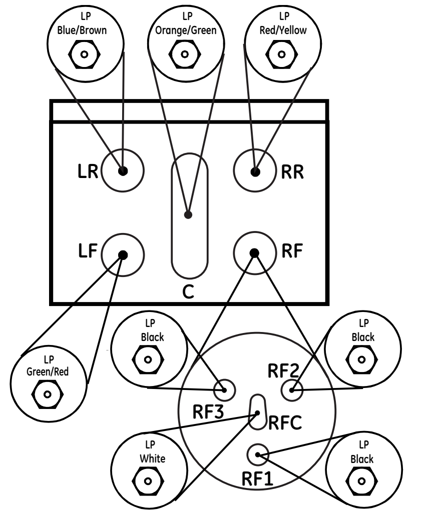
WARNING IMPORTANT SAFETY NOTICE

THIS INFORMATION IS INTENDED FOR USE BY PERSONS POSSESSING ADEQUATE BACKGROUNDS OF ELECTRICAL, ELECTRONIC AND MECHANICAL EXPERIENCE. ANY ATTEMPT TO REPAIR A MAJOR APPLIANCE MAY RESULT IN PERSONAL INJURY AND PROPERTY DAMAGE. THE MANUFACTURER OR SELLER CANNOT BE RESPONSIBLE FOR THE INTERPRETATION OF THIS INFORMATION, NOR CAN IT ASSUME ANY LIABILITY IN CONNECTION WITH ITS USE.

DISCONNECT POWER BEFORE SERVICING
IMPORTANT - RECONNECT ALL GROUNDING DEVICES.

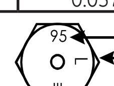
ALL PARTS OF THIS APPLIANCE CAPABLE OF CONDUCTING ELECTRICAL CURRENT ARE GROUNDED. IF GROUNDING WIRES, SCREWS, STRAPS, NUTS OR WASHERS USED TO COMPLETE A PATH TO GROUND ARE REMOVED FOR SERVICE, THEY MUST BE RETURNED TO THEIR ORIGINAL POSITION AND PROPERLY FASTENED.

CONVERSION TO LP (PROPANE) GAS

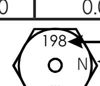


To aid in identifying the proper location for the LP orifices during a conversion from Natural Gas to LP Gas, paint color codes have been added to the side or top of the orifice. See the following charts.

BURNER OUTPUT RATINGS: BTU/HR				
LP (Propane) Gas 10" W.C.P.				
BURNER	BTU RATE	ORIFICE SIZE (mm)	COLOR	MARKING
RF	15,000			
RF1		0.025" (0.63)	Black	63L
RF2		0.025" (0.63)	Black	63L
RF3		0.025" (0.63)	Black	63L
RFC		0.014" (0.35)	White	35L
LF	11,000	0.039" (0.99)	Green/Red	99L
RR	5,000	0.026" (0.66)	Red/Yellow	66L
LR	9,100	0.035" (0.89)	Blue/Brown	89L
C	8,000	0.034" (0.86)	Orange/Green	86L
LOWER BAKE	13,500	0.043" (1.09)	Green	
UPPER BAKE	10,000	0.037" (0.93)	Red	
BROIL	10,000	0.037" (0.93)	Red	



BURNER OUTPUT RATINGS: BTU/HR				
NG (Natural) Gas 5" W.C.P.				
BURNER	BTU RATE	ORIFICE SIZE (mm)	COLOR	MARKINGS
RF	20,000			
RF1		0.043" (1.09)	Red	109N
RF2		0.043" (1.09)	Red	109N
RF3		0.041" (1.04)	Green	104N
RFC		0.030" (0.71)	None	71N
LF	17,000	0.076" (1.92)	Red	192N
RR	5,000	0.038" (0.96)	Blue	96N
LR	9,100	0.054" (1.36)	Green	136N
C	8,000	0.05" (1.27)	Blue	127N
LOWER BAKE	16,000	0.073" (1.85)	Green	0.073
UPPER BAKE	12,000	0.062" (1.57)	Red	
BROIL	10,000	0.056" (1.42)	Yellow	



SPILL-PROOF SEALED BURNER

Brackets are mounted to the under side of the cooktop by T-15 Torx screws. The screw heads are located under burner head (**these screws must be removed before lifting the cooktop**). Screws and bracket ensure proper alignment for gas to be injected into the burner head. It is critical that brackets are aligned correctly and screws fully torqued down during final assembly.

REPLACING ORIFICE HOLDER AND TUBING

The Orifice Holder and Supply Tubing are one assembly.
To replace the assembly:

- Follow the instructions under *To Remove the Cooktop*.
- Remove the 5/8" nut securing the orifice holder being replaced to the bracket. Use a 5/8" open ended or adjustable wrench to loosen the nut.
- Loosen the 1/2" nut securing the tubing to the valve.

