Gas Freestanding Range—Technical Information

JGR8875QD*

- Due to possibility of personal injury or property damage, always contact an authorized technician for servicing or repair of this unit.
- Refer to Service Manual 16022498 for detailed installation, operating, testing, troubleshooting, and disassembly instructions.

⚠ CAUTION

All safety information must be followed as provided in Service Manual 16022498.

⚠ WARNING

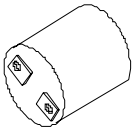
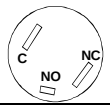
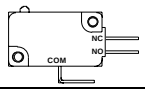
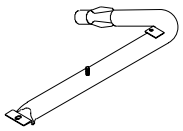
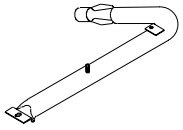
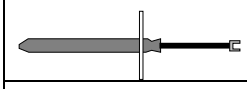
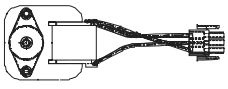
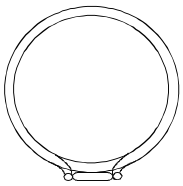
To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.

Models	JGR8875QD*	
Power Source		
Electrical rating	120 VAC	
Amperage	15 Amp max.	
Frequency	60 Hz	
Water Column Pressure		
Natural	4 in. W.C.P.	
LP/Propane	10 in. W.C.P.	
Surface Burner (BTU Nat. / LP)		
Center	5,000	4,000
Left and Right rear	9,200	9,100
Left front	12,000	10,500
Right Front	16,000	14,000
Oven Burner (BTU Nat./LP)		
Bake	18,000	18,000
Broil	13,000	13,000
Convection Element - 120 VAC	1,000 Watts	
Oven Interior Dimensions in. (cm)		
Height	19 - 3/16	(48.7)
Width	24 – ¼	(61.5)
Depth	19 - 3/8	(49.2)
Product Exterior Dimensions in. (cm)		
Height overall	47 - 3/8	(120.3)
Width	29 - 7/8	(75.8)
Depth oven door closed with handle	29	(73.6)
Clearance with oven door open	48 - 7/8	(124.1)
Height of cooktop	36	(91.4)
Unit Features		
Frameless glass door with window	X	
Interior oven light	X	
Automatic oven door latch	X	
Child lockout	X	
12 hour automatic shut off	X	
Porcelain broiler pan and grid	X	
Removable full width storage drawer	X	
2 standard and 1 half oven rack – 8 positions	X	
Weight lbs. (kg)		
Crated	240	(108.8)
Uncrated	225	(102.0)

Component Testing Procedures

⚠ WARNING

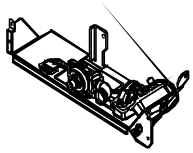
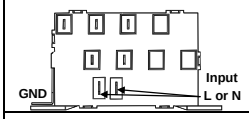
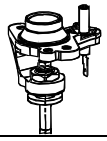
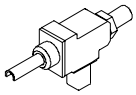
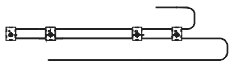
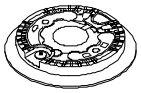
To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.

Illustration	Component	Test Procedure	Results
	Oven light socket	Test continuity of receptacle terminals. Measure voltage at oven light.	Indicates continuity with bulb screwed in. 120 VAC, see wiring diagram for terminal identification. If no voltage is present at oven light check wiring.
	Door plunger switch	Remove switch from unit and measure the following points: C-NO	 Plunger in continuity, Plunger out infinite.
	Door lock switch	Switch connection in following positions: Not engaged Engaged	Normally Open COM-NO=Open, COM-NC=Closed COM-NO=Closed, COM-NC=Open
	Autolatch assembly with switch	Disconnect wires and test for continuity per wiring diagram.	See wiring diagram for schematic layout. Refer to Parts Manual for correct autolatch switch associated with the correct manufacturing number.
	Bake burner	Verify gas is supplied. Orifice adjusted for Natural or LP. Check for obstructions, contamination in ports or damage.	 Clean with hot soapy water and dry completely. Replace if punctured or torn.
	Broil burner	Verify gas is supplied. Verify proper orifice installed for Natural or LP. Check for obstructions, contamination in ports or damage.	 Clean with hot soapy water and dry completely. Replace if punctured or torn.
	Ignitor	Test for voltage at terminals ..... Test for the amount of amperage in the circuit..... (Ignitor may glow, but not have sufficient amperage to open valve).	120 VAC 3.2–3.6 Amps.
	Temperature sensor	Measure resistance.	Approximately 1100 Ω at room temperature 80°F.
	Convection motor fan	Verify supply voltage ..... Measure continuity at the following points: Terminal to terminal..... Terminal to ground	120 VAC Continuity Infinite
	Convection element	Test continuity of terminals..... Test voltage to terminals	Approximately 14 Ω - cold 120 VAC

