

Service Manual



WHATCOM **GAS VERTICAL ROTISSERIE** Rotisserie

*Gas-Fired, Stand, Double Door and
Countertop Models*

WHATCOM WS-GVR-(6,10)-(CT)-(DD)
WS-GVR-10-(CT)-(DD)-CE



WOOD STONE CORPORATION

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SERVICE MANUAL FOR WOOD STONE WHATCOM GVR GAS-FIRED VERTICAL ROTISSERIE WS-GVR-10 MODELS

This manual is intended for use **ONLY** by qualified service personnel. There are no user serviceable parts in this appliance. Any service or repair of this appliance must be performed by qualified and properly trained personnel. Please adhere to the warnings and cautions below, as well as all warnings and cautions found in the appliance Installation and Operation Manual. Please do not hesitate to contact the Wood Stone Service Department if you have any questions.

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 fonctionnement et d'entretien avant de procéder à son installation ou entretien.

IF THIS APPLIANCE IS NOT PROPERLY INSTALLED A FIRE COULD RESULT. TO REDUCE THE RISK OF FIRE, FOLLOW THE INSTALLATION INSTRUCTIONS INCLUDED IN THE INSTALLATION AND OPERATION MANUAL. A MAJOR CAUSE OF APPLIANCE RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS OF UTMOST IMPORTANCE THAT THIS APPLIANCE BE INSTALLED ONLY IN ACCORDANCE WITH THE INSTRUCTIONS FOUND IN THE INSTALLATION AND OPERATION MANUAL.

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.

Always keep the area under and around this appliance free and clear of any and all combustible materials.



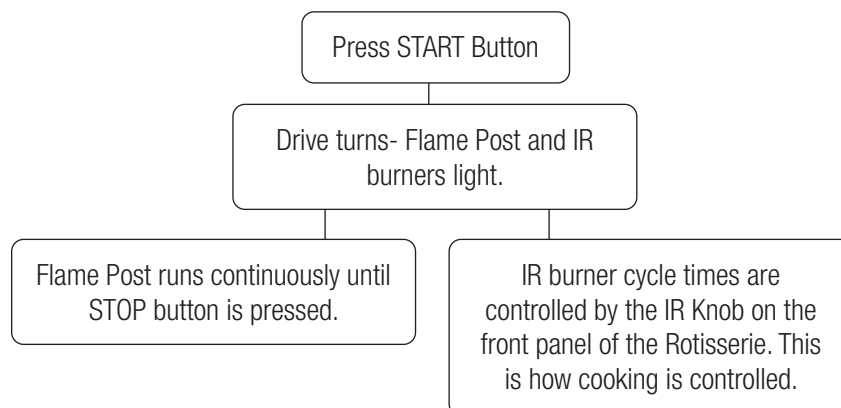
The Wood Stone Gas Vertical Rotisserie has been tested and approved by Intertek Testing Services and conforms to ANSI Z83.11:2016 Ed. 4; is certified to CSA 1.8:2016 Ed. 4; and to NSF/ANSI 4:2016.



WHATCOM VERTICAL ROTISSERIE OPERATION SEQUENCE

The Whatcom GVR is a gas-fired vertical rotisserie. It utilizes a unique drive system that allows food to be hung on vertical spits and hooks so that different types of food may be cooked at the same time without cross contamination.

Operation is quite straightforward. See diagram below.



FUNCTIONS

- **STOP Button** - Pressing STOP turns OFF drive and all flames.
- **JOG Button**. When the rotisserie is stopped (OFF), the JOG button may be used to rotate the rotisserie drive to make loading the rotisserie easier. Press and hold the JOG button as necessary to rotate the rotisserie drum to the desired position.
- **Rear Door Option**: If rear door is opened while the unit is running, rotisserie drive and all flames will shut down immediately. Once the rear door has been closed, press the START button to resume operation.
- **IR Knob**. The GVR utilizes a “percent” timer module to control the cycle times of the IR burners.
 - The percent timer runs in 10 minute cycles whenever the rotisserie is running.
 - The IR Knob controls the percentage of the 10 minute cycle that the IR burners will fire, i.e. 10% = 1 minute.

For example, if the IR knob is turned to 60:

- The IR burners will be on 60% of the time.
 - That is, the IR burners will fire for 6 minutes, turn OFF for 4 minutes.
- This cycle will run until the unit is turned OFF, or the IR Knob setting is changed.

Note the Flame Post Burner is always lit when the unit is ON; it is not influenced by the timer.

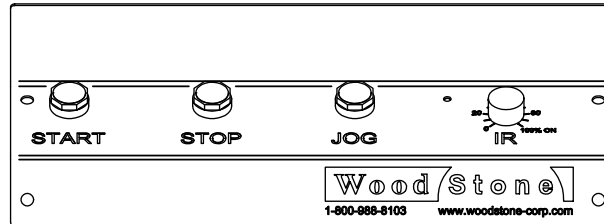
- **Water Bath and Drain**. This rotisserie utilizes a water bath in the cooking chamber and must be connected, utilizing a flexible water line, to a potable water supply. This unit also has a drain connection, and must be connected to a suitable drain line served by a grease trap. The water bath has drain plug with a built in overflow feature. Use the water knob on the front of the rotisserie to turn on the water to fill the water bath. The water bath must be used anytime the rotisserie is in operation to prevent damage to the unit, and to minimize the chance of a grease fire in the rotisserie. Fill the water bath until it begins to overflow slightly through the drain plug. Adjust the water so that there is just a slight continuous amount of water flowing through the drain plug. If the water is left on at too high of a flow rate, the cold water will have a cooling effect on the cook chamber which will cause poor performance and longer cook times. All plumbing connections must be made in accordance with all pertinent local and national codes.

**VENTILATION:**

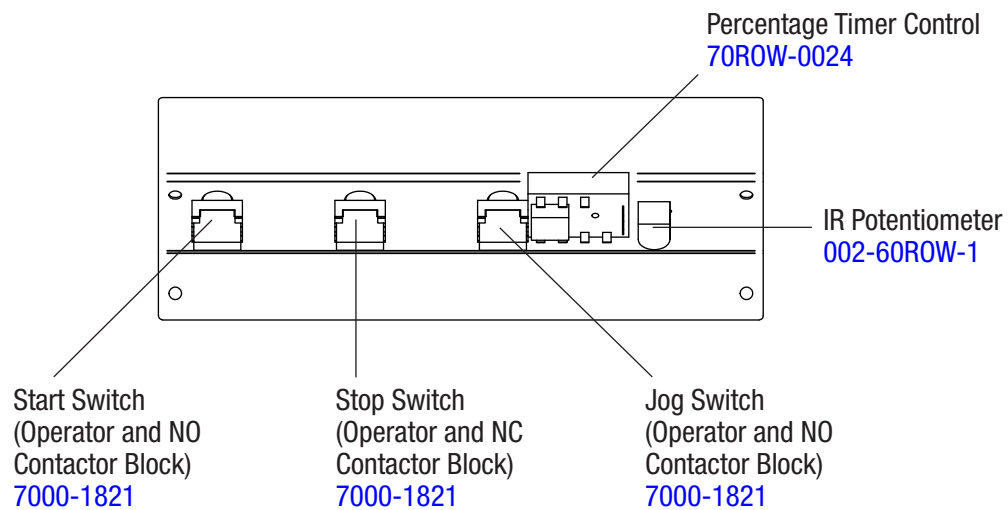
This appliance must be vented with a Type 1 hood in accordance with NFPA 96, and any additional applicable local requirements. Makeup air must not be aimed at the rotisserie as excessive air blowing at or into the unit will cause lighting issues which will not be covered by the WARRANTY.



