

30” ELECTRIC WALL OVEN
CONTROL AND MOTORIZED DOOR LOCK

⚠ WARNING

 **Electrical Shock Hazard**

Death or serious injury can result from failure to follow these instructions.

- Service by a qualified service technician only.
- Disconnect power before servicing this product.
- Reconnect all grounding devices after service.
- Replace all parts and panels before operating.

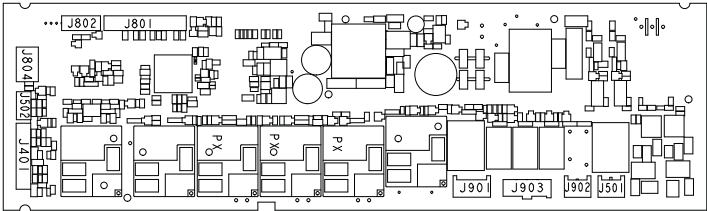
GROUNDING SPECIFICATIONS

Ground Path Resistance 0.10Ω Max.
Insulation Resistance250KΩ Min.

ALUMINUM WIRE: **⚠ CAUTION** This oven power supply cable is recognized for copper wire only, NOT ALUMINUM WIRE. Refer to Installation Instructions for additional details.

ELECTRONIC OVEN CONTROL

⚠ CAUTION Components are electrically **HOT** on control when voltage is connected to range.



The Electronic Oven Control system consists of the control, key panel, oven sensor, door and lock assembly, electronic FAD sensor board, and WiFi board.

CONTROL VOLTAGE

TERMINALS	VOLTAGE
J901-1 to -3	120VAC ALL THE TIME
J901-1 to K915-NO	240VAC ALL THE TIME

NOTE: Voltage must be present across terminals L1 to N and L2 to N for control to operate.

OVEN SENSOR AND DOOR SWITCH OHMMETER TEST

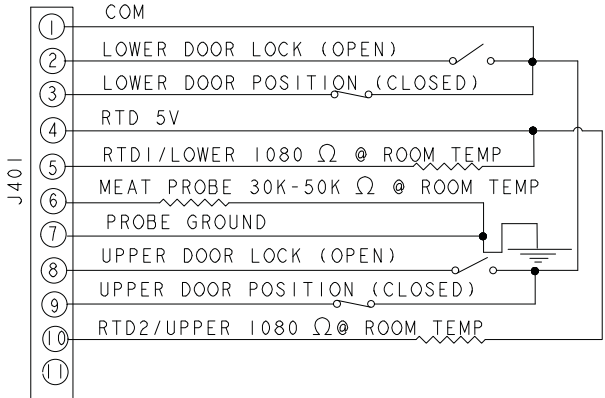
See “Motorized Door Lock Operation” for door switch function explanation. Remove power from oven. Make resistance measurement from side of sensor and lock switch connector with exposed terminals.

CIRCUIT	TERMINALS	OHMS
Upper Oven Sensor	4 to 10	1080Ω @ Rm Temp.*
Upper Door Latched	1 to 8	Locked
Upper Door Sense	1 to 9	Closed
Lower Oven Sensor	4 to 5	1080Ω @ Rm Temp.*
Lower Door Latched	1 to 2	Locked
Lower Door Sense	1 to 3	Closed

* If abnormal reading is observed, remove sensor from oven and check at disconnect block. Wiggle leads while checking resistance. If more than 10Ω variation, replace.

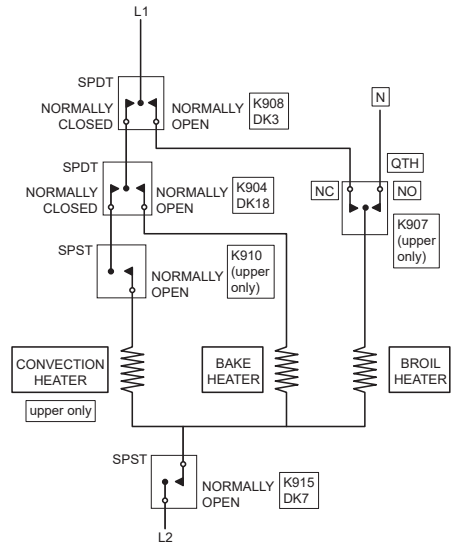
OVEN SENSOR AND LOCK SWITCH CONNECTOR

(In unlock state)



NOTE: In self clean mode both doors lock.

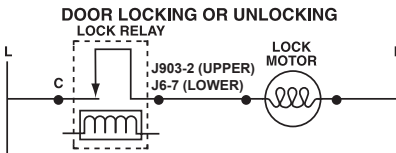
OVEN CIRCUITS



- NOTES:**
- **BAKE AND BROIL ELEMENT CAN NOT BE ON AT THE SAME TIME.**
 - **BAKE/TIME BAKE –** Bake, broil and convection elements alternately cycle during preheat.
 - **CLEAN –** Broil element is on for 30 minutes or until oven reaches 785°F, which ever comes first. Then the bake and broil elements cycle separately while calling for heat.