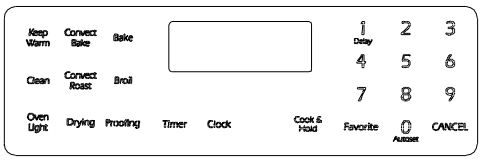
Component Testing Procedures

⚠ WARNING

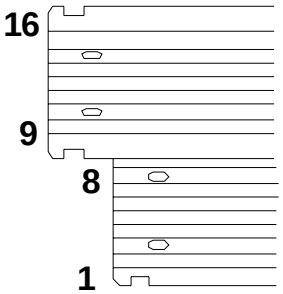
To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.

Illustration	Component	Test Procedure	Results
	Pressure regulator	Verify gas pressure (WCP). If on LP service, verify proper gas supply conversion.	4" Natural 10" LP/Propane
	Spark module 5 + 0	Test for voltage at terminals L and N..... Polarity and ground	120 VAC Not subject to polarity
	Holder orifice	Verify gas pressure (WCP). Check orifice for debris.	4" Natural 10" LP/Propane Clean as needed.
	Spark ignition electrode	Test for resistance of spark lead..... Test ignitor to chassis	Continuity No continuity from ignitor to chassis.
	270° valve	Verify gas is supplied. Orifice adjusted for Natural or LP. Adjust set screw for simmer control.	 See conversion section.
	Spark 270° switch	Unplug switch harness at rear of range. Test for continuity at wire terminals. Switch in LITE position ..... Switch in any other position.....	120 VAC Continuity Infinite
	Top surface burner	Verify gas is supplied..... Verify burner cap is positioned correctly.	Check for obstructions in burner ports.

Matrix
Control Panel Assembly



Continuity is indicated as follows:
1000 – 6600 Ω for Cancel pad
1000 – 15000 Ω for All other pads



Pad	Trace	Measurement
1	13 & 15	Continuity
2	12 & 15	Continuity
3	10 & 15	Continuity
4	7 & 13	Continuity
5	12 & 13	Continuity
6	10 & 12	Continuity
7	4 & 13	Continuity
8	4 & 12	Continuity
9	4 & 10	Continuity
0	5 & 12	Continuity
Cancel	1 & 2	Continuity
Convect Bake	7 & 11	Continuity
Convect Roast	11 & 13	Continuity
Keep Warm	4 & 7	Continuity
Bake	7 & 15	Continuity
Broil	4 & 5	Continuity
Clean	5 & 7	Continuity
Drying	11 & 12	Continuity
Proofing	5 & 10	Continuity
Timer	4 & 11	Continuity
Clock	5 & 11	Continuity
Cook & Hold	11 & 15	Continuity
Favorite	5 & 13	Continuity
Light	10 & 11	Continuity

Component Testing Procedures

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.