CONTROL PANEL - FRONT VIEW

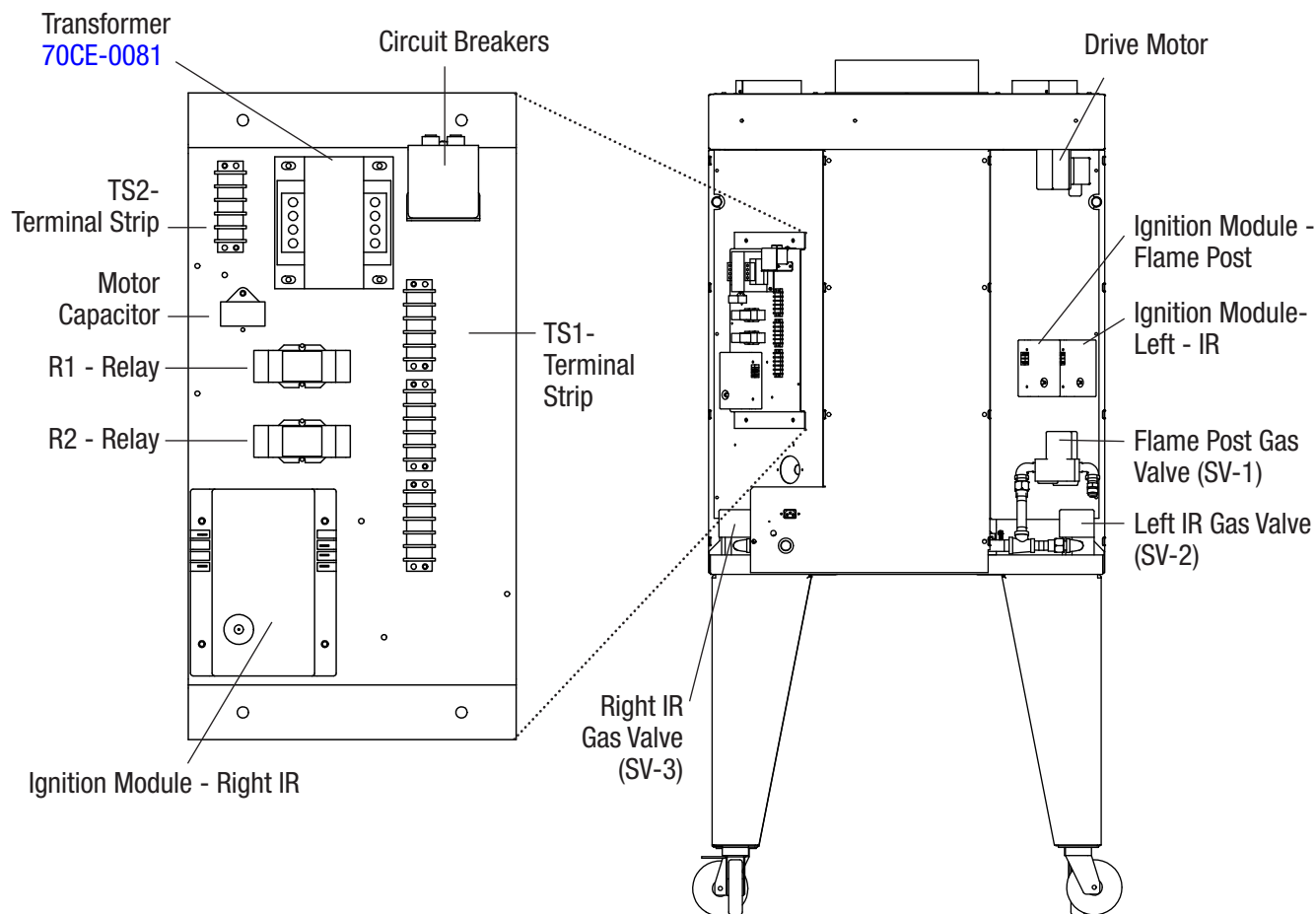


CONTROL PANEL - INTERNAL VIEW





ELECTRIC AND GAS COMPONENTS - REAR VIEW



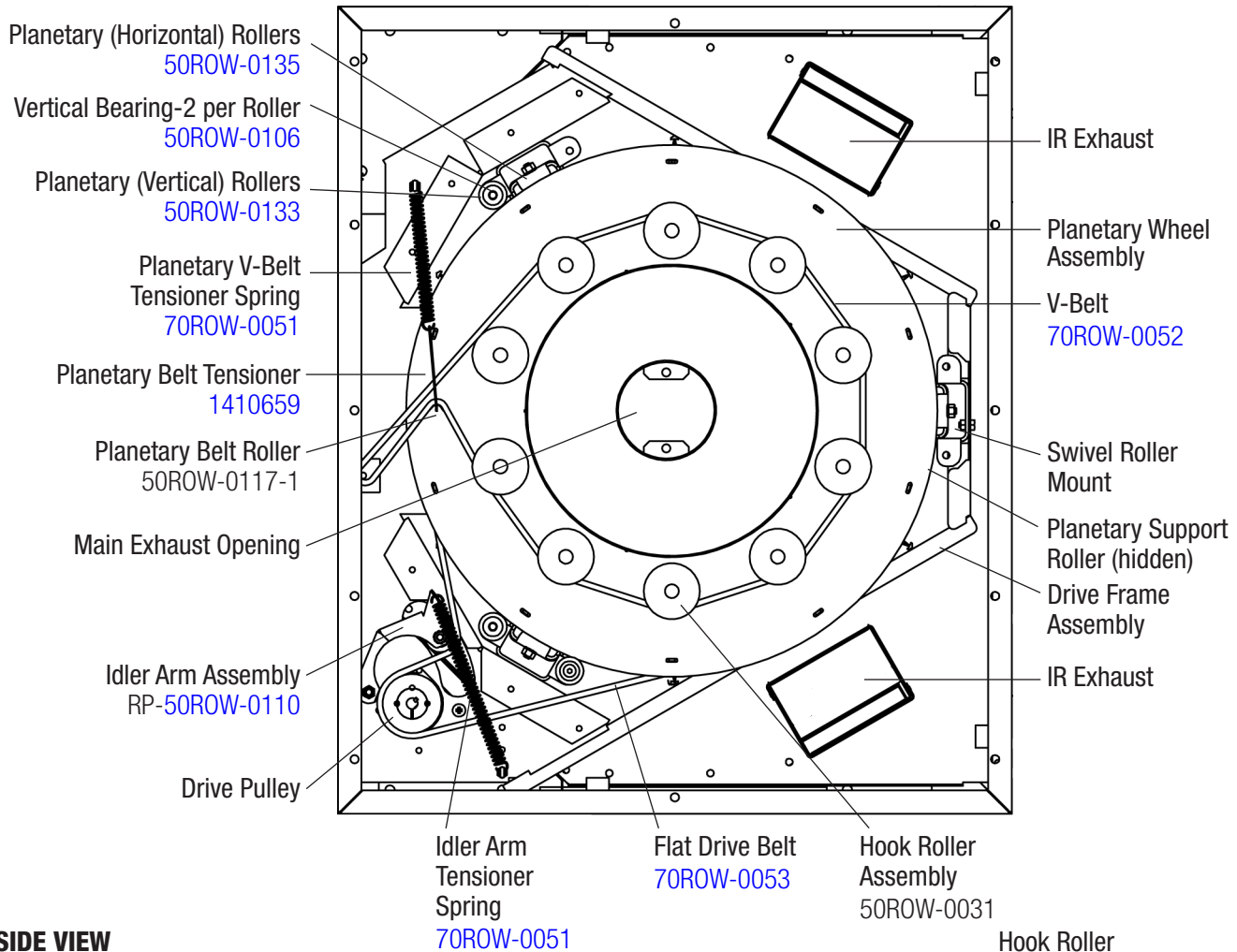
Description	Part no.
Motor Capacitor - 120 VAC	70ROW-0004-1
Motor Capacitor 230-240 VAC	Contact Factory
Ignition Module	70ROC-0005
Ignition Module-CE Model	70ROW-0049
R1 or R2 Relay	70ROC-0300
Drive Motor 120 VAC	70ROW-0004
Drive Motor 230-240 VAC	70ROW-0042
Transformer 230 VAC	70CE-0081

Description	Part no.
Circuit Breaker 5 A	7000-0068
Circuit Breaker 3 A	7000-0060
Circuit Breaker 1 A (CE models only)	7000-0097
50" Igniter Wire	70ROC-0007
80" Igniter Wire (Older models)	70ROW-0015
SV-1, SV-2, SV-3 Gas Valves (Specify NG or LP)	70ROC-0004
SV-1, SV-2, SV-3 CE Gas Valves (Specify NG or LP)	70CE-0010

