Electric Freestanding Range—Technical Information

AER5715QA* MER5754QA* MER5755QA*

- 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 16025644 for detailed installation, operating, testing, troubleshooting, and disassembly instructions.

⚠ CAUTION

All safety information must be followed as provided in Service Manual 16025644.

⚠ WARNING

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Model	AER5715QA*	MER5754QA*	MER5755QA*
Power Source @ 240 V (208 V)			
Electrical rating	11 kW (8.3 kW)	11 kW (8.3 kW)	11 kW (8.3 kW)
Amperage	40 Amp	40 Amp	40 Amp
Frequency	60 Hz	60 Hz	60 Hz
Element Wattage @ 240 V (208 V)			
6-inch ribbon radiant	1,200 (960)	1,200 (960)	1,200 (960)
9-inch ribbon radiant	2,500 (2000)	2,500 (2000)	2,500 (2000)
12-inch ribbon radiant	N/A	N/A	2,700 (2160)
6/9-inch dual ribbon radiant	N/A	2,400 (1920)	N/A
Oven Wattage @ 240 V (208 V)			
Bake 5 pass	3,000 (2400)	3,000 (2400)	3,000 (2400)
Broil 5 pass	3,600 (2880)	3,600 (2880)	3,600 (2880)
Oven Interior Dimensions in. (cm)			
Height	19 3/16 (48.7)	19 3/16 (48.7)	19 3/16 (48.7)
Width	24 1/4 (61.3)	24 1/4 (61.3)	24 1/4 (61.3)
Depth	19 3/8 (49.2)	19 3/8 (49.2)	19 3/8 (49.2)
Product Exterior Dimensions in. (cm)			
Height overall	47 3/8 (120.3)	47 3/8 (120.3)	47 3/8 (120.3)
Width	29 7/8 (75.9)	29 7/8 (75.9)	29 7/8 (75.9)
Depth oven door closed with handle	29 (73.7)	28 1/2 (72.4)	28 1/2 (72.4)
Height of cooktop	36 (91)	36 (91)	36 (91)
Features			
Oversized glass ceramic Spillsaver	X	X	X
Frameless glass door with window	X	X	X
Interior oven light	X	X	X
Two standard oven racks – 8 positions	X	X	X
Removable full width storage drawer	X	X	X
Automatic oven door latch	X	X	X
Weight lbs. (kg)			
Uncrated	200 (90.7)	205 (93.0)	200 (90.7)

Component Testing Procedures

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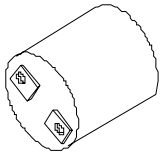
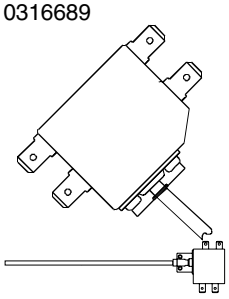
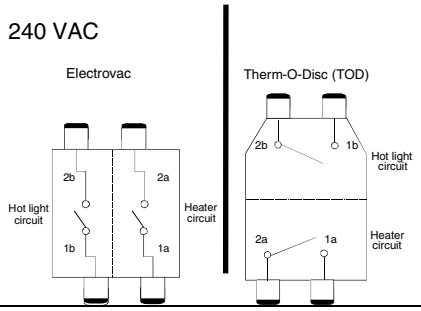
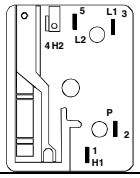
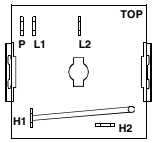
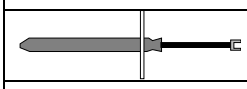
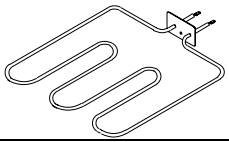
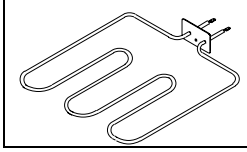
Illustration	Component	Test Procedure	Results
	Oven light socket	Remove one wire from receptacle and test resistance of terminals..... Measure voltage at oven light.....	Indicates continuity with bulb screwed in. 120 VAC, see wiring diagram for terminal identification. If no voltage is present at oven light, check wiring or light switches.
1200 W 2500 W 2700 W 2400/1000 W	Ribbon radiant elements	Remove element and measure resistance across terminals. Dual element–1000 + 1400 = 2400 W .	Continuity, if not replace. 1200W: 44 to 49 Ω Approximately 2500W: 21 to 24 Ω Approximately 2700W: 20 to 22 Ω Approximately 2400W: 53 to 59 Ω Approximately inner 38 to 42 Ω Approximately outer
0316689 	Ribbon surface thermal limiter/hot light switch	Disconnect leads and measure resistance on the following: 1a–2a room temperature–continuity 1b–2b room temperature–infinite Turn surface element on and test for voltage. See wiring diagram and schematic. 1a–2a 240 VAC 1b–2b 120 VAC	240 VAC 
	Snap Action Infinite switch	Connect Volt-ohms meter to H1 and H2. Measure the following for voltages at LO, MED, HI: H1 to H2	**Approximate** **Time On** / **Time Off** LO 5% / 95% MED (4-5) 35% / 65% HI 100% / 0% 240 VAC, if not replace switch.
	Dual Infinite switch	Connect Volt-ohms meter to H1 and H2. Measure the following for voltages at LO, MED, HI: H1 to H2	**Approximate** **Time On** / **Time Off** LO 8% / 92% MED (4-5) 35% / 65% HI 100% / 0% 240 VAC, if not replace switch.
	Oven temperature sensor	Measure resistance.	Approximately 1100 Ω at room temperature 80°F.
	Bake element	Disconnect wire leads to element and measure resistance of terminals..... Measure voltage at bake element.....	Approximately 18.6 Ω, if not replace. 240 VAC, see wiring diagram for terminal identification. If no voltage is present at bake element check wiring.
	Broil element	Disconnect wire leads to element and measure resistance of terminals..... Measure voltage at broil element.....	Approximately 15.5 Ω, if not replace. 240 VAC, see wiring diagram for terminal identification. If no voltage is present at broil element check wiring.