Illustration	Component	Test Procedure	Results
H1 Controlled	Oven temperature adjustment	Press ***BAKE*** pad. Enter ***550*** on the digit-pad. Immediately press and hold ***BAKE*** pad for 3 seconds. Oven can be adjusted from -35 to +35 degrees in 5-degree increments by pressing ***AUTOSET*** pad. To avoid over adjusting the oven, move temperature 5 degrees each time. Wait 4 seconds for the data entry timer to expire to accept the change. Temperature adjustment will be retained even through a power failure.	While increasing or decreasing oven temperature, this does not affect self-cleaning temperature.
H1 Controlled	Temperature display	Press and hold ***Cancel*** and ***Bake*** pads for 3 seconds.	This mode enables the user to indicate °F or °C on the display.
H1 Controlled	Clock Display	Press and hold ***Cancel*** and ***Clock*** pads for 3 seconds.	Allows clock to be toggled On or OFF.
H1 Controlled	24 Hour Clock	Press and hold ***Cancel*** and ***Favorite*** pads for 3 seconds.	Allows the time on the clock to be toggled from 12 hour or 24 hour display.
H1 Controlled	Factory Default	Press and hold ***Cancel*** and ***Keep Warm*** pads for 3 seconds.	Allows the clock to be reset to factory settings.
H1 Controlled	Twelve hour off	Control will automatically cancel any cooking operation and remove all relay drives 12 hours after the last pad touch.	See Sabbath mode to disable.
H1 Controlled	Sabbath Mode	Hold ***CLOCK*** pad for 3 seconds to activate Sabbath mode. Hold ***CLOCK*** pad for 3 seconds to disable Sabbath mode.	"SAb" will be displayed and flash for 5 seconds. Display will go back to time of day. All pad inputs are disabled except for CANCEL and CLOCK pads. This mode disables the normal 12 hour shutoff to allow operation of the bake mode for a maximum of 72 hours.
H1 Controlled	Child lock out	Press and hold ***Cancel*** and ***Cook & Hold*** pads for 3 seconds. **"OFF"** will display where the temperature normally appears. "**LOCK**" will display flashing while door is locking. To reactivate the control, press and hold ***Cancel*** and ***Cook & Hold*** pads for 3 seconds.	This is a safety feature that can be used to prevent children from accidentally programming the oven. It disables the electronic oven control. Child lockout features must be reset after a power failure.
H1 Controlled	Diagnostic Code Display	See "Quick Test Mode". Cycle through the codes using the number pads 1 through 5.	The last 5 diagnostic codes will be stored in the non-volatile memory. See **"Description of Error Codes"** for explanation.

Component Testing Procedures

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.

Relay Logic

Note that this chart was correct at time of printing; subsequent changes to cooking parameters may alter it.

COOKING MODE	BAKE	BROIL	CONVECT ELEMENT	CONVECT FAN	OVEN LIGHT
IDLE	×	×	×	×	◈
BAKE PREHEAT	●	×	×	×	◈
BAKE	●	×	×	×	◈
BROIL PREHEAT	×	●	×	×	◈
BROIL	×	●	×	×	◈
CLEAN PREHEAT	●	●	×	×	×
CLEAN	●	×	×	×	×
KEEP WARM	●	×	×	×	◈
CONVECT BAKE PREHEAT	●	×	●	●	◈
CONVECT BAKE	●	×	●	●	◈
CONVECT ROAST PREHEAT	●	×	●	●	◈
CONVECT ROAST	●	×	●	●	◈
PROOFING PREHEAT	●	×	×	●	◈
PROOFING	●	×	×	●	◈
DRYING PREHEAT	●	×	×	●	◈
DRYING	●	×	×	●	◈

KEY INDEX

× - OFF
● - ON
◈ - ON OR OFF (DETERMINED BY USER INPUT)
- TEMPERATURE CONTROLLED

Component Testing Procedures

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.

"Quick Test" Mode for Electronic Range Control

Follow procedure below to use the quick test mode. Entries must be made within 32 seconds of each other or the control will exit the quick test mode.

1. **Press and hold** *CANCEL* and *BROIL* pads for 3 seconds.
2. Once the control has entered the "Quick Test" mode, release both pads.
3. Press each of the following pads indicated in the table below.

NOTE: First time one of following pads are pressed it will activate the response. The second time the pad is pressed it will deactivate the response.

Display will indicate the following:

Pad	Response
BAKE	Bake relay activated
BROIL	Broil relay activated
KEEP WARM	N\A
CONVECT BAKE	Convection Fan on high speed
CONVECT ROAST	Cooling Fan activated
CLEAN	MDL relay activated
COOK & HOLD	Displays last diagnostic code
FAVORITE	Displays EEPROM version number
TIMER	Displays main code version number
CLOCK	All display segments illuminated
OVEN LIGHT	Oven light activated
CANCEL	Exit Quick Test mode
1	Even segments on
2	Odd segments on
3	N\A
4	Bake relay activated
5	Broil relay activated
6	Convection relay activated
7	N/A
8	N/A
9	N/A
AUTOSET	Steps through last 5 diagnostic codes

Description of Error Codes

Error diagnostic codes can only be viewed by entering the Diagnostic Code Display Mode.
Each error code is four digits long and is created based on the following table.