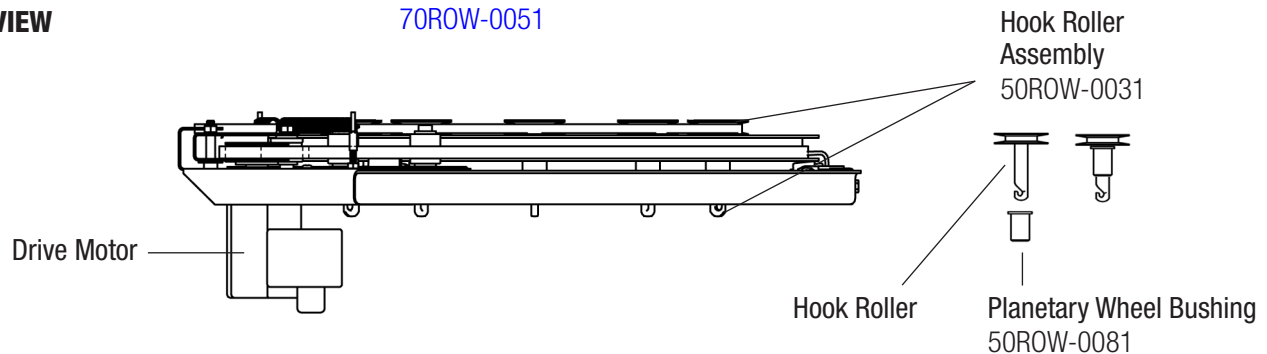


10-SPIT DRIVE ASSEMBLY

TOP VIEW



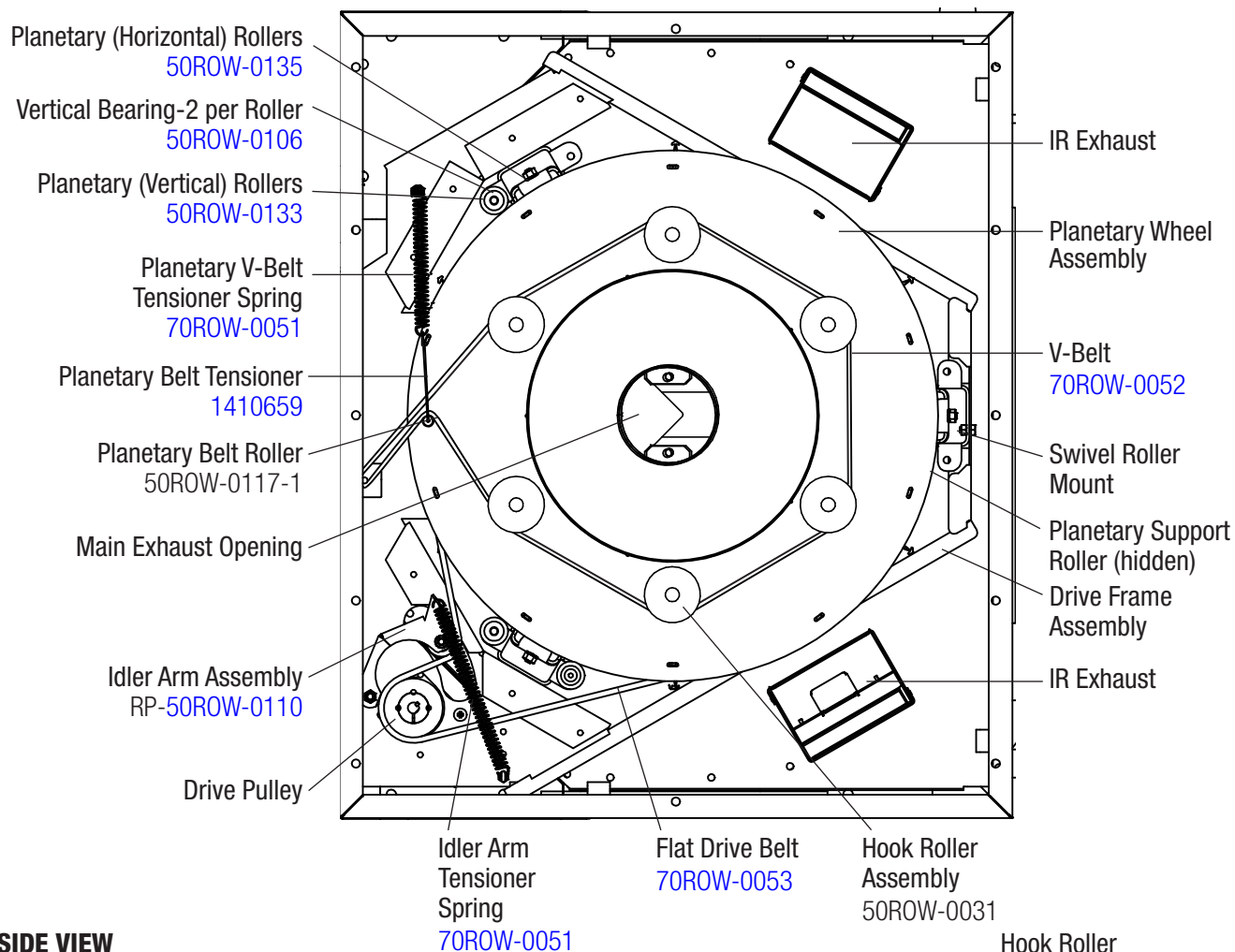
SIDE VIEW



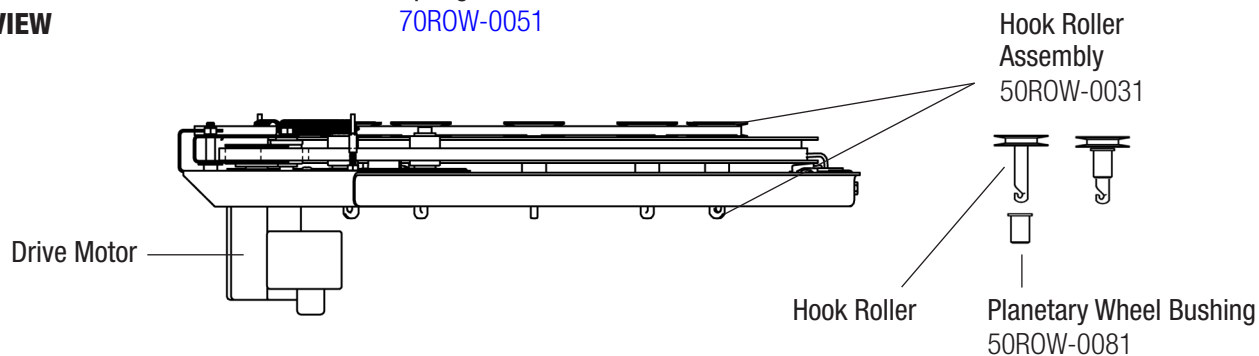


6-SPIT DRIVE ASSEMBLY

TOP VIEW

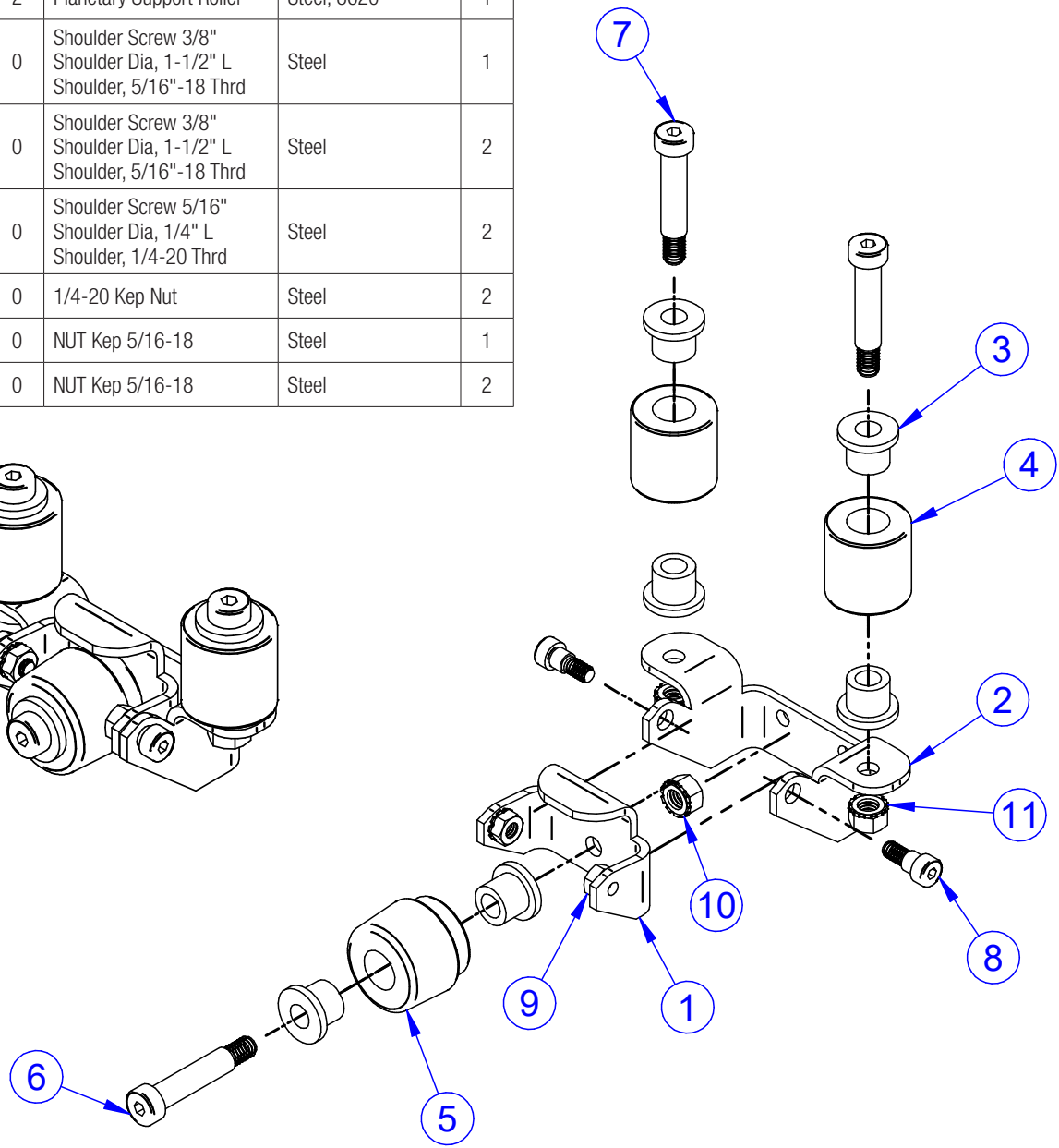
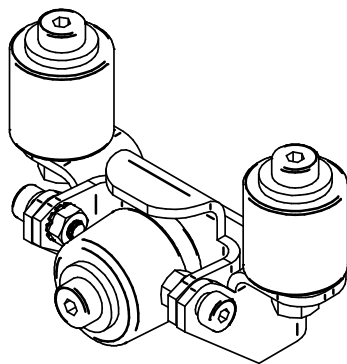