MOTORIZED DOOR LOCK

The motorized door lock assembly is located above the oven. The assembly consists of a lock motor cam and switch assembly, lock hook, mounting plate, door switch, spring and plunger.



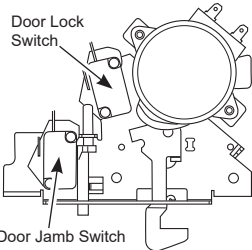
Motorized Door Lock Operation: The lock motor is energized when the control is set for Clean and Clean Time is selected. The K905 (upper) or DK12 (lower) relay contact will close and complete the circuit that supplies the voltage to the lock motor.

NOTE: To enable proper operation of the door lock, ensure that the door jamb switch is in closed position. This tells the software to close the corresponding door lock relay.

- The  will flash on and off in the display while the lock motor is in motion. When the door is locked the  will remain illuminated in the display.

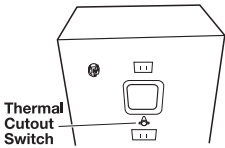
- **CAM –** The cam on the motor performs two functions:

1. Positions the lock hook in the door to prevent opening during Clean operation.
2. Operates the lock switches which tell the control if the door is unlocked or locked and ready for Clean operation.



THERMAL CUTOUT SWITCH (ALL) (UPPER & LOWER)

A one -shot thermal fuse is mounted on the rear of the oven. The switch will open the L2 leg to the heating elements in the event of an over temperature condition. The switch will open when the panel it is mounted to reaches approximately 351°F and will not reset. The oven will not heat after the switch opens and the switch will need to be replaced.



THERMAL CUTOUT SWITCH (DWO ONLY)

A one -shot thermal fuse is mounted to the top of the lower oven in the left rear corner The switch will open the neutral leg of the power to the electronic control in the event of an over -temperature condition. The switch will open when the panel it is mounted to reaches approximately 300°F and will not reset. The control display will go blank and the element relays will open after the switch opens and the switch will need to be replaced.

OVEN CALIBRATION

To change:

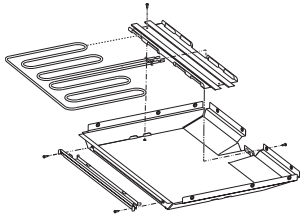
Testing has shown that this oven has the best cooking performance at a control setting of 350°F when the AVERAGE center oven temperature is between 340°F and 380°F. Customers may change the average center oven temperature by +/-35°F to satisfy their own cooking needs. This affects Bake and Convection Bake modes. Broil and Self-Clean are not affected.

Select **Settings** and **Oven Adjust** to add More Heat or Less Heat and then press **Save**.

HIDDEN BAKE

Bake Element Replacement:

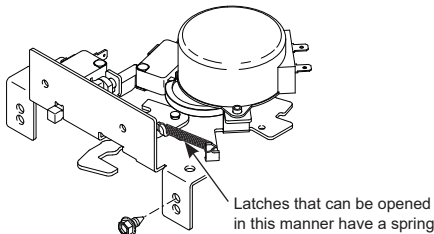
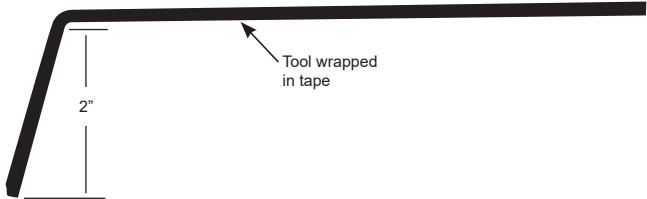
1. Disconnect power to unit (flip breaker). (LOTO)
2. Remove unit from cabinet.
3. Remove rear wire cover.
4. Remove wires from terminals.
5. Remove screw located between terminals.
6. At the front of the unit, remove the door.
7. Remove the trim panel located below the cavity.
8. Remove insulation panels.
9. Remove 2 screws that secure the hidden bake compartment cover in place.
10. With pliers, grasp tabs on each side of screw locations and pull forward. This cover is attached to the element so the element will be pulled forward with the cover. Element will have resistance to pull as it pulls through the guides. The second row of the element may catch on the opening lip, this may need to be lifted with a screwdriver to clear the lip.
11. Replacement is in reverse order of removal.
12. Reconnect power. Test operation.



UNLATCH LOCKED DOOR

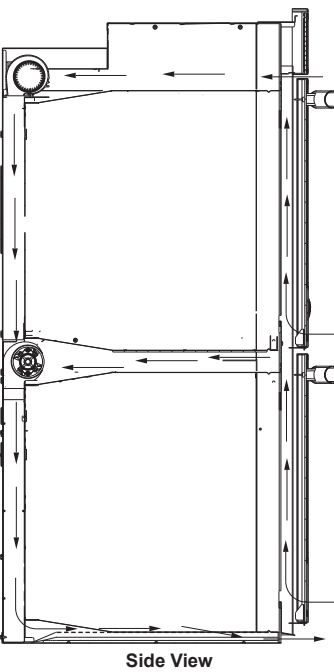
NOTE: Allow the oven to cool before manually unlatching door lock.