Digit	Description	
1st	Primary System:	1 – Local to the control circuit board 3 – Sensor or meat probe 4 – Control input 9 – Door lock
2nd	Measurable:	d – Diagnostic: measurable parameter c – Control related, replace control
3rd	Secondary System:	Sequential numbering
4th	Oven Cavity:	1 – Upper oven (or single cavity oven) 2 – Lower oven c – Control specific

Diagnostic Code Display Mode can be activated by **pressing and holding** the *AUTOSET* pad for 3 seconds at power-up. **Diagnostic Code Display Mode can only be started while powering up the control.**

Component Testing Procedures

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.

Diagnostic Code Checking

Code	Description	When Checked	Detection
1c1c	Shorted key	Always	1 minute
1c2c	Keyboard tail disconnected	Always	1 minute
1c31	Cancel key circuit problem	Always	20 seconds
1c32	Cancel key circuit problem	Always	20 seconds
1c6c	EEPROM error	When accessing EEPROM	3 tries
1c7c	Control not calibrated	Always	3 tries
1c8c	Cooking program error	Cook or clean programmed	3 tries
1d11	Runaway temp (650°F), door unlocked	Latch unlocked	1 minute
1d12	Runaway temp (650°F), door unlocked	Latch unlocked	1 minute
1d21	Runaway temp (950°F), door locked	Latch locked	1 minute
1d22	Runaway temp (950°F), door locked	Latch locked	1 minute
3d11	Sensor open	Cook or clean active	20 seconds
3d12	Sensor open	Cook or clean active	20 seconds
3d21	Sensor shorted	Cook or clean active	20 seconds
3d22	Sensor shorted	Cook or clean active	20 seconds
4d11	Door switch position failure	Clean or keyboard Lockout active	1 minute
4d12	Door switch position failure	Clean or keyboard Lockout active	1 minute
4d21	No reverse airflow fan rotation (no/low RPM)	Clean or Cook programmed	1 minute
4d31	Reverse airflow fan state (on when should be off)	Suppose to be OFF	1 minute
4d51	Door switch circuit failure	Convect, Clean or Keyboard Lockout programmed	1 minute
4d52	Door switch circuit failure	Convect, Clean or Keyboard Lockout programmed	1 minute
9d11	Latch will not lock	Latch should be locked	See Note [6]
9d12	Latch will not lock	Latch should be locked	See Note [6]
9d21	Latch will not unlock	Latch should be unlocked	See Note [6]
9d22	Latch will not unlock	Latch should be unlocked	See Note [6]
9d31	Latch state unknown, both locked and unlocked	Latch should be locked or when lock attempted	See Note [6]
9d32	Latch state unknown, both locked and unlocked	Latch should be locked or when lock attempted	See Note [6]

Diagnostic Code Handling

Code	Measurable	What is Displayed	Action Taken By Control
1c1c	Keypress	Nothing	Disables audible for affected key depression Disables all outputs [1, 2] Disables lights and timers
1c2c	Keyboard loop improper value	Nothing	Disables audible for key depression Disables all outputs [1] Disables lights and timers
1c31	Cancel key improper value	BAKE flashes [3]	Disables all outputs for cavity [1]
1c32	Cancel key improper value	BAKE flashes [3]	Disables all outputs for cavity [1]
1c6c	No response from EEPROM	Nothing	Disables all outputs [1]
1c7c	Calibration value out of range	"CAL" in the time digits	Completely disables oven [4]
1c8c	CRC invalid	Nothing	Cancels active cook function
1d11	Sensor resistance > 2237 Ohms	BAKE flashes [3]	Disables all cook function for cavity
1d12	Sensor resistance > 2237 Ohms	BAKE flashes [3]	Disables all cook function for cavity
1d21	Sensor resistance > 2787 Ohms	BAKE flashes [3]	Disables all cook function for cavity
1d22	Sensor resistance > 2787 Ohms	BAKE flashes [3]	Disables all cook function for cavity
3d11	Sensor resistance > Infinite Ohms	BAKE flashes [3]	Disables all cook function for cavity
3d12	Sensor resistance > Infinite Ohms	BAKE flashes [3]	Disables all cook function for cavity
3d21	Sensor resistance > 0 Ohms	BAKE flashes [3]	Disables all cook function for cavity
3d22	Sensor resistance > 0 Ohms	BAKE flashes [3]	Disables all cook function for cavity
4d11	Door switch not closed when door is locked	Nothing	Disables Clean and Lockout functions [5]
4d12	Door switch not closed when door is locked	Nothing	Disables Clean and Lockout functions [5]
4d21	No reverse airflow fan rotation (no/low RPM)	Nothing	Disables all cook function for cavity
4d31	Reverse airflow fan state (on when should be off)	Nothing	No action
4d51	Door switch not open or closed	Nothing	Disables Convect, Clean, and Lockout functions [4, 5] Turn off light and disable light from door switch
4d52	Door switch not open or closed	Nothing	Disables Convect, Clean, and Lockout functions [4, 5] Turn off light and disable light from door switch
9d11	Lock switch not closed	LOCK flashes [3]	Disables Clean and Lockout functions [4]
9d12	Lock switch not closed	LOCK flashes [3]	Disables Clean and Lockout functions [4]
9d21	Unlock switch not closed	LOCK flashes [3]	Disables Clean and Lockout functions [4]
9d22	Unlock switch not closed	LOCK flashes [3]	Disables Clean and Lockout functions [4]
9d31	Latch both locked and unlocked	LOCK flashes [3]	Disables Clean and Lockout functions [4]
9d32	Latch both locked and unlocked	LOCK flashes [3]	Disables Clean and Lockout functions [4]