SIDE VIEW





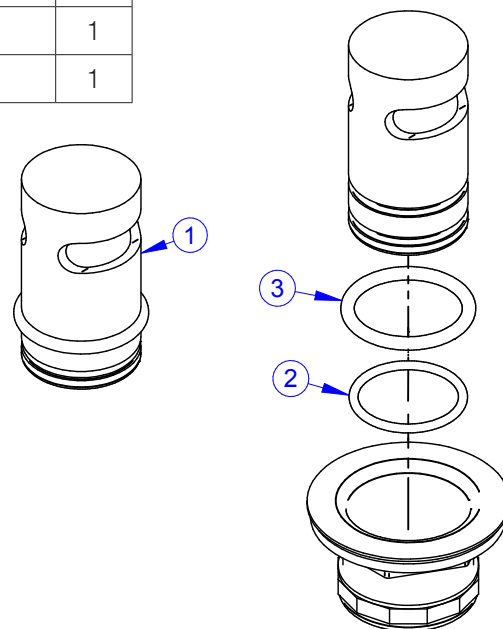
Item	Part Number	Rev	Description	Material	Qty
1	1570653	3	Planetary Bearing Mount	Stainless Steel, 304	1
2	1570654	3	Planetary Gimbal Base	Stainless Steel, 304	1
3	50ROW-0106	2	Planetary Bearing	PTFE, Mechanical Grade	6
4	50ROW-0133	1	Planetary Vertical Roller	Steel, 8620	2
5	50ROW-0135	2	Planetary Support Roller	Steel, 8620	1
6	9000-0552	0	Shoulder Screw 3/8" Shoulder Dia, 1-1/2" L Shoulder, 5/16"-18 Thrd	Steel	1
7	9000-0552	0	Shoulder Screw 3/8" Shoulder Dia, 1-1/2" L Shoulder, 5/16"-18 Thrd	Steel	2
8	9000-0553	0	Shoulder Screw 5/16" Shoulder Dia, 1/4" L Shoulder, 1/4-20 Thrd	Steel	2
9	9000-0554	0	1/4-20 Kep Nut	Steel	2
10	9000-0628	0	NUT Kep 5/16-18	Steel	1
11	9000-0628	0	NUT Kep 5/16-18	Steel	2





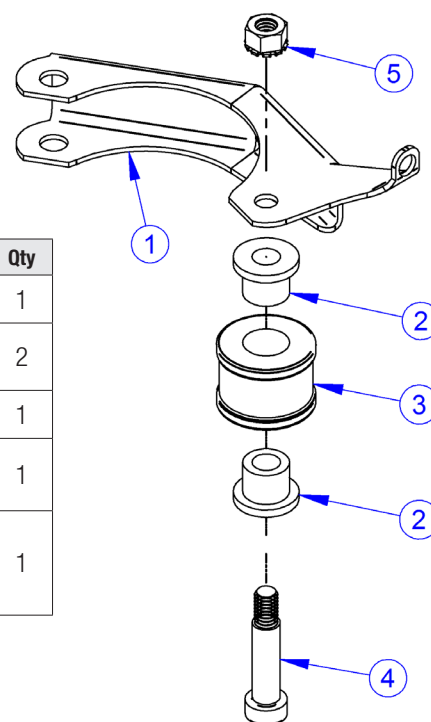
DRAIN PLUG ASSEMBLY

Item	Part Number	Rev	Description	Material	Qty
1	50ROW-0021	0	Drain Plug w/ O-Rings (complete)	Aluminum	1
2	7000-0786	0	O-Ring, 1/8" DIA x 1-3/8" ID	Buna-N	1
3	7000-0827	0	O-Ring, 3/16" DIA x 1-1/2" ID	Buna-N	1



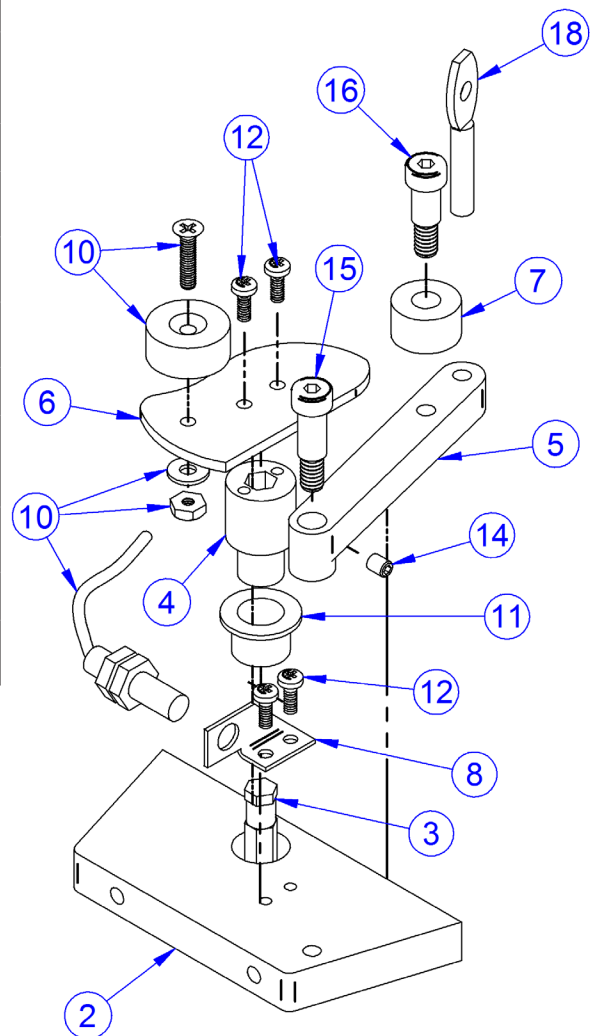
IDLER ARM ASSEMBLY

Item	Part Number	Rev	Description	Material	Qty
1	1550652	0	Idler Arm	Stainless Steel, 304	1
2	50ROW-0106	2	Planetary Bearing	PTFE, Mechanical Grade	2
3	70ROW-0031	2	Idler Wheel	Mild Steel	1
4	9000-0551	0	Shoulder Screw 3/8" Shoulder Dia, 1-1/4" L Shoulder, 5/16"-18 Thrd	Steel	1
2	9000-0628	0	Znc-Pltd Stl Machine Screw Nut W/ Tooth Washer 5/16"-18 Screw Size, 1/2" Width, 17/64" Height	Steel	1





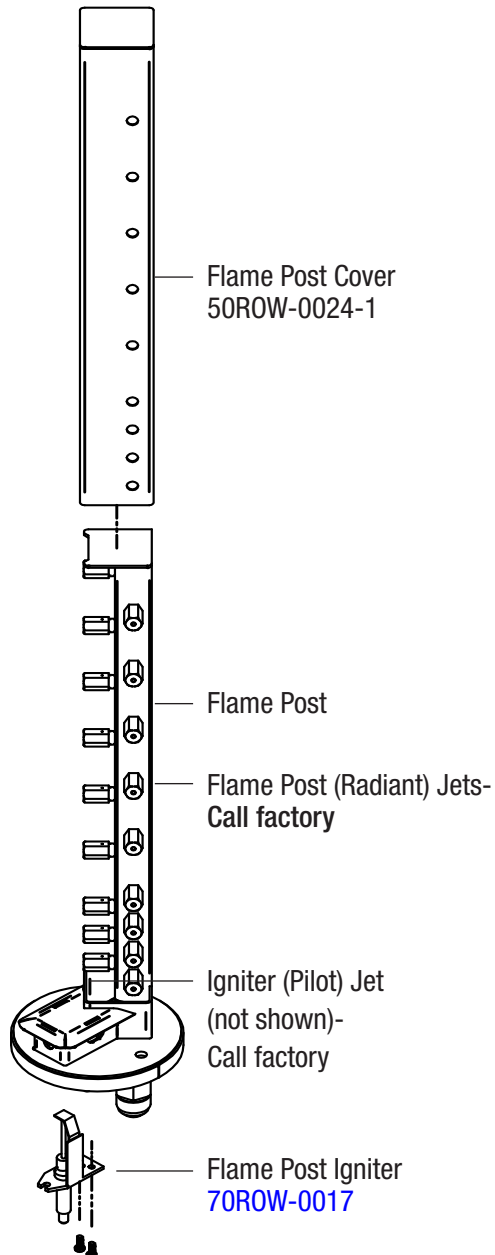
Item	Part Number	Rev	Description	Material	Qty
1	1630661	0	Rear Door Hinge Cover	Stainless Steel, 304	1
2	50ROW-0057	1	Rear Door - Upper Bearing Mount	6061 Aluminum	1
3	7000-0827	0	Rear Door - Drive Link	TYPE 304 SS	1
4	50ROW-0058	1	Rear Door - Upper Bearing	brass	1
5	50ROW-0061	4	Cam Follower Support	Aluminum, 6061-T6	2
6	50ROW-0066	2	Rear Door - Cam	Aluminum, 6061-T6	3
7	50ROW-0067	0	Rear Door - Cam Follower	brass	4
8	50ROW-0068	1	Mag Switch Mounting Bracket - Rear Door	10 Ga TYPE 304 SS	5
9	70ROW-0034	0	Steel Extension Spring, 6-1/2" Length, 5/8" OD, .080" Wire	Zinc	1 unit
10	70ROW-0047	0	Magnetic Switch Kit		1
11	70ROW-0048	0	Bearing - 1/2" Shaft Dia, 5/8" Od, 1/2" Length	Nylon, general purpose	1
12	9000-0054	0	#8-32 x 3/8, Screw, Pan HD, Phil, S Zinc Plated	steel	4
13	9000-0275	0	Screw, Truss, 1/4-20 x 1/2", SS	Stainless Steel, 304	4
14	9000-0479	0	10-32 x 3/16 Set Screw		1
15	9000-0487	0	Shoulder Screw 5/16" Dia x 5/8" Long, 1/4-20 Thread	Alloy Steel	1
16	9000-0489	0	Shoulder Screw 5/16" Dia x 1/2" Long 1/4-20 Thread		1
17	9000-0497	0	1/4"-20 Eye Nut, Female	Steel	1
18	9000-0504	0	1/4-20 x 7/8 Eye Machine Screw	Stainless Steel, 304	1