If the lock fails in a locked position, the door can be opened by sliding the latch hook to the left. A 7 inch piece of brazing solder or coat hanger, bent into an “L” shape works very well to access latch pawl. Be sure to wrap the tool in tape to prevent scratching the door or trim.



COOLING AIRFLOW

Air enters the door assembly through large slots in the bottom and flows upward between the inner and outer assemblies, exhausting through slots in the top of the door. DO NOT INSULATE THIS AIR CHANNEL. Verify there is adequate space under unit for proper air flow. Oven platform should be even with cabinet front and bottom base pan of unit should not be bent restricting flow.



During the cool down stage of the oven, the cooling fan turns off based on temperature or time. The EEPROM settings are currently based on 175°F (at the sensor) or 80 minutes (110 minutes for self clean), whichever comes first.

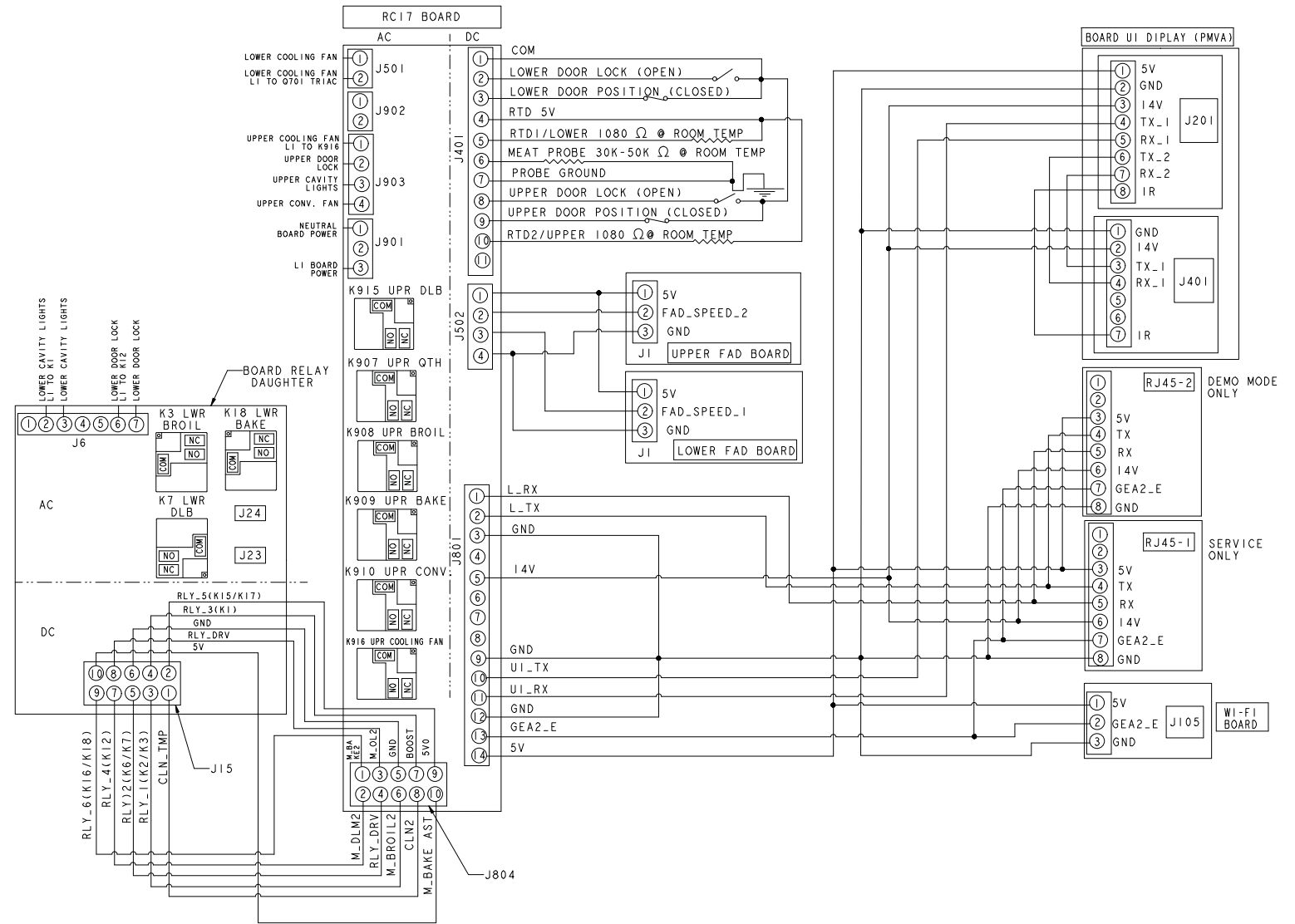
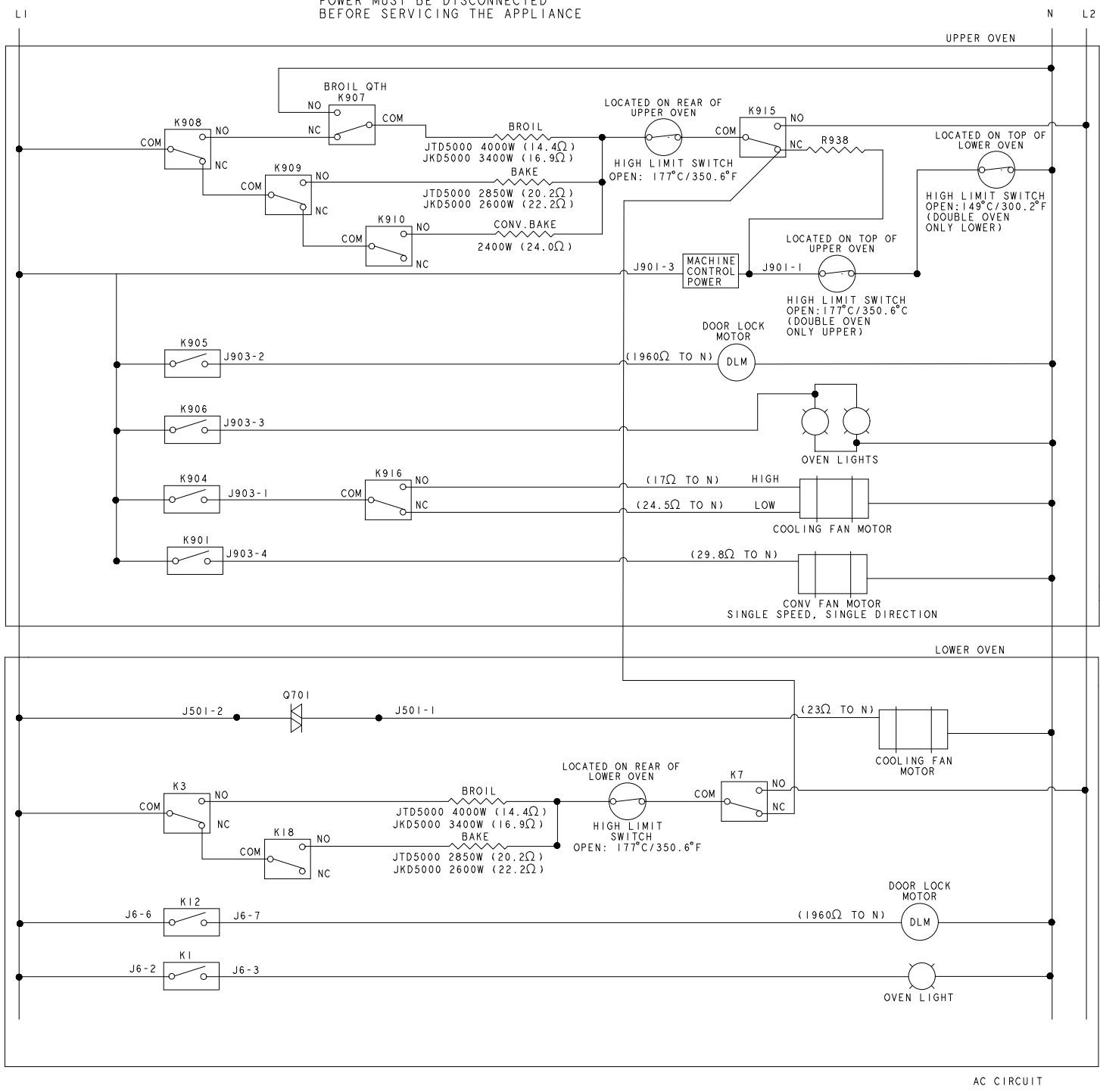
ERC FAILURE CODES