TO REMOVE COOKTOP

- Remove grates, burner caps, and heads.
- Remove T-15 torxs screws - 3 under each burner head.
- Disconnect electrode leads.
- Disengage 2 front clips using a flat blade screw driver located between cooktop and manifold approximately 2-1/2" from each side.
- Lift top up at front.
- Shift top left or right to disengage hinge pins at the rear.

IMPORTANT: Before lowering the top onto the front clips, line up the burner bracket with the cooktop to replace screws.

NOTE: When reinstalling top, position top to be the equivalent of 1/2 way lowered before attempting to insert the top hinge pins into the corresponding slots on the backguard.

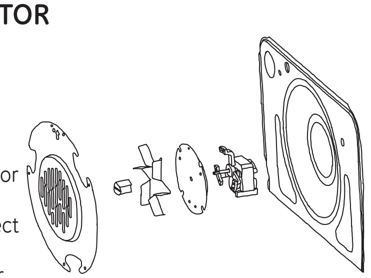
SPARK MODULE LOCATION

The spark module is located inside the backguard. The module is mounted by two tabs which snap into correspoinding slots.

To remove the module from its mounting, use a small, flat bladed screwdriver to bend the mounting tab toward the module body, freeing the tabs from their slots.

TO REMOVE CONVECTION MOTOR

1. Remove oven door.
2. Remove Phillips head screws from fan cover.
3. Remove nut from fan blade and remove fan blade.
4. Remove 1/4" hex head screws from motor support.
5. Pull the motor straight out and disconnect the wires.



NOTE: For service replacement on all other leads, use 18 GA. 150˚C wire except as individually noted on leads. All leads with designation numbers that enter common lead path (▭) must be traced to their terminations.

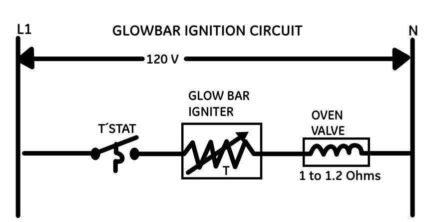
OVEN CONTROL TEST PROCEDURES

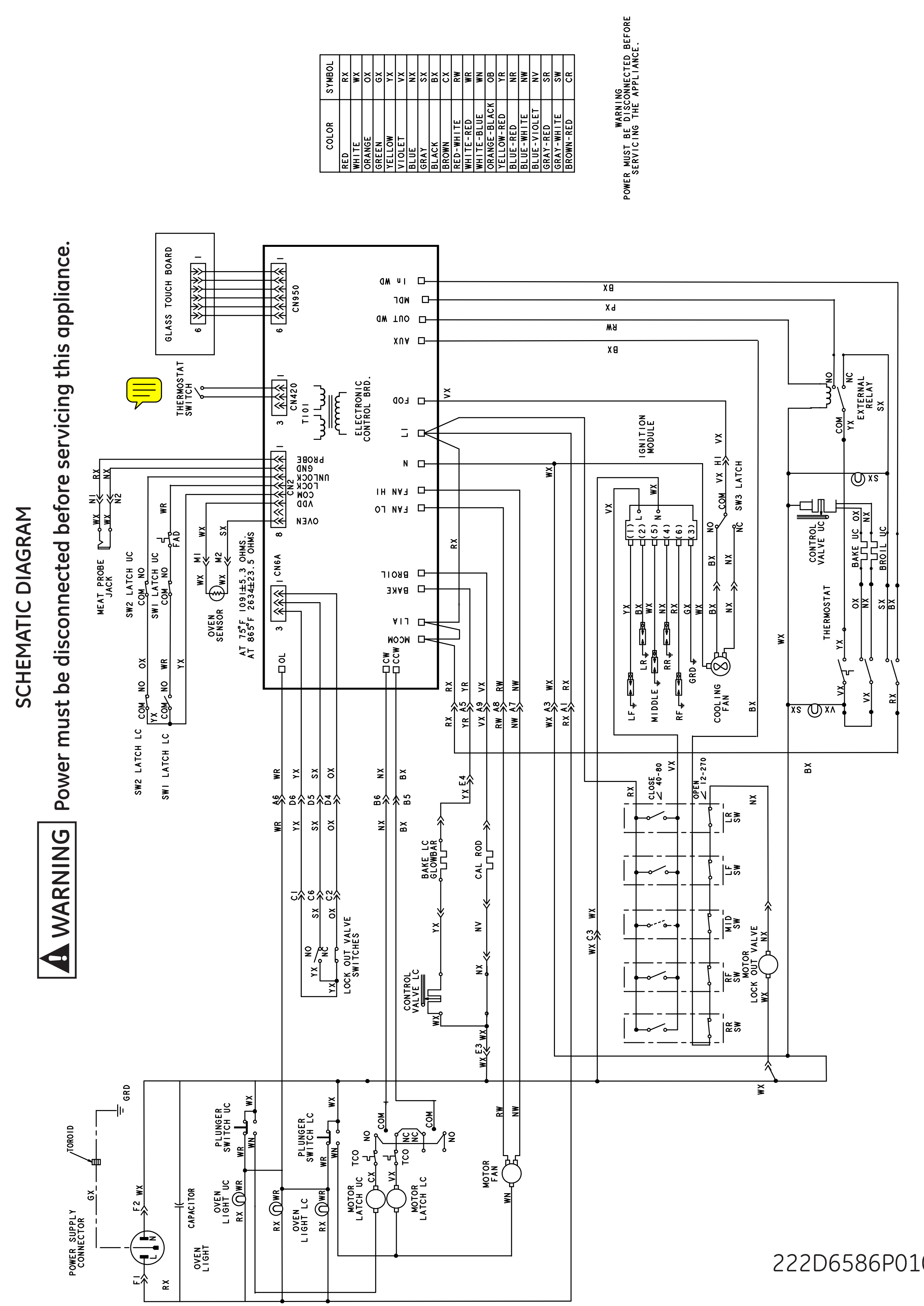
NOTE: VOLTAGE MUST BE PRESENT ACROSS TERMINALS L1 TO N AT ALL TIMES FOR CONTROL TO OPERATE.