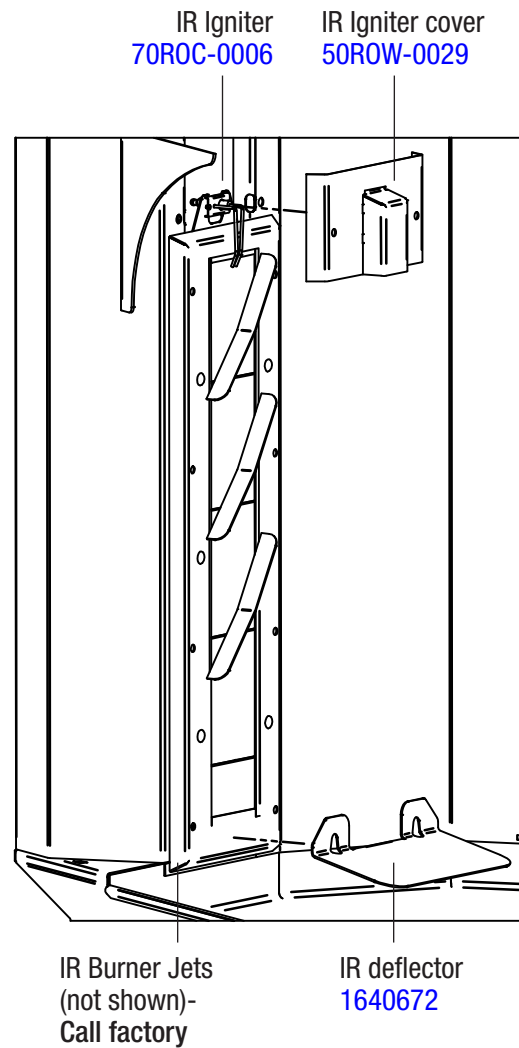


BURNERS

FLAME POST (RADIANT)

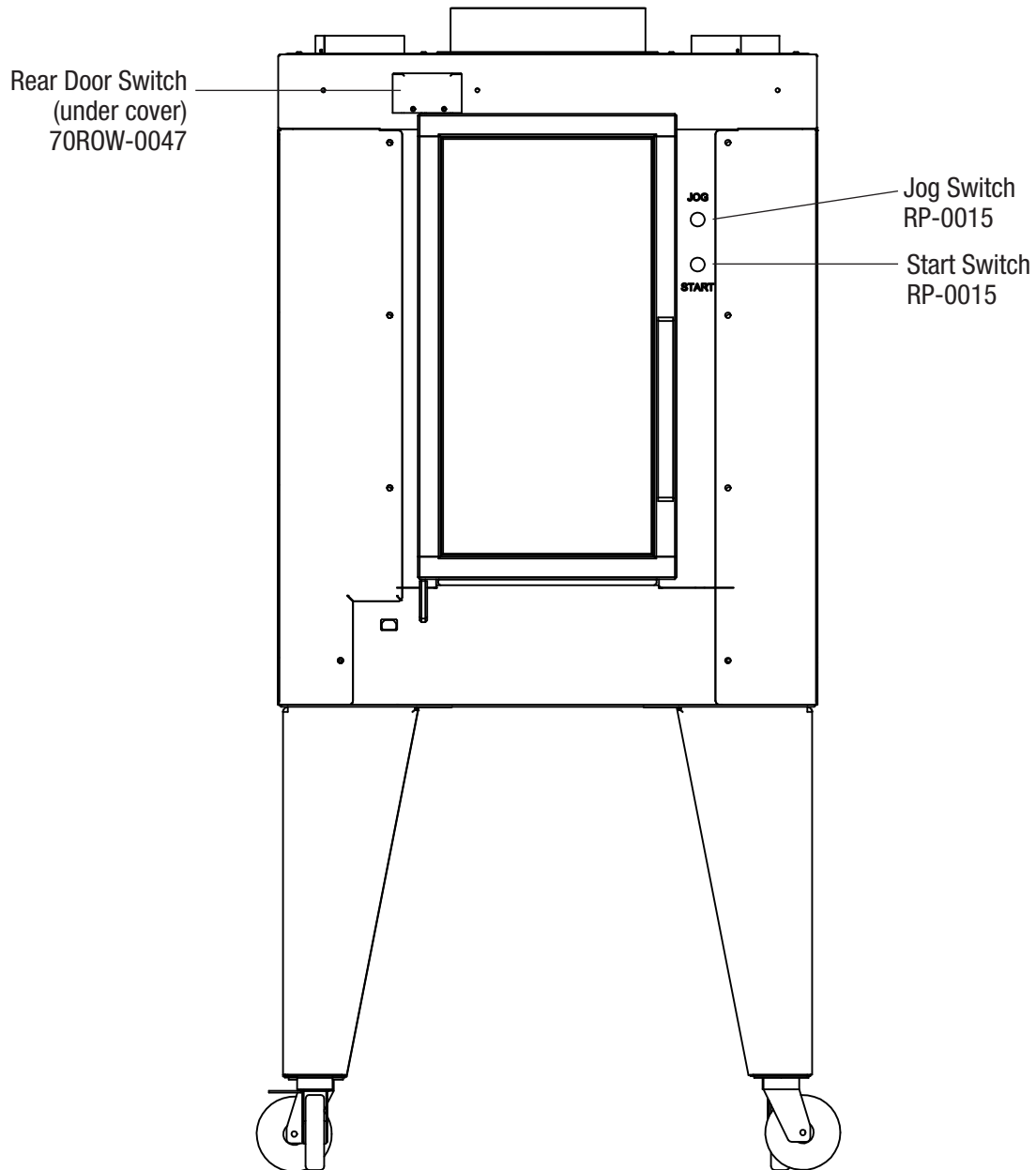


IR BURNER





MODEL WITH OPTIONAL REAR DOOR





SYMPTOM	PROBABLE CAUSE/SOLUTION
Rotisserie does not turn on.	1. No power to rotisserie. Check fuse or breaker for circuit supplying the rotisserie. Verify that incoming power matches that shown on the equipment data plate. 2. Circuit breaker on rotisserie tripped. Remove right side, rear corner panel to access circuit breakers. If breaker(s) trip repeatedly check wiring and connections for damage or shorts. 3. Loose wire in control panel. Check wiring connections to the START, STOP and JOG switches. 4. Check 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 ROTISSERIE. Then verify that all wiring connections on the transformer are tight, and that the wires are connected as specified for the voltage supplied on the data plate. Turn power back on and retry. If 24 VAC is still not present at the output of the transformer, replace the transformer.
No burners light, rotisserie drum is turning.	No gas to rotisserie. Verify that gas quick connect is securely engaged. Verify that any gas shut-offs on the supply line are in the ON position. Be aware that your incoming gas supply may be interlocked to the ventilation/exhaust and or fire suppression system. Check that interlock system is functioning properly. On a new installation there may also be air in the gas line that will need to be purged.
Flame Post does not light or cuts out.	1. Air is blowing at the rotisserie, disrupting the flame and flame sense. 2. Holes on flame post cover plugged. Make sure flame post cover is clean and all holes clear. 3. Check ground wire connection and igniter wire connection at the burner. To access, remove the 2 screws at the base of the burner and carefully lift burner assembly up. Then disconnect flex line at base of burner to remove. 4. Broken igniter. 5. Bad gas valve or ignition module.
Both IR Burners not lighting, No spark at either IR igniter. Drum is turning.	1. IR percent control not calling for heat because it is set at 0%, or it is in the OFF phase of the timing cycle. The control is based on a 10 minute cycle. For example: if the control is set at 70%, the burners will fire for 7 minutes, then shut off for 3 minutes, then the cycle repeats. 2. Visually inspect both IR igniters for damage. If igniters look good proceed to 3. 3. Loose connections at ignition module. Carefully remove control panel. With the Rotisserie on, check for 24 VAC between the (-) and (+) terminals. Turn the rotisserie OFF, then set the control knob to 100%. Turn the rotisserie back ON. Between the NO terminal and ground, there should be 24 VAC. If no voltage present, check the potentiometer for damage and replace if necessary. If the potentiometer is good, replace IR percent control. If control is good, proceed to IR troubleshooting below.

