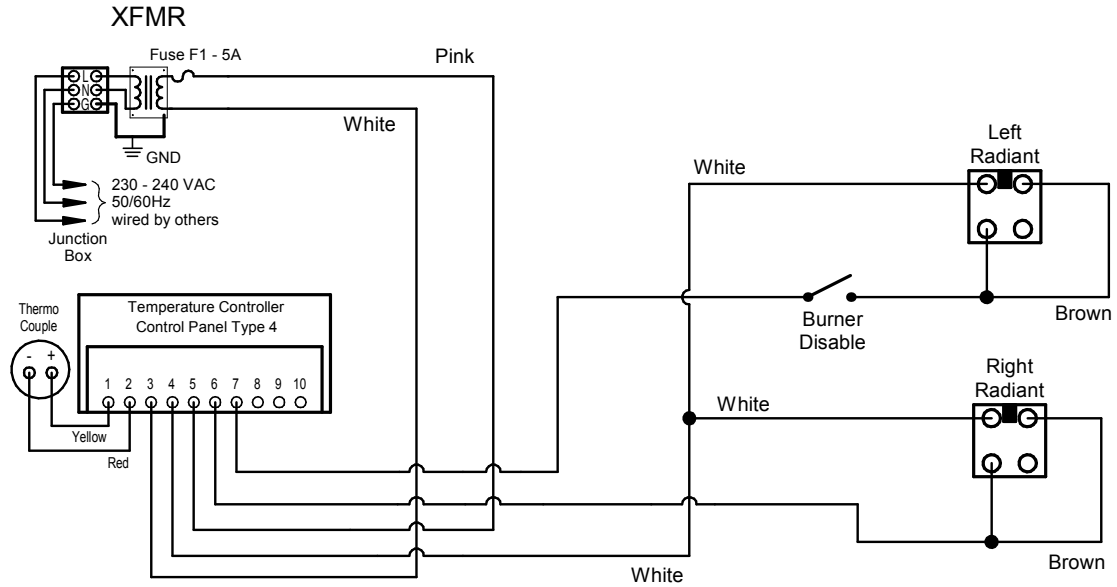
DIAG #: WD075 Rev. 2
DATE: 2/2/2017

220-240 VAC



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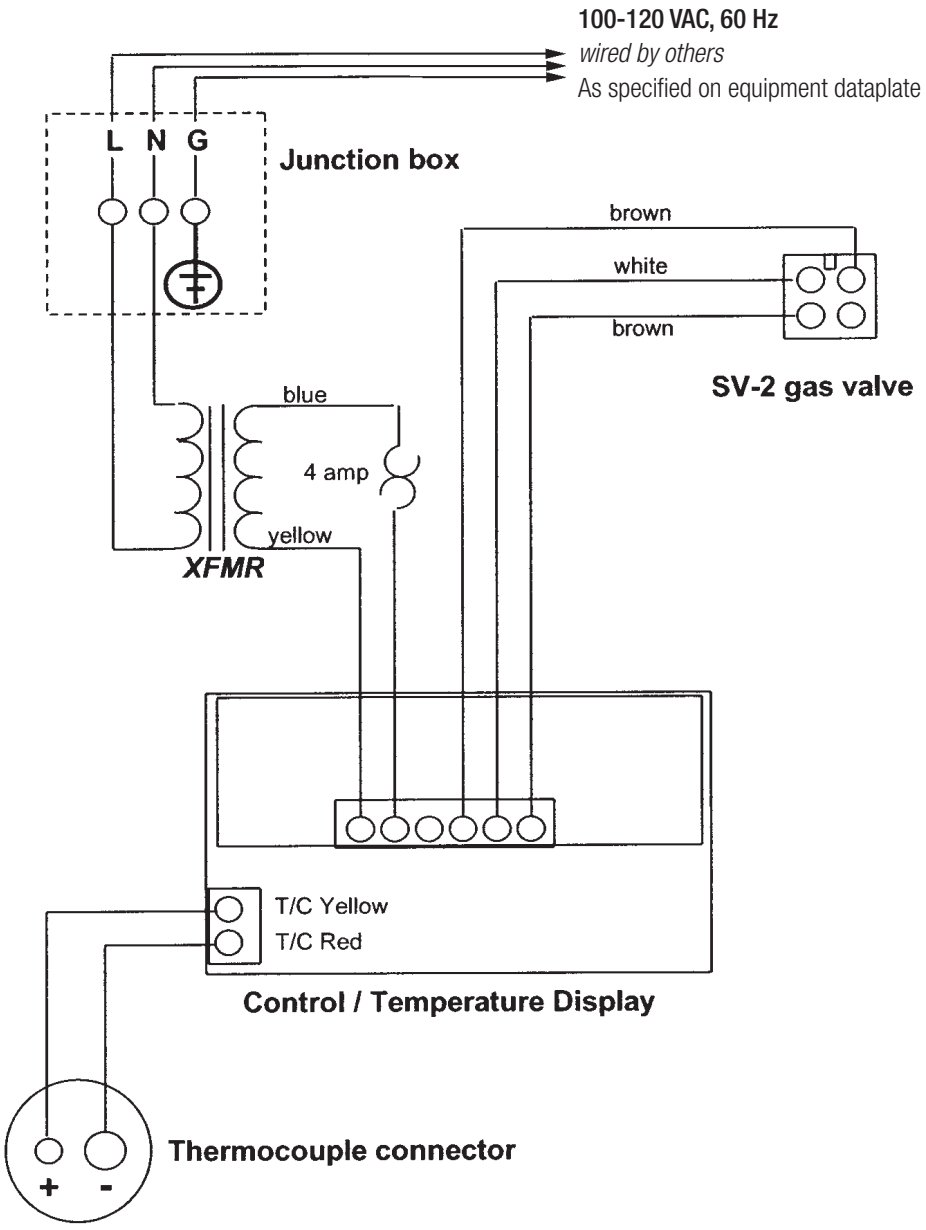
DIAG #: WD078 Rev. 1
DATE: 2/2/2017