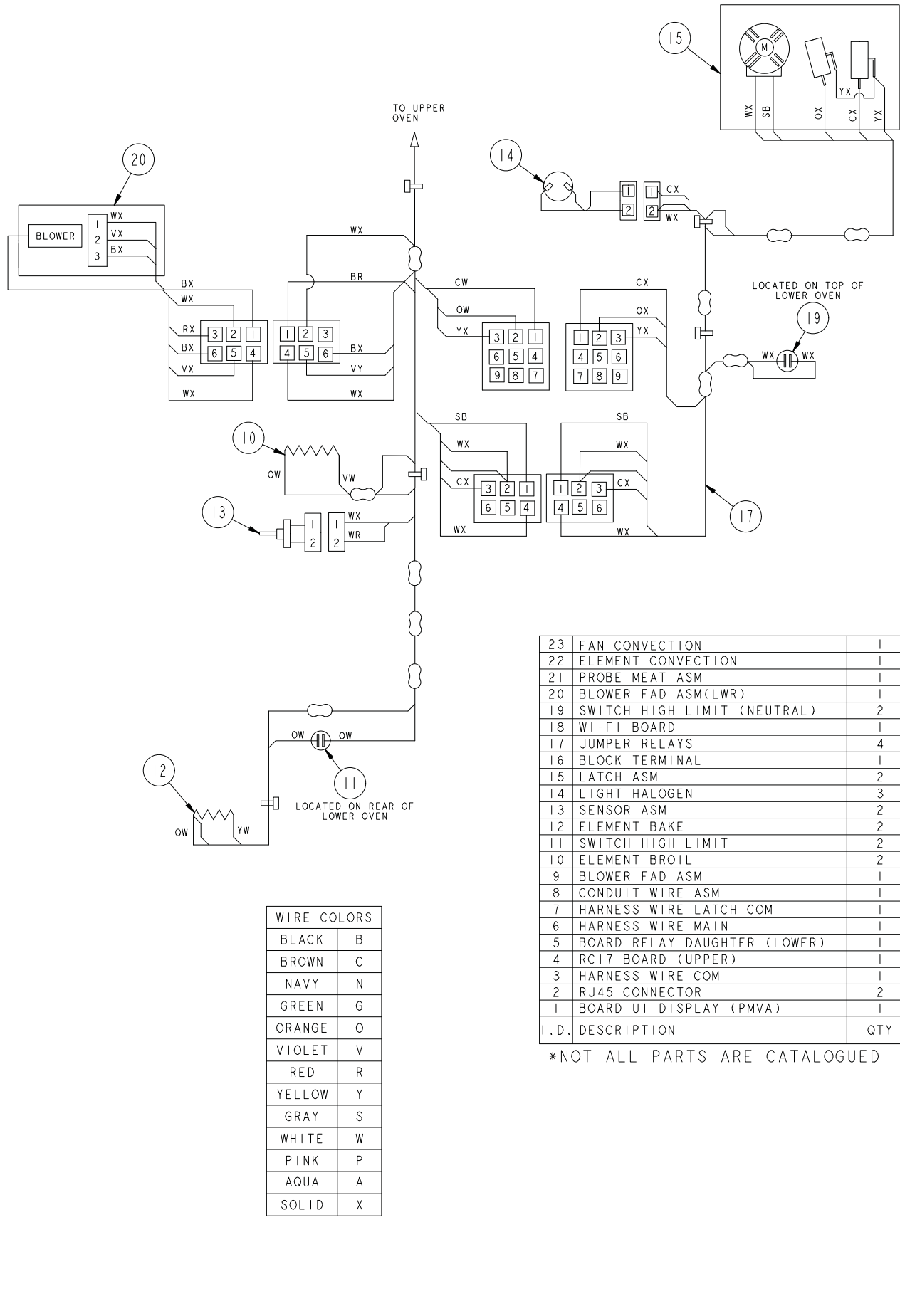
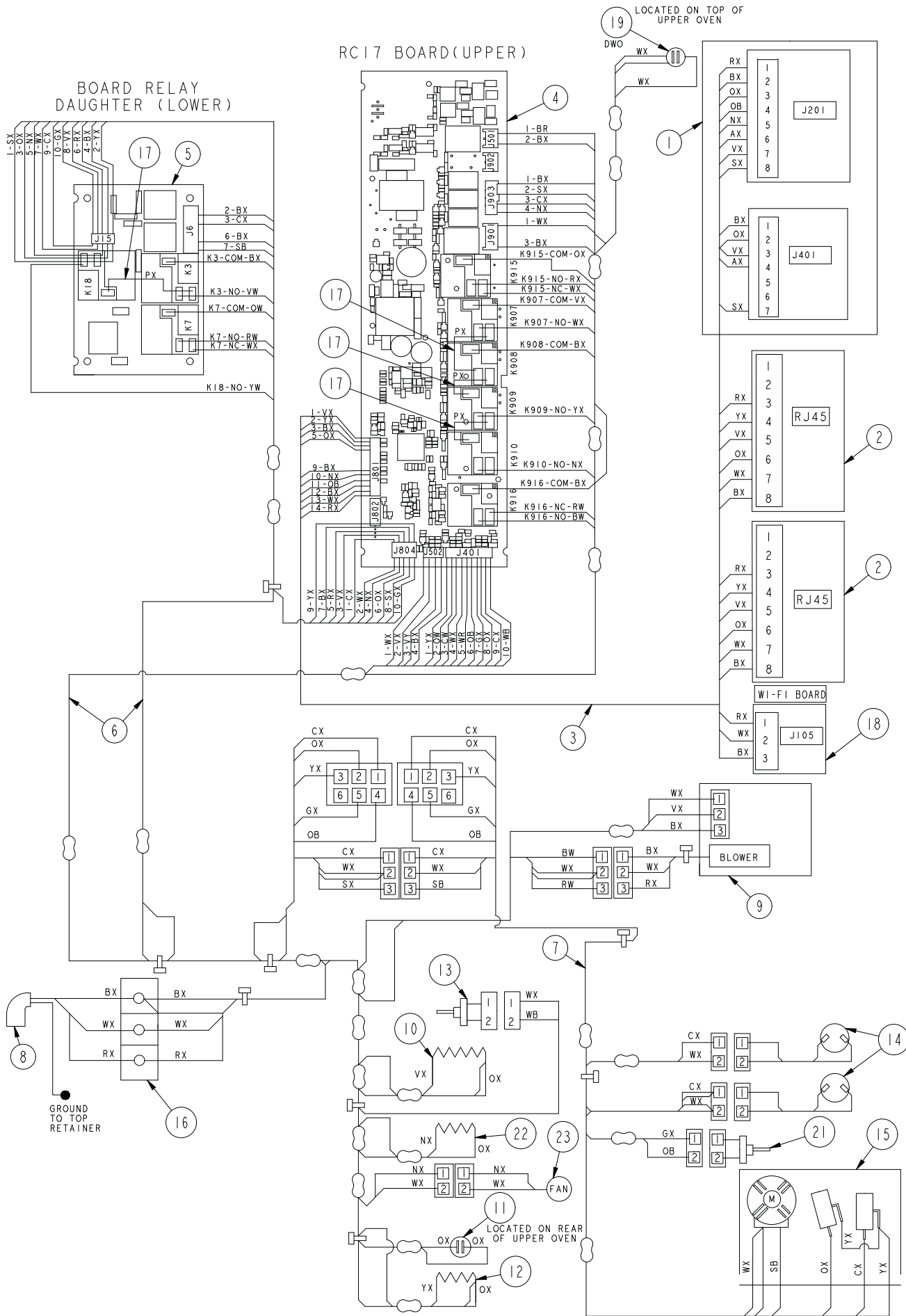
The oven may stop operating but not give an F code on the display. F codes are stored in non-volatile memory and can be recalled by pressing **BAKE** and **2** for 3 seconds. Then, press **1** key to show faults, and advance to the next. The control will show up to 5 distinct faults, its status, and how many occurrences of each. Press **9** and **0** together to clear. Press CLEAR/OFF to exit.