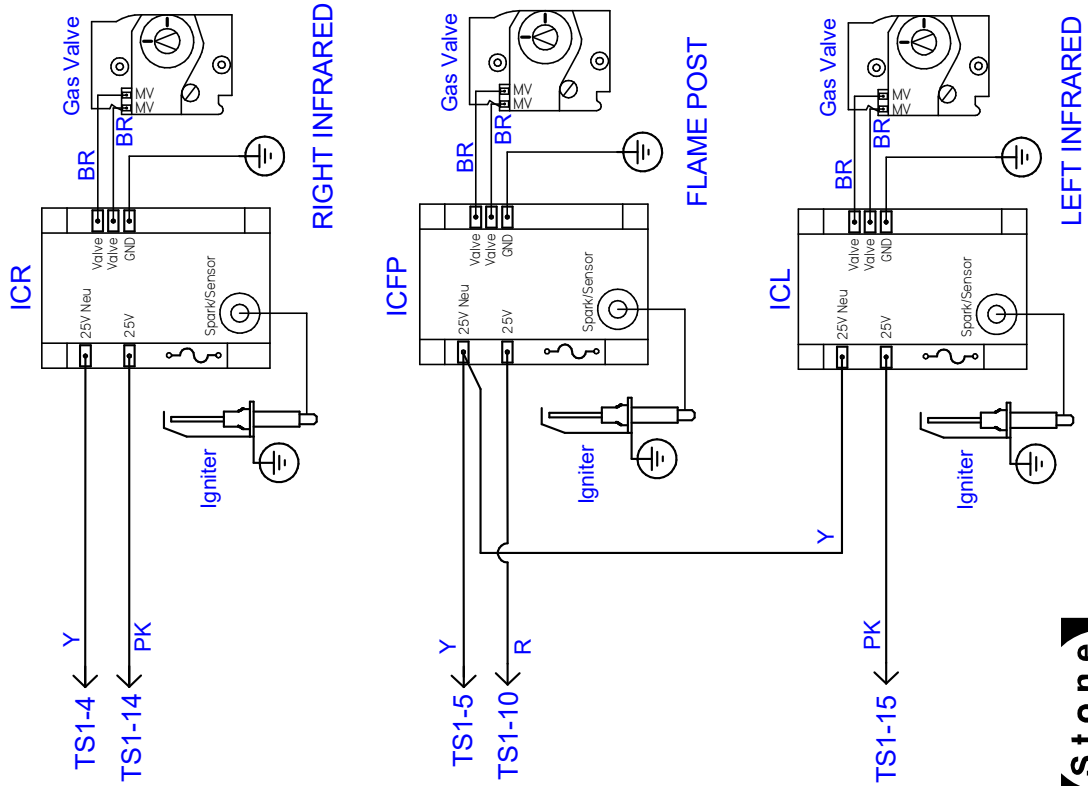


SYMPTOM	PROBABLE CAUSE/SOLUTION
IR Burner not lighting	1. If neither IR burner is lighting, make sure IR control is set to call for heat and not in an OFF portion of the cycle. 2. Air blowing into the rotisserie. Redirect any air vents in the area away from the rotisserie doorway. 3. Broken igniter. Inspect igniter for cracked insulator or other damage. Replace if damaged. Make sure igniter cover is installed. 4. Igniter cable. Make sure cable is firmly attached to igniter and not damaged. 5. Gas pressure. Check for proper burner manifold gas pressure at the appropriate gas control valve. See Gas Pressure Specifications section of this manual. Also verify incoming gas pressure to the rotisserie while rotisserie is ON. For NG models incoming gas pressure, should not exceed 14 inches W.C., and should not be below approximately 7 inches W.C. For LP models, incoming pressure must not exceed 14 inches W.C., and should not be below 11 inches W.C. IF THE INCOMING PRESSURE FOR NG OR LP MODELS EXCEEDS 14 inches W.C., AN EXTERNAL REGULATOR MUST BE PROVIDED TO AVOID DAMAGE TO THE ROTISSERIE. 6. Bad gas valve. Check for 24 VAC at valve when Ignition Module is energized. If 24 VAC is present at valve, and gas supply to the rotisserie is connected, valve should output gas at the rated pressure. If after checking the incoming pressure as directed in step 5, the valve does not open, or outlet pressure is low and cannot be adjusted higher with the regulator adjustment on the gas valve, the gas valve may be defective and should be replaced. 7. Bad Ignition Module. Check for 24 VAC at the module (25 V and 25 V Neutral connections). If voltage present, but no voltage output to gas valve, OR when unit is first turned on there is no spark output from the spark terminal - check fuse on module. If fuse good replace module. (Note: No fuse on Fenwal modules used on European models).
Rotisserie drum does not turn. Burners are lighting.	1. Disconnect gas supply to the rotisserie. Remove the top cover of the rotisserie, to expose the drive components. Press Start button. 2. From the top of the rotisserie check that motor is turning. If motor is turning check for loose or broken drive belt. Check idler arm spring. Replace belt or spring if necessary. If motor is not turning proceed to step 3. 3. Push STOP button and disconnect power to the rotisserie. Check wire connections at motor. Check motor capacitor and replace if defective. Check connections at Relay 2. Check that Relay 2 is seated firmly in its socket. Once connections, capacitor and relay has been checked. Retry. If motor still not turning motor may need to be replaced.
Drum turns, but hooks are not rotating.	Check planetary belt and planetary belt tensioner.

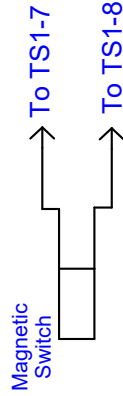


GVR 120 VAC WIRING DIAGRAM

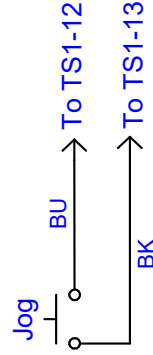
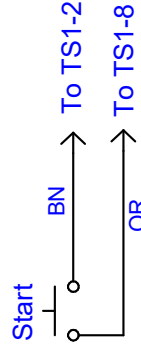
Electrical Diagram



Optional Rear Door



Note: Remove Jumper
Between TS1-7 And TS1-8



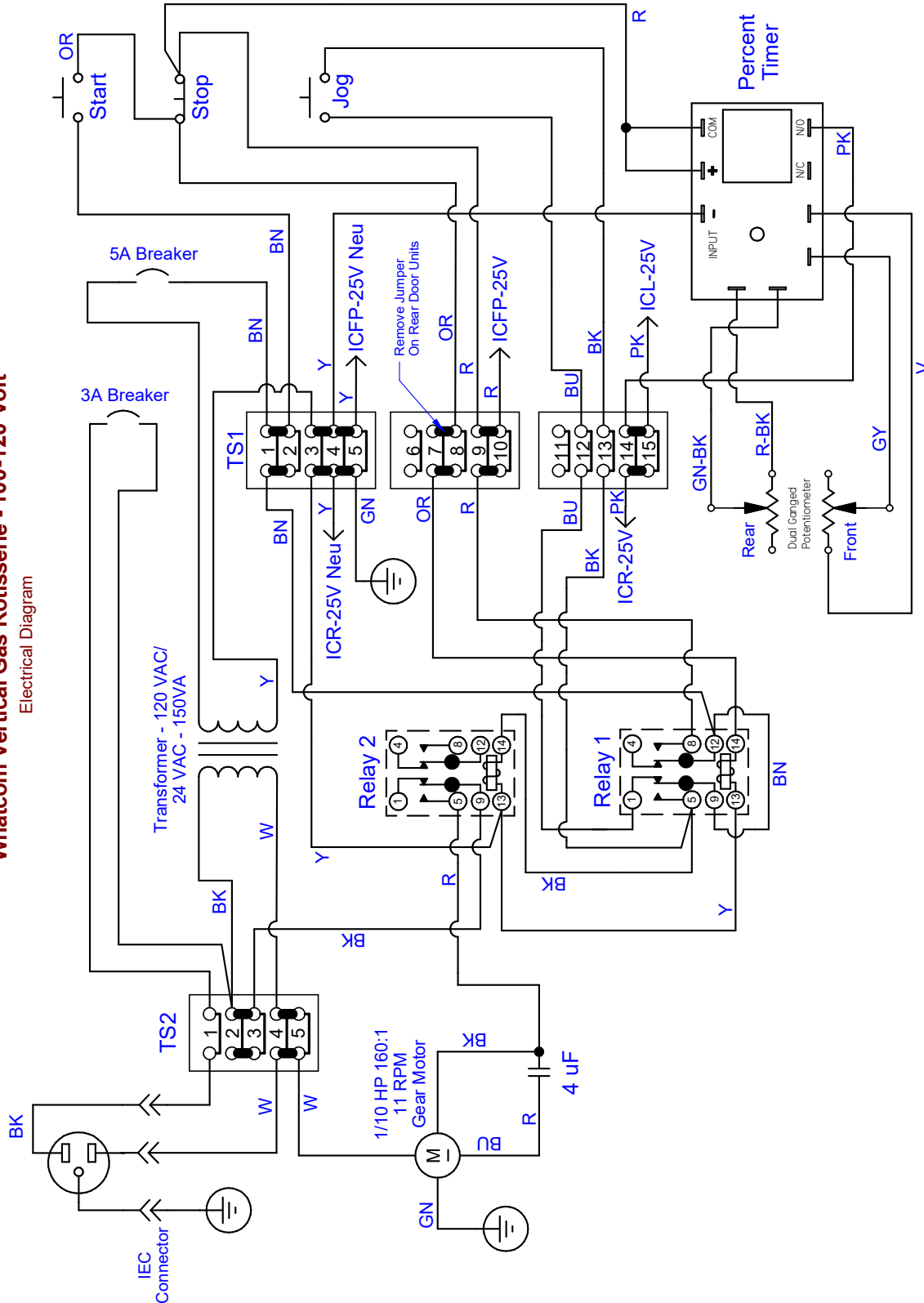
DIAG #: WD221 Rev. 0
SHEET: 1 of 2
DATE: 2/4/2014