Component Testing Procedures

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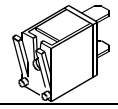
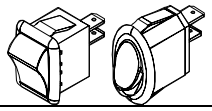
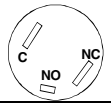
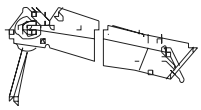
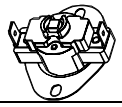
	Oven indicator light and Surface indicator light	Measure voltage at indicator light.	If voltage is present and light does not work replace light. If no voltage is present at indicator light check wiring.
	Rocker switch	Measure continuity of switch positions: Closed..... Open	 Continuity Infinite
	Door plunger switch	Measure continuity at the following points: C-NO.....	 Plunger in continuity, Plunger out infinite.
	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.
	Limiter	Normally Closed Verify proper operation. Open .....320°F ..... Manual Reset- Closed.....	 Infinite Continuity

Component Testing Procedures

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Illustration	Component	Test Procedure	Results
M1 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 ***SLEW*** 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.
M1 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.
M1 Controlled	Clock Display	Press and hold ***Cancel*** and ***Clock*** pads for 3 seconds.	Allows clock to be toggled On or OFF.
M1 Controlled	24 Hour Clock	Press and hold ***Cancel*** and ***Delay*** pads for 3 seconds.	Allows the time on the clock to be toggled from 12 hour or 24 hour display.
M1 Controlled	Factory Default	Press and hold ***Cancel*** and ***Keep Warm*** pads for 3 seconds.	Allows the clock to be reset to factory settings.
M1 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.
M1 Controlled	Sabbath Mode	Hold ***CLOCK*** button for 3 seconds to activate Sabbath mode. Hold ***CLOCK*** 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.
M1 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.
M1 Controlled	Diagnostic Code Display	Press and hold ***Up Arrow*** pad and ***Power Up*** the unit. 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

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

NOTE: This mode can only be entered within the first 5 minutes after power up.

NOTE: If the temperature sensor is greater than 400°F and the Quick Test mode will be disabled if the temperature sensor reaches 400°F while under test.

Display will indicate the following:

Key	Operation
[Bake]	**Bake** relay activated, **DLB** relay activated
[Broil]	**Broil** relay activated, **DLB** relay activated
[Keep Warm]	**DLB** relay activated
[Cook&Hold]	Last Diagnostic Code displayed
[Clean]	**MDL** relay activated (lock and unlock)
[Delay] (M1)	**EEPROM Version Number** displayed
[Timer]	**Main Code Version Number** displayed
[Clock]	**All Segments** On
[More +]	**Even Segments** On
[Less –]	**Odd Segments** On
[Cancel]	End Factory Test Mode