IGNITER GLOWBAR REPLACEMENT

The igniter glowbar and it's protective cage are one assembly on this Norton style igniter. the round Carborundum igniter CANNOT be substituted for the rectangular Norton Igniter.

- Remove the burner from the oven. See *Bake Burner Removal* in this manual.
- Remove the 1/4" hex head screws securing then igniter to the burner.
- Remove the old igniter.
- Install the new igniter and re-install the two 1/4" hex head screws to secure the igniter.
- Reinstall the burner.

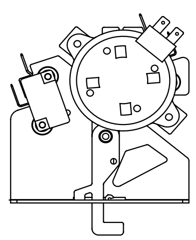




222D6586P010

GAS, FREESTANDING, SELF-CLEANING RANGE

DOOR LATCH



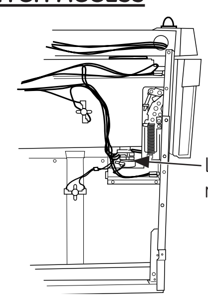
The latch mechanism is thermally operated. When the ***SELF CLEAN*** cycle is selected, the latch will automatically lock for cleaning and unlock after cleaning. The door locks immediately and will remain locked until the oven has dropped below these temperatures (about 420˚F.)

UPPER LOCK MECHANISM AND LOCK SWITCH ACCESS

1. Remove oven door.
2. Remove the cooktop (see *Remove Cooktop* in this manual.)
3. Remove manifold panel (remove phillips head screws from burner flame adjustment switch and 1/4" hex head screws from the underside of the manifold panel.)
4. Remove cover over lock mechanism (remove 1/4" hex head screws on each side of the cover.)
5. Label and remove wires from lock switch.
6. Remove screws securing lock mechanism to oven frame.
7. Remove mechanism.

Note: After installing mechanism, rotate lock to unlock position to prevent low temperature lock-up.

LOWER LOCK MECHANISM AND LOCK SWITCH ACCESS



Lower lock mechanism

1. If upper door is locked, see *Upper Lock Mechanism and Lock Switch Access* to disengage the upper lock mechanism and remove the upper door.
2. Remove 2 hex screws from front that attach the lower lock mechanism to the front frame. If lower door is locked, disengage latch hook to remove lower oven door.
3. Remove the cooktop (see *To Remove Cooktop* in this manual.)
4. Remove manifold panel (remove Phillips head screw from left and right burner flame adjustment switch and 1/4" hex head screws from the underside of the manifold panel.)
5. Remove left side panel (Remove screws at top connecting to burner box. Remove screws at rear connecting to range back. Remove screw at bottom front connecting to front frame. Remove screw at top front connecting to side post.)
6. Lower lock mechanism is located between the upper and lower oven near the front of the unit.

Note: After installing mechanism, rotate lock to unlock position to prevent low temperature lock-up.

ERC FAILURE CODES

The oven may stop operating but not give an F code on the display immediately. F codes are stored in nonvolatile eprom memory until the same fault occurs twice consecutively. After that, the F code will be displayed. F codes can be recalled by pressing together ***TIMER, CLOCK, MIN DOWN*** or ***9***. While F codes are displayed, pressing ***MIN UP*** or ***8*** and ***HR, DOWN*** or ***6*** together will clear them.