Component Testing Procedures

WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.

NOTES:

1 "Action Taken" applies as long as the condition exists. If the condition goes away, the control recovers.

2 If there is a cook function or timer active, the function continues. The user cannot edit the function, and [Cancel] will cancel the cook mode.

3 Flash rate: 0.2 seconds on, 0.1 second off. Pressing any key will clear the display until the fault clears and is re-triggered.

4 "Action Taken" applies until there is a POR (Power On Reset ["hard reset"]).

5 If the control believes the door is locked, it will attempt to unlock it when the function cancels and the cavity temperature cools.

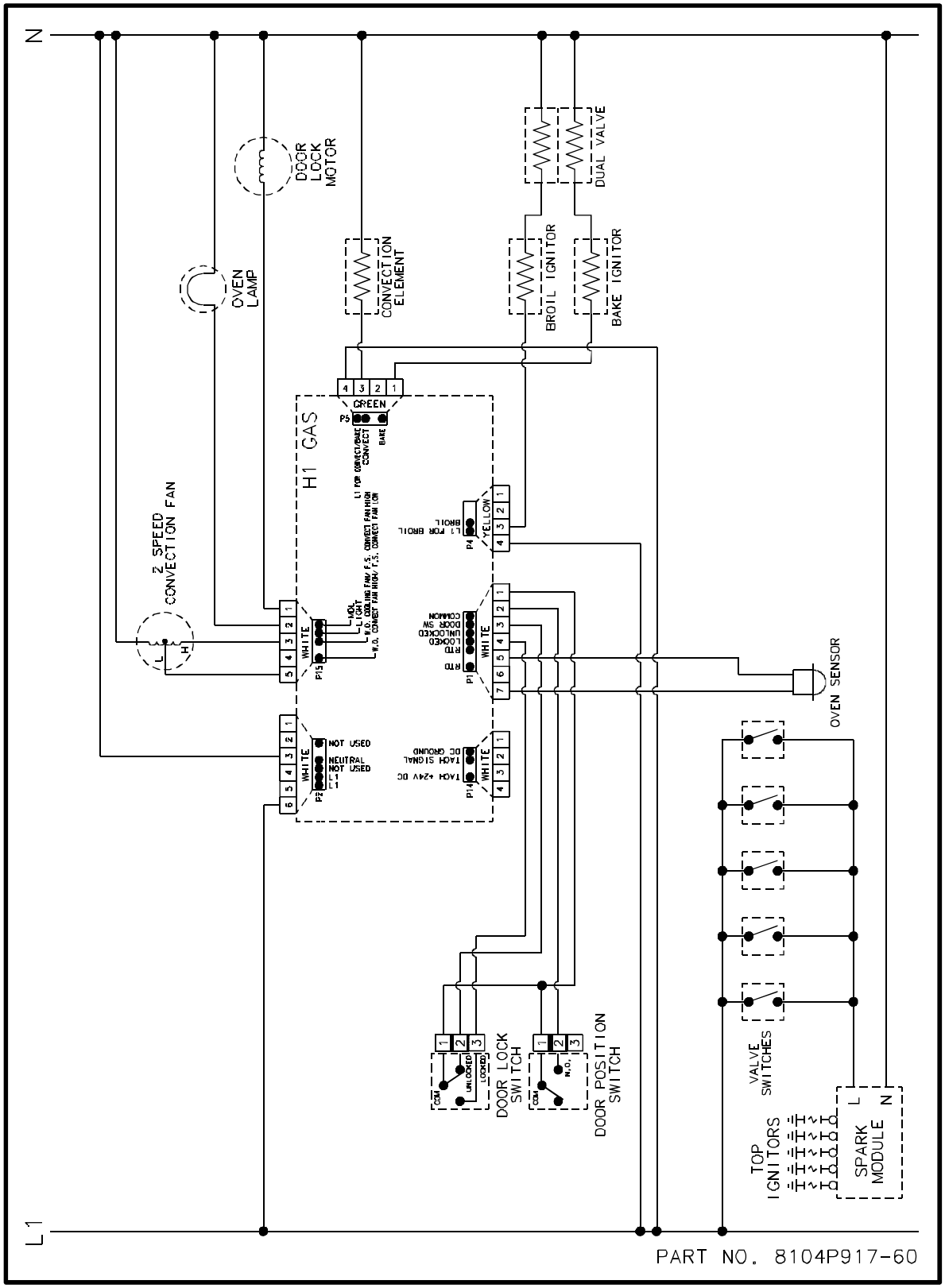
6 Special conditions for latch faults (9dxx):