GVR 120 VAC WIRING DIAGRAM

Whatcom Vertical Gas Rotisserie - 100-120 Volt

Electrical Diagram

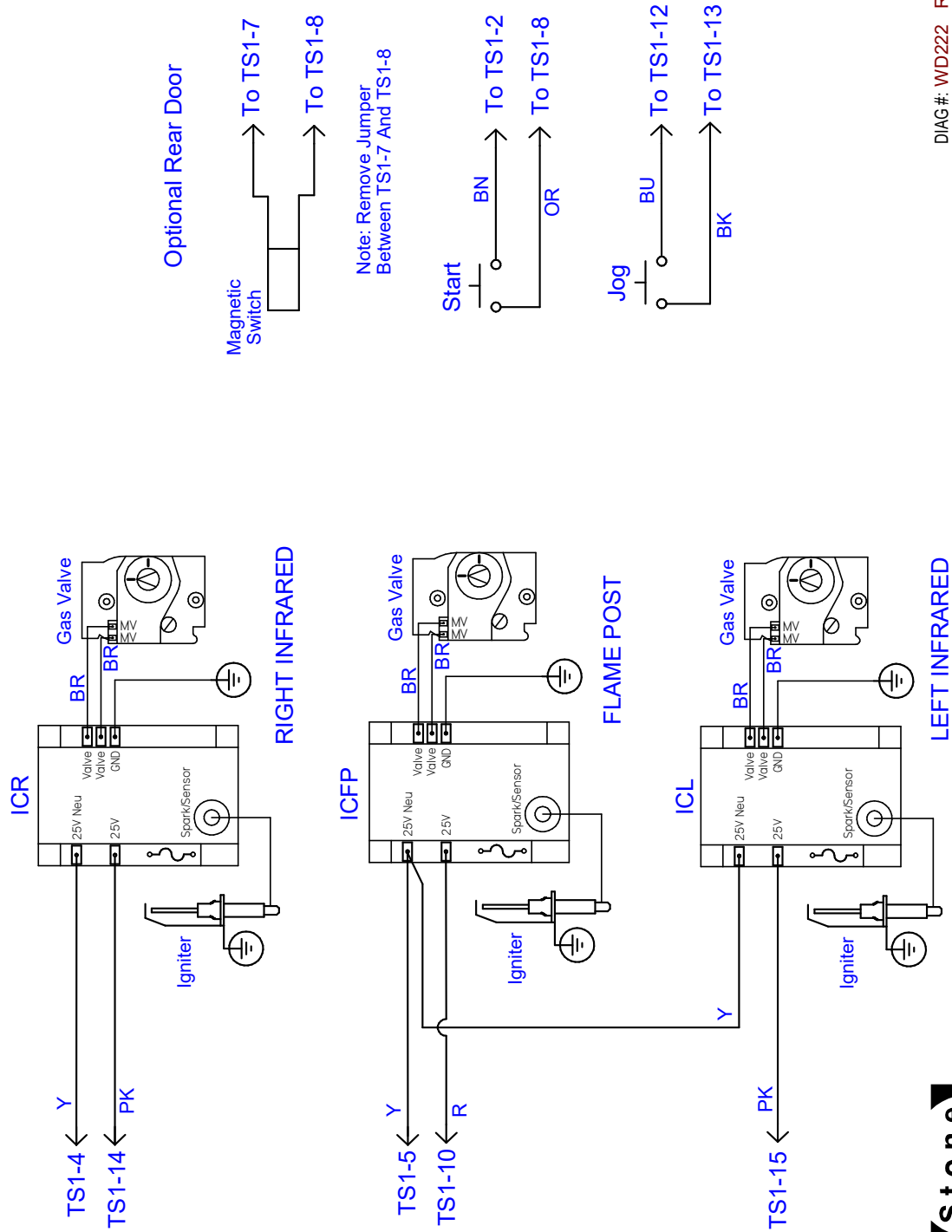


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SHEET: 2 of 2
DATE: 2/4/2014



GVR 220-240 VAC WIRING DIAGRAM

Whatcom Vertical Gas Rotisserie - 220-240 Volt Electrical Diagram

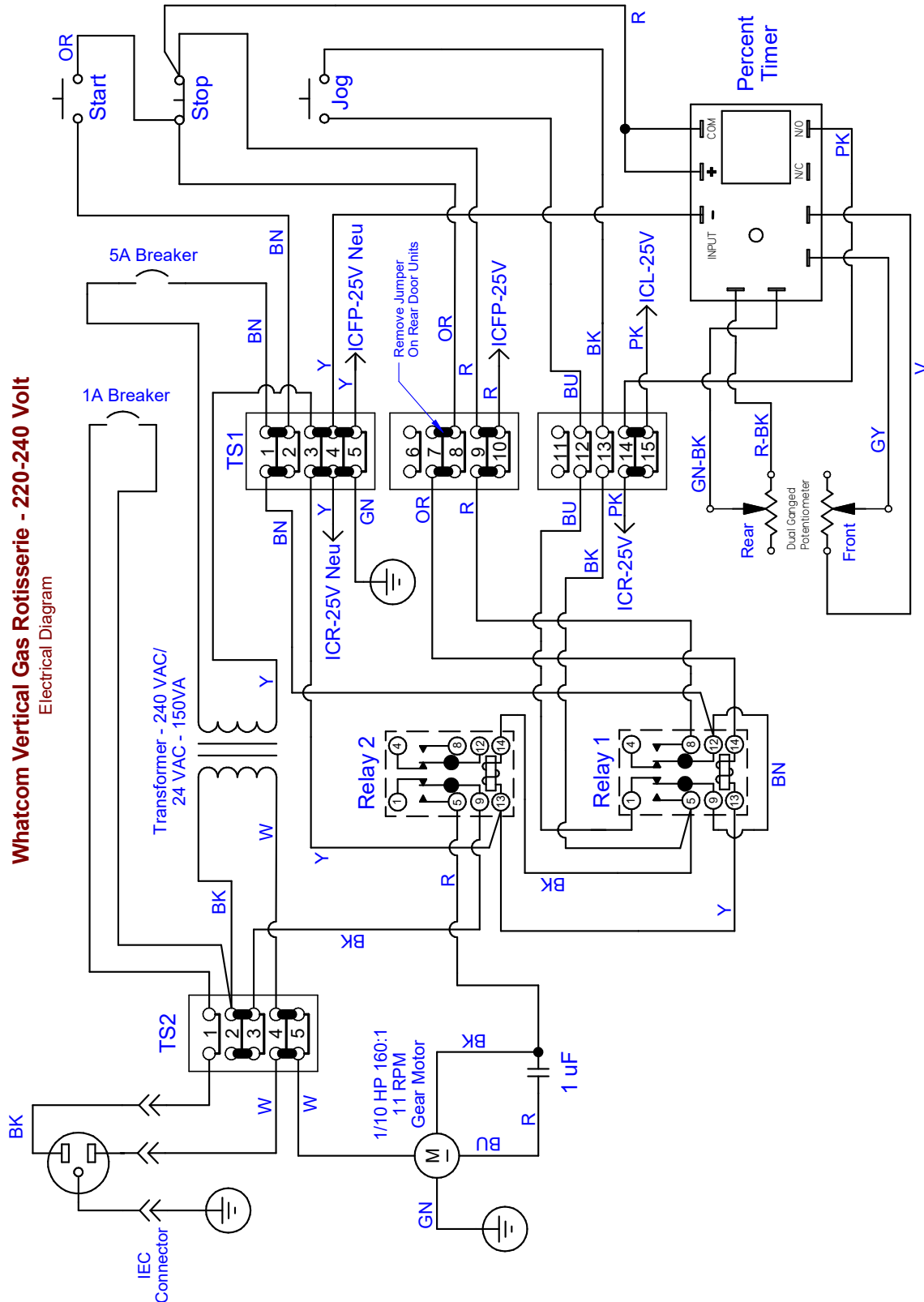


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SHEET: 1 of 2
DATE: 2/4/2014