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

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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
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
1d21	Runaway temp (950°F), door locked	Latch locked	1 minute
3d11	Sensor open	Cook or clean active	20 seconds
3d21	Sensor shorted	Cook or clean active	20 seconds
4d11	Door switch position failure	Clean or keyboard Lockout active	1 minute
4d51	Door switch circuit failure	Convect, Clean or Keyboard Lockout programmed	1 minute
9d11	Latch will not lock	Latch should be locked	See Note 6
9d21	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

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]
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
1d21	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
3d21	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]
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
9d11	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]
9d31	Lock and unlock switches both closed	LOCK flashes [3]	Disables Clean and Lockout functions [4]

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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. Then:
    - 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

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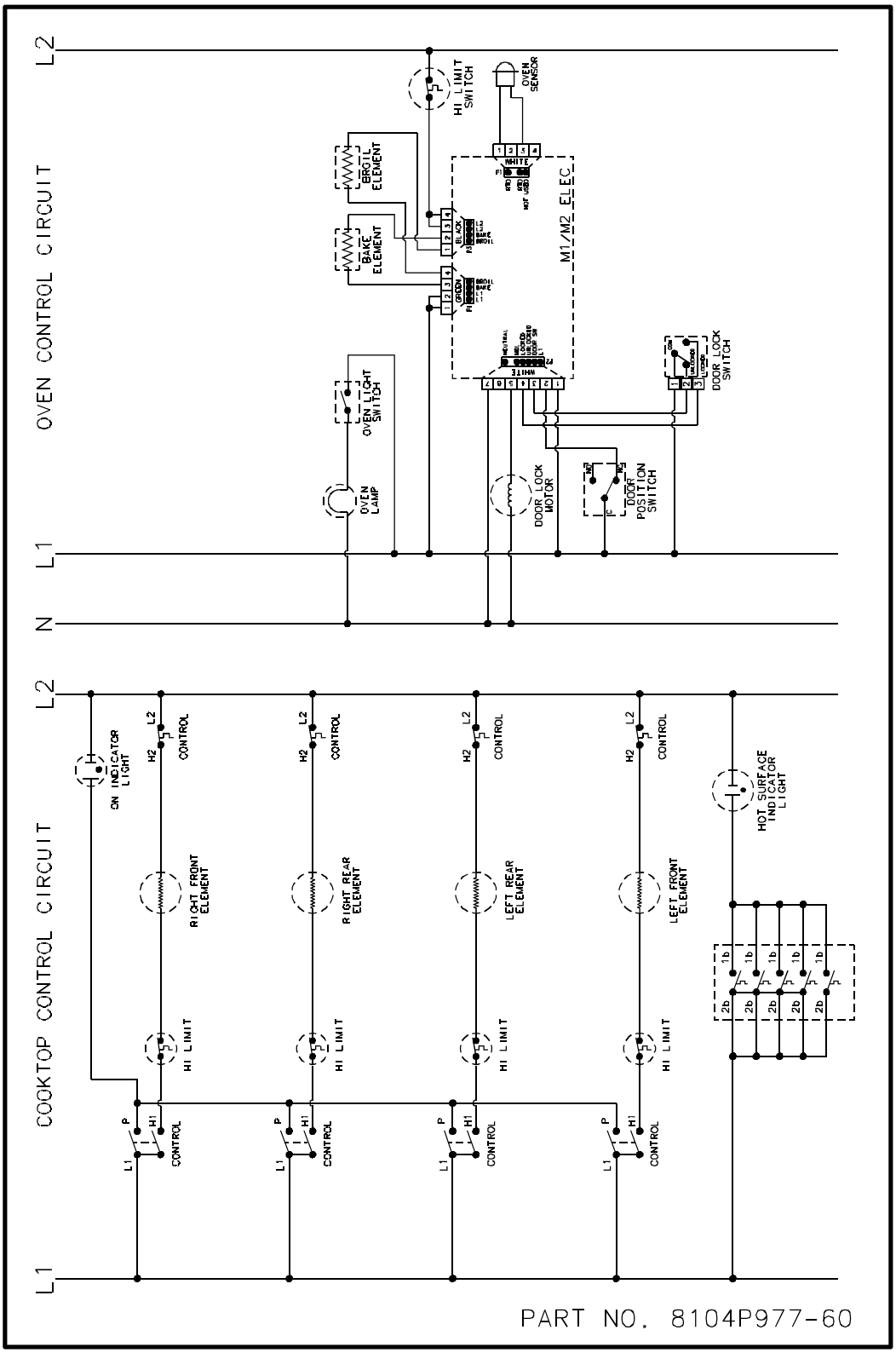

Wiring Diagram and Schematic

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