CATEGORY	FAULT CODE	DESCRIPTION	SET CONDITIONS	POSSIBLE CAUSE(S)	WHAT SERVICE CAN DO TO CORRECT
AC Power	100	Range Miswired	Miswire condition detected on 240VAC (electric models). Monitoring for this condition happens continuously, not just at startup.	System miswired	Check branch circuit and harness miswiring by: - J901-1 to K915-NO to be 120VAC - J901-1 to J901-3 to be 120VAC - Replace upper/single machine control board
	101				
Thermal	200	Cavity 1 Thermal Runaway when Unlocked	The cavity 1 (or single) temperature exceeds 615F while the door is unlocked.	Bad RTD. System over heated.	- Check for zippered element heating without a glow - Check oven sensor harness connectors. Melted?
	210	Cavity 1 Thermal Runaway when Locked	The cavity 1 (or single) temperature exceeds 930F with the door locked (i.e. during self clean).	Bad RTD. System over heated.	- Check for zippered element or shorted relay contacts
	220	Cavity 2 Thermal Runaway when Unlocked	The cavity 2 temperature exceeds 615F while the door is unlocked.	Bad RTD. System over heated.	- Check for zippered element heating without a glow - Check oven sensor harness connectors. Melted?
	230	Cavity 2 Thermal Runaway when Locked	The cavity 2 temperature exceeds 930F with the door locked (i.e. during self clean).	Bad RTD. System over heated.	- Check for zippered element or shorted relay contacts
Sensors	300	RTD1 sensor short-circuit detected	The RTD1 ADC value reads above 44268 counts for 10 seconds to set the raw fault. Once the raw fault has been set for 120 sec, the F-code is set (total debounce = 130 sec).	Bad Sensor or Harness issue.	- Upper/single oven - Harness pinched or shorted - Bad sensor
	310	RTD1 sensor open-circuit detected	The RTD1 ADC value reads below 19159 counts for 10 seconds to set the raw fault. Once the raw fault has been set for 120 sec, the F-code is set (total debounce = 130 sec).	Bad Sensor or Harness issue.	- Upper / single oven - Harness intermittent opened in line conn. or board conn. - Bad sensor
	320	RTD2 sensor short-circuit detected	The RTD2 ADC value reads above 44268 counts for 10 seconds to set the raw fault. Once the raw fault has been set for 120 sec, the F-code is set (total debounce = 130 sec).	Bad Sensor or Harness issue.	- Lower oven - Harness pinched or shorted - Bad sensor
	330	RTD2 sensor open-circuit detected	The RTD2 ADC value reads below 19159 counts for 10 seconds to set the raw fault. Once the raw fault has been set for 120 sec, the F-code is set (total debounce = 130 sec).	Bad Sensor or Harness issue.	- Lower oven - Harness intermittent opened in line conn. or board conn. - Bad sensor
	340	PROBE1 sensor short-circuit detected	The Probe 1 ADC value reads below 7710 counts for 10 seconds to set the raw fault. Once the raw fault has been set for 120 sec, the F-code is set (total debounce = 130 sec).	Bad Sensor or Harness issue.	- Upper/Single Oven - shorted probe jack inside. Check with ohmmeter. With / without probe inserted. - Bad meat probe. Should be ~50K at room temp
	342	PROBE2 sensor short-circuit detected	The Probe 2 ADC value reads below 7710 counts for 10 seconds to set the raw fault. Once the raw fault has been set for 120 sec, the F-code is set (total debounce = 130 sec).	Bad Sensor or Harness issue.	Lower oven (when equipped). Same as above.
	350	Cooling Fan Speed Fault	If the cooling fan is requested to be on, but the speed falls below 200 RPM for 30 consecutive seconds, set this fault.	Bad cooling fan. Obstruction. Locked Rotor.	- Not spinning: Look for open circuit to fan in harness connection. - Spinning: Look for open circuit from speed detect board to J502 on MC board. - Check if speed board fell off of fan, or the magnet drum is misplaced. - Assure there is 5VDC on pins 1,3 of speed detect board.
	351	Cooling Fan Unexpected Operation Fault	If the cooling fan speed is non-zero for 30 seconds when it is not requested to be on, set this fault.	Cooling fan failure. Harness issue (i.e. short circuit).	- Relay shorted on machine control board. Replace board.
	352	Cooling Fan Rotor Fault	If the cooling fan is between 3540-3660 RPM (59Hz-61Hz) for 25 consecutive seconds, set this fault. Detection of a false field that occurs when the shaft stalls in certain positions.	Cooling fan rotor is locked.	- Fan blades may be mechanically stuck. - Not spinning: Look for open circuit to fan in harness connection. - Assure there is 5VDC on pins 1,3 of speed detect board.
	353	Secondary WO Cooling Fan Speed Fault	If the cooling fan is requested to be on, but the speed falls below 200 RPM for 30 consecutive seconds, set this fault.	Bad cooling fan. Obstruction. Locked Rotor.	Press cancel to reset system.
	354	Secondary WO Cooling Fan Unexpected Operation Fault	If the cooling fan speed is non-zero for 30 seconds when it is not requested to be on, set this fault.	Cooling fan failure. Harness issue (i.e. short circuit).	The fan stops.
	355	Secondary WO Cooling Fan Rotor Fault	If the cooling fan is between 3540-3660 RPM (59Hz-61Hz) for 25 consecutive seconds, set this fault.	Cooling fan rotor is locked.	The cooling fan speed is outside the 3540-3660 range.
Communication	683 685	UI board heartbeat missing	If a Heartbeat is not received within 15 seconds, this fault is set.	Harness issue or UI board failure.	- Check harness connection from UI board to J801 on MC board. - Is life LED blinking at ~1 hz rate when first turned on? If not replace board.
	686 691	UI to lower MC board heartbeat missing	If a Heartbeat is not received within 15 seconds, this fault is set.	Harness issue UI to MC or Upper MC to Lower MC.	- Query control panel boards with NewFi. If no response, replace. - Check harness connection J802 upper MC to J802 Lower MC.