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GVR 220-240 VAC WIRING DIAGRAM

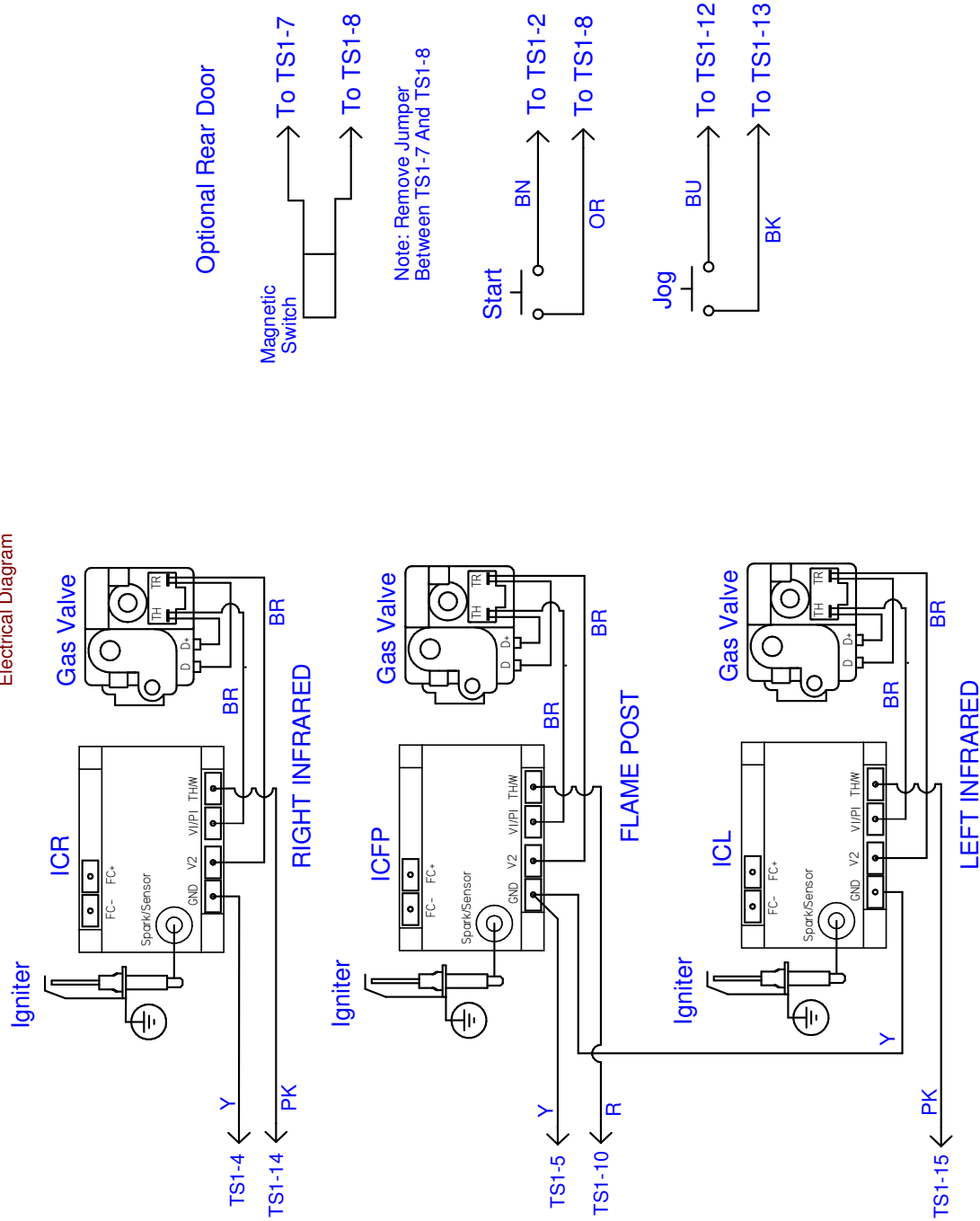


DIAG #: WD222 Rev. 0
SHEET: 2 of 2
DATE: 2/4/2014



GVR-CE 230 VAC WIRING DIAGRAM

Whatcom Vertical Gas Rotisserie - CE Electrical Diagram

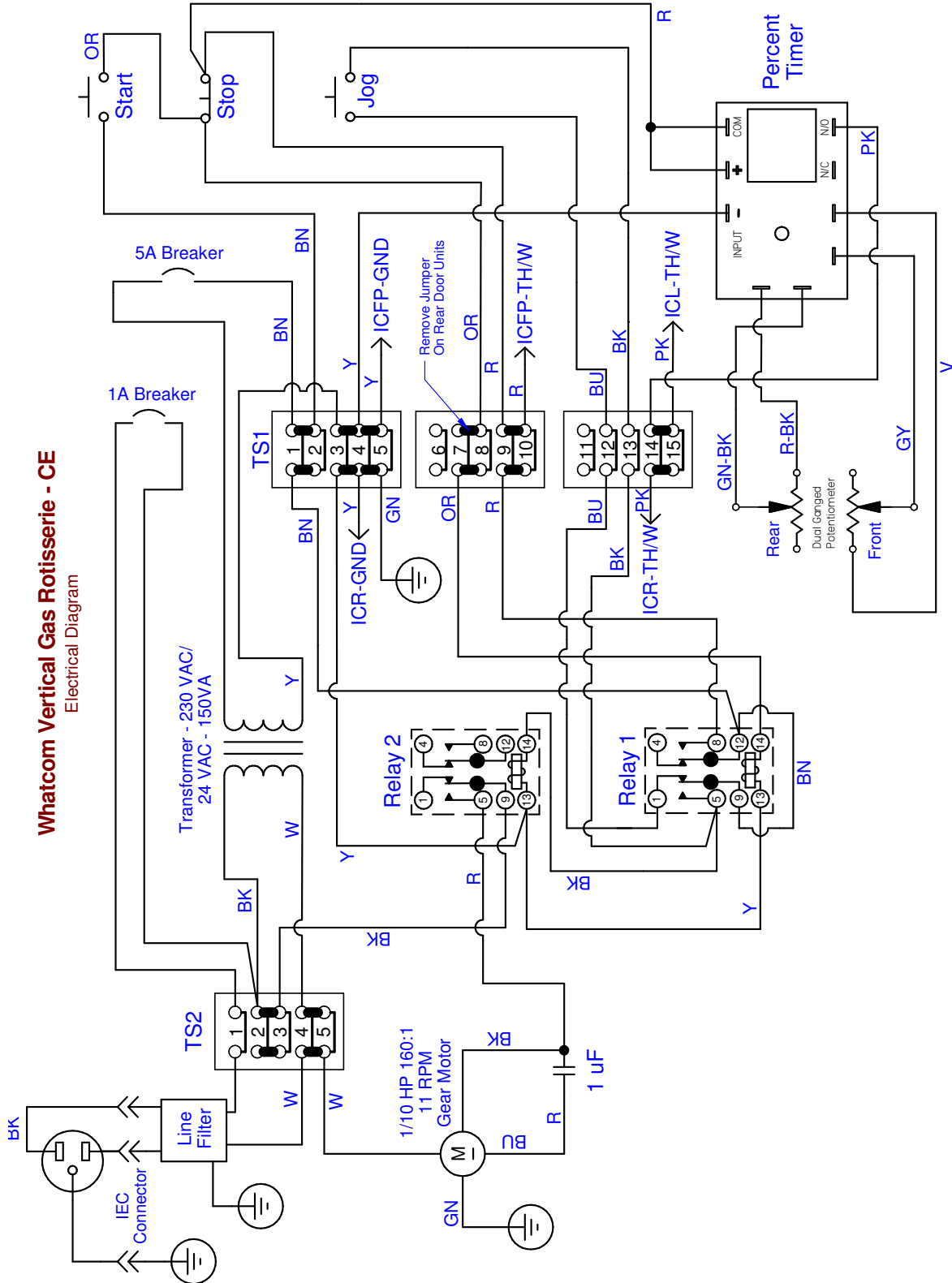


DIAG #: WD223 Rev. 1
SHEET: 1 of 2
DATE: 1/30/2018

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GVR-CE 230 VAC WIRING DIAGRAM



DIAG #: WD223 Rev. 1
SHEET: 2 of 2
DATE: 1/30/2018



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 PST 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



WOOD STONE CORPORATION

1801 W. Bakerview Rd.

Bellingham, WA 98226 USA

Toll Free 800.988.8103

Tel 360.650.1111

Fax 360.650.1166

www.woodstone-corp.com

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