SINGLE BURNER MODELS
100-120 VAC MODELS WITH HOT SURFACE IGNITION

ON MODELS PRODUCED **BEFORE** APRIL 2005

100-120 VAC



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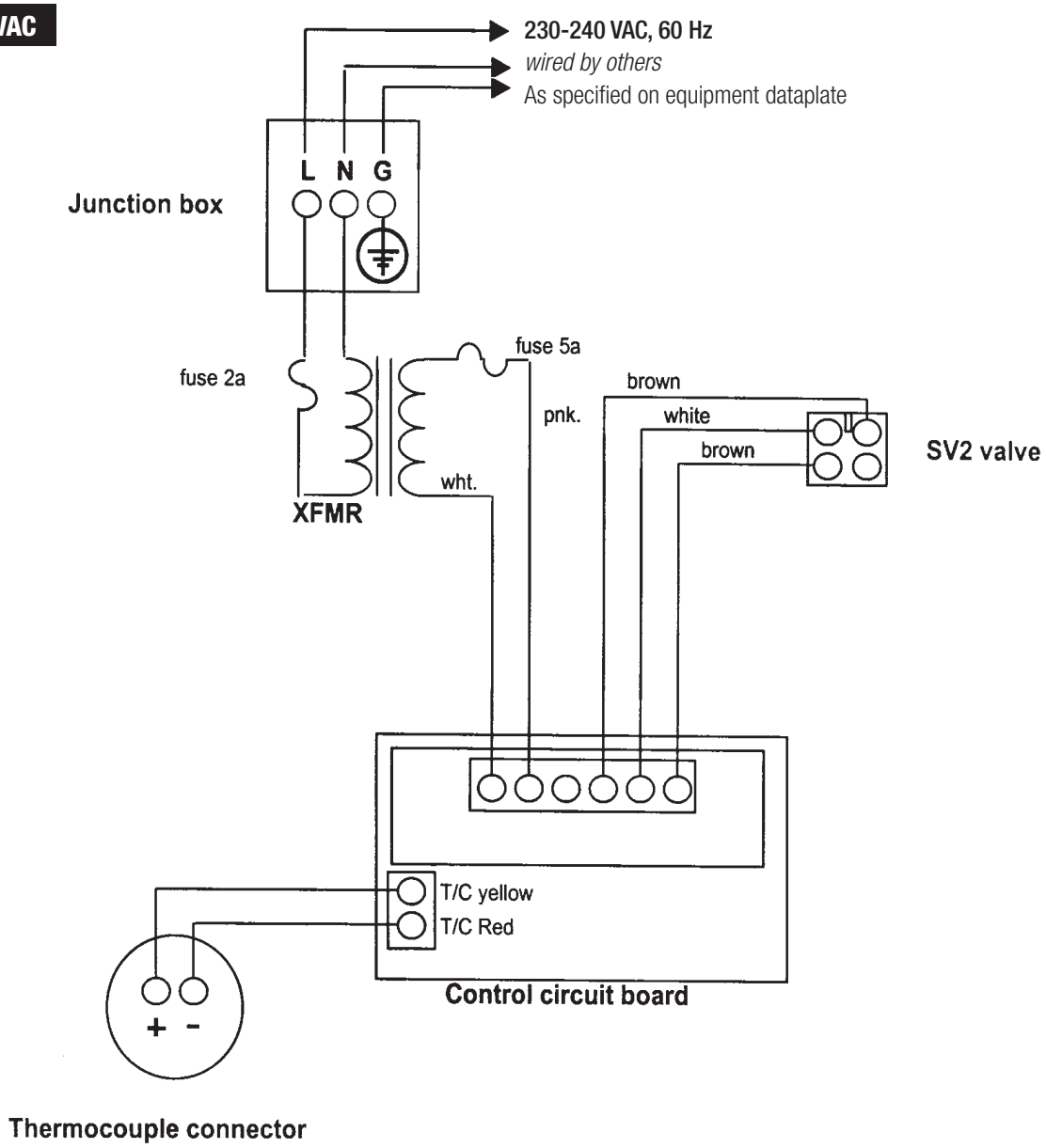
SINGLE BURNER MODELS
220-240 VAC MODELS