	687 694	Upper to Lower MC board heartbeat missing (on models with two RC17's)	If a Heartbeat is not received within 15 seconds, this fault is set.	Harness issue UI to MC or Upper MC to Lower MC.	- Check harness connection J802 upper MC to J802 Lower MC. - Replace Upper MC - Replace Lower MC
	689	UI missing heartbeat from front end	If a Heartbeat is not received within 15 seconds, this fault is set.	Software issue	- Replace UI board - Replace SBC board (LCD models)
	695	Touchscreen communications error (on LCD models)	Touchscreen fails to respond to connection test.	Ribbon connection or bad touchscreen.	- Re-seat ribbon connection. Assure small lever is engaged after seating. - Touchscreen on glass damaged. Replace.
	696	UI missing heartbeat from Connected App.	If a Heartbeat is not received within 15 seconds, this fault is set.	Software issue	- Replace MC board
	681	2-key UI board heartbeat missing (LCD models)	If a Heartbeat is not received within 15 seconds, this fault is set.	Harness issue or 2-key UI board failure.	- Check harness connection from 2-key UI touchkey board to J801 on MC board. - Is life LED blinking at ~1 hz rate on 2-key UI touchkey board? If not replace board. - Query control panel boards with NewFi. If no response, replace.
	690	Lower MC missing heartbeat from 2-key UI (LCD models)	If a Heartbeat is not received within 15 seconds, this fault is set.	Harness issue 2-key UI to MC or Upper MC to Lower MC.	
Keys	70x	Cancel Off Monitor (UL)	Oven cavity 1 (or single) does not stop cooking within 10ms of pressing the cavity 1 (or single) cancel key. If this raw fault stays set for 100 seconds, then the fault is latched.	Software error.	- If life LED is blinking on 2-key UI board and harness is connected well on both ends (control panel to J801 on MC), then replace 2-key UI board. - If life LED is blinking on LCD board and harness is connected well on both ends (control panel to J801 on MC), then replace LCD board. - Replace LCD board - Replace 2-key UI board
	721	Oven Stuck Cancel Key	Cancel key is stuck for 30 seconds.	Oven display failure.	
	722	Oven Stuck Other Key	Any key other than cancel keys is stuck for 30 seconds.	Oven display failure.	
	783	UI Checks - LCD UI	Low level self-checks failed on LCD UI board.	LCD UI hardware failure.	
	784	UI Checks - 2-key UI touch	Low level self-checks failed on 2-key UI board.	2-key UI board hardware failure.	
Agency	800	Clean Two Step On Error Cavity 1 - self clean started without 2 key inputs	Self clean started in cavity 1 without 2 separate operations.	Bad RC17 MC control	- Check for excessive moisture or wetness behind 2-key board. - Replace MC board if 2-key life LED is working.
	801	Clean Two Step On Error Cavity 2 - self clean started without 2 key inputs	Self clean started in cavity 2 without 2 separate operations.	Bad RC17 MC control	
	810	Cavity 1 heating element relay in unexpected state	If any heating elements in cavity 1 (or single) turn on when the oven cavity is not running, this fault is set.	Bad RC17 MC control	- Press OFF CANCEL to reset. - Replace MC board if persistent.
	811	Cavity 2 heating element relay in unexpected state	If any heating elements in cavity 2 turn on when the oven cavity is not running, this fault is set.	Bad RC17 MC control	
	830 831	Dual self clean detected (double ovens only)	If self clean is running in 1 cavity and any cookmode is running in the other, set this fault.	Software error.	- Replace upper / single MC board. - Replace Lower MC board
	840	Upper / Single MC Internal ADC diagnostic failure	If the internal analog-digital-converter diagnostic test fails, this fault is set.	Bad RC17 control	
	841	Lower MC Internal ACD diagnostic failure	If the internal analog-digital-converter diagnostic test fails, this fault is set.	Bad RC17 MC control	
Door	900	Cavity 1 door lock changed states unexpectedly	The door lock status for cavity 1 (or single) changed unexpectedly.	Bad lock assembly. Harness issue.	- Check harness connections between latch motor cam switch and J401 on MC. - Bad cam switch. Check with ohmmeter. - Cam switch gummed up with grease or moisture.
	910	Cavity 1 door lock failed to change to expected state	The door lock for cavity 1 (or single) did not change to the desired state.	Bad lock assembly. Harness issue.	
	920	Cavity 2 door lock changed states unexpectedly	The door lock status for cavity 2 changed unexpectedly.	Bad lock assembly. Harness issue.	
	930	Cavity 2 door lock failed to change to expected state	The door lock for cavity 2 did not change to the desired state.	Bad lock assembly. Harness issue.	
	940	Cavity 1 door detected as open when locked	If the cavity 1 (or single) door reads "open" when it is "locked", this fault is set.	Bad plunger. Harness issue.	- Check harness connections from plunger switch to J401 on MC. - Check plunger switch with ohmmeter. door closed = 0 ohms.
	950	Cavity 2 door detected as open when locked	If the cavity 2 door reads "open" when it is "locked", this fault is set.	Bad plunger. Harness issue.	
	960	Cavity 1 door lock is in an unknown state	If the cavity 1 (or single) door lock is in an unknown state, set this fault.	Bad lock assembly. Harness issue.	- Check harness connections between latch motor cam switch and J401 on MC. - Bad cam switch. Check with ohmmeter. - Cam switch gummed up with grease or moisture.
	970	Cavity 2 door lock is in an unknown state	If the cavity 2 door lock is in an unknown state, set this fault.	Bad lock assembly. Harness issue.	