- A known good **unlock** position is defined as when the unlock switch reads closed and lock switch reads open.
- A known good **lock** position is defined as when the unlock switch reads open and lock switch reads closed.
- A **faulted switch** means the switch input is reading an invalid state, neither open nor closed.
- Once a latch fault occurs, latch movement is disabled until there is a POR. An error tone will sound if a function requiring a faulted latch is attempted.
- If at POR, the latch is not at a known good unlock position:
    - If the latch is at a good lock position, it will attempt to unlock when the RTD (Resistance Temperature Device) temperature is below 400°F.
    - If the latch is not at a good lock position, the control will fault.
- If a latch fault occurs while the RTD is above the lock temperature, the latch will not try to move, but the fault is still logged to EEPROM after the first stage of detection.
- The Display column for latch faults applies 1) If the latch was moving when the fault occurred; 2) If the latch is already in a known locked state when the fault occurs.
    - LOCK flashes after a fault is detected and until the unlocked position is achieved. The unlock position may be identified by a successful unlock switch closure, or as the result of timing when the unlock switch is not functioning properly.
- If the last known good position was unlock (e.g. baking, or idle) and a latch fault occurs, the motor is never moved. The fault is logged to EEPROM and is not seen by the user.
- The detection for latch faults is in two stages. The first stage is to let the control recover without moving the latch. After this:
    - If the latch was previously at a known good unlock position, the latch will not move and the control will fault.
    - If the control was previously in a known good lock position:
        - If the RTD is below 400°F, the latch will attempt to recover to it's proper position (up to three revolutions). If it cannot, the control will fault and the latch will move to a calculated unlock position.
        - If the RTD is at or above 400°F, the control will fault. When the RTD cools to below 400°F, the control will attempt to recover to a good unlock position (up to three revolution). If it cannot, the control will fault and the latch will move to a calculated unlock position.
        - **Note:** If the unlock position cannot be found, this may result in a second fault, the first fault occurring when the latch request was locked, and the second when the latch request is unlocked.
    - If the latch is moving when the fault occurs, the control will bypass the first stage of detection and immediately try to find it's proper position. If it cannot, the control will fault and the latch will move to a calculated unlock position.
- Affected DLBs (Double Line Breaks) and loads are disabled during detection.
- If the control is in a known good unlock position and the lock switch becomes faulted:
    - The control will not fault.
    - If a function requiring latch movement is attempted while the lock switch is faulted, the control will sound an error tone and the function will be disabled.
- If the control is in a known good lock position and the unlock switch becomes faulted:
    - The control will not fault.
    - After the function is canceled and unlock is attempted, the control will attempt to unlock the latch according to the procedures in these notes.

Wiring Diagram and Schematic

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.



Wiring Diagram and Schematic

⚠ WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power to oven before servicing, unless testing requires power.