ON MODELS PRODUCED **BEFORE** APRIL 2005

220-240 VAC



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TECHNICAL VERIFICATION CHECKLIST

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

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

OVEN SERIAL NUMBER: | | | | | | | | | | | | | | | | |

	CHECKLIST ITEMS
☐Yes ☐No	1. Is the Rear Stand Panel installed? **Note:** The Rear Panel **must** be installed for proper operation of the oven. If not installed, call Wood Stone immediately at **800.988.8103**.
☐Yes ☐No	2. Is the Incoming Gas Piping properly sized—minimum 3/4" O.D.
☐Yes ☐No	3. Gas Line Shut Off Valve is minimum 3/4" O.D.
☐Done	4. Static (no load) incoming gas pressure is: _____ W.C.
☐Done	5. ☐ Verify all Burners are lighting. ☐ Incoming gas pressure under load with all Burners running is: _____ W.C. **Note: Must match pressure listed on Data Plate.**
☐Done	6. Radiant Burner Manifold pressure with all Burners running and throttle full on is: _____ W.C. Adjust if necessary to match Data Plate on oven.
☐Done	7. Radiant Burner Manifold Pressure with all other gas appliances fired (if possible) is: _____ W.C.
☐Done	8. Check all Control Board Wires for tightness at the terminal strip.
☐Done	9. Verify all Controller functions working correctly.
☐Done	10. Visually inspect Igniter Wires and Wiring Harnesses for damage.
☐Done	11. ☐Check Pilot/Igniter Mounting Screws are tight. ☐Verify tightness of Pilot Tubes and check for Leaks.
☐Done	12. Leak check all Gas Fittings, including incoming gas connection.
☐Done	13. Check tightness of Burner Mounting Bolts and Screws.
☐Done	14. Verify all Nuts, Unistrut Mounting Bolts and Pipe Clamps are tight.
☐Yes ☐No	15. **If equipped,** is the Burner Guard in place?
☐Done	16. 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 at 360.650.1166

Sales Order #
FOR OFFICE USE ONLY

M0008.09 DECEMBER 2017

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

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PG **30** OF 32

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 wood-fired equipment configurations, in the event that pressed log products of any type have been burned in the equipment.
9. In coal-fired oven configurations, in the event any type of coal other than anthracite coal fuel has been used.
10. 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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An ongoing program of product improvement may require us to change specifications without notice.