PT.NO. 229C6653P004

WIRING DIAGRAM WARNING:
POWER MUST BE DISCONNECTED
BEFORE SERVICING THE APPLIANCE





WIRE COLORS	
BLACK	B
BROWN	C
NAVY	N
GREEN	G
ORANGE	O
VIOLET	V
RED	R
YELLOW	Y
GRAY	S
WHITE	W
PINK	P
AQUA	A
SOLID	X

23	FAN CONVECTION	1
22	ELEMENT CONVECTION	1
21	PROBE MEAT ASM	1
20	BLOWER FAD ASM(LWR)	1
19	SWITCH HIGH LIMIT (NEUTRAL)	2
18	WI-FI BOARD	1
17	JUMPER RELAYS	4
16	BLOCK TERMINAL	1
15	LATCH ASM	2
14	LIGHT HALOGEN	3
13	SENSOR ASM	2
12	ELEMENT BAKE	2
11	SWITCH HIGH LIMIT	2
10	ELEMENT BROIL	2
9	BLOWER FAD ASM	1
8	CONDUIT WIRE ASM	1
7	HARNESS WIRE LATCH COM	1
6	HARNESS WIRE MAIN	1
5	BOARD RELAY DAUGHTER (LOWER)	1
4	RC17 BOARD (UPPER)	1
3	HARNESS WIRE COM	1
2	RJ45 CONNECTOR	2
1	BOARD UI DISPLAY (PMVA)	1
I.D.	DESCRIPTION	QTY

*NOT ALL PARTS ARE CATALOGUED

MODEL NUMBERS
JTD5000
JKD5000

**IMPORTANT
SERVICE INFORMATION
DO NOT DISCARD**