FAILURE CODE MEANING & CORRECTIONS		
FAILURE CODES WILL BE SHOWN IN THE OVEN CONROL BY PRESSING THE (TIMER), (8) & (9) KEYS AT THE SAME TIME		
FAILURE CODE	MEANING	CORRECTION
F0	CLEAR/OFF key input failure	Short for approximately 100 seconds.
F1	Control Failure	Loss of element relay redundant driver protection.
F2	Oven temperature condition due to sensor input to control	Oven above 640˚F with Lock input untrue. Oven above 915˚F with Lock input true.
F3	Open Sensor	Sensor is 2900 to infinite ohms while in a heating mode.
F4	Shorted Sensor	Sensor is 0 to 950 ohms maximum while in a heating mode.
F6	Failed Gas Valve Lockout	Open harness switch and/or installed gas lockout motor.
F7	Shorted key detection except for slew entry and Clear/Off keys	Short for approximately 40 seconds.
F9	Door lock false while above Runaway Setpoint, Unlatched Door Lock temperature OR FAD device setpoint exceeded.	"Unlock" Latch Changing status to "Lock". Latch of Motor changing to "Un-Lock" while above run away set point.
FC	Door Latch error	Unlock home and lock home are try simultaneously.
FD	Probe failure	Shorted Probe
FF	Control failure	Loss of door motor redundant driver protection.

TO SELF CLEAN IN LOWER OVEN

1. Press ***SELF CLEAN***.
2. Press number pads to enter desired time (4:00 hours is standard).
3. Press ***START*** pad.
4. ***LOr*** and ***door*** will be displayed and ***LOCKED*** will be flashing. ***CLEAN*** will be on and solid indicating the gas valve and doors are locking and the unit is entering self clean. The gas valve locks first, then the lower door, then the upper door. The call for heat will begin once everything has locked successfully. Towards the end of the cycle, the lower door will unlock, then the upper door, and finally the gas valve. ***LOCKED*** will flash while the doors are unlocking. ***LOC*** will flash while the gas valve is unlocking.

TO SELF CLEAN IN UPPER OVEN

1. Turn thermostat to ***SELF CLEAN*** position.
2. Press ***START*** pad (default time is 5:00 and cannot be changed).
3. ***UPr*** and ***door*** will be displayed and ***LOCKED*** will be flashing. ***CLEAN*** will be on and solid indicating the gas valve and doors are locking and the unit is entering self clean. The gas valve locks first, then the lower door, then the upper door. The call for heat will begin once everything has locked successfully. Towards the end of the cycle, the lower door will unlock, then the upper door, and finally the gas valve. ***LOCKED*** will flash while the doors are unlocking. ***LOC*** will flash while the gas valve is unlocking.

NOTE FOR SELF CLEAN IN UPPER OR LOWER OVEN: Average clean temperature is 790˚F. Cool down period is 1 hour at the end of the cycle. The self-clean operation can only be initiated when the range is at room temperature. If any recent oven cooking has been done, allow the range to cool to room temperature before initiating a self-clean cycle. If you try to initiate a self-clean cycle in either of the ovens before the range has reached room temperature, the following will occur: Initially, the display will look normal. 15 seconds after initiating the cycle, the control will begin to beep about once every second for approximately 1 minute. After 1 minute, the beeping will cease and the display will flash the word. LOC. After 15 seconds, the control will show the time of day, indicating it is now in the standby mode and the self-clean cycle has been terminated.

OVEN TEMPERATURE CALIBRATION

The bake temperature can be adjusted from its factory calibration (**+** or **-**) 35˚F in 1˚ increments.

1. Press and hold both the ***BAKE*** and ***WARM*** pads for about 2 seconds until the display shows ***SF***.
2. Press the ***BAKE*** pad. The current offset setting is shown in the display.
3. Enter the desired temperature offset using the number pads.
4. Use the ***BAKE*** pad to toggle between **+/-**.
5. Press ***START*** key. The display will return to ***Time*** or ***Day Clock***.

BAKE BURNER REMOVAL UPPER OVEN

- Remove oven door and drawer.
- Remove the screws on the oven floor at the back of the oven cavity and remove oven floor/deflector.
- Remove 1/4" hex head screws from the bracket holding the burner to the back wall of the range.
- Remove the screw at the front of the burner.
- Disconnect the igniter wires.
- Remove the Bake Burner.

BAKE BURNER REMOVAL LOWER OVEN

- Remove oven door and drawer.
- Remove the screws on the oven floor at the back of the oven cavity and remove oven floor/deflector.
- Remove the screw at the front of the burner.
- Disconnect the igniter wires.
- Remove the Bake Burner

BACKGUARD DISASSEMBLY

- Remove screws located on the back of the backguard. (There is a set of screws on each side.)
- Remove the torx screw on the front inside corner of backguard (1 on each side).
- Gently lift backguard off.
- Be sure to reassemble rear cover and backguard per original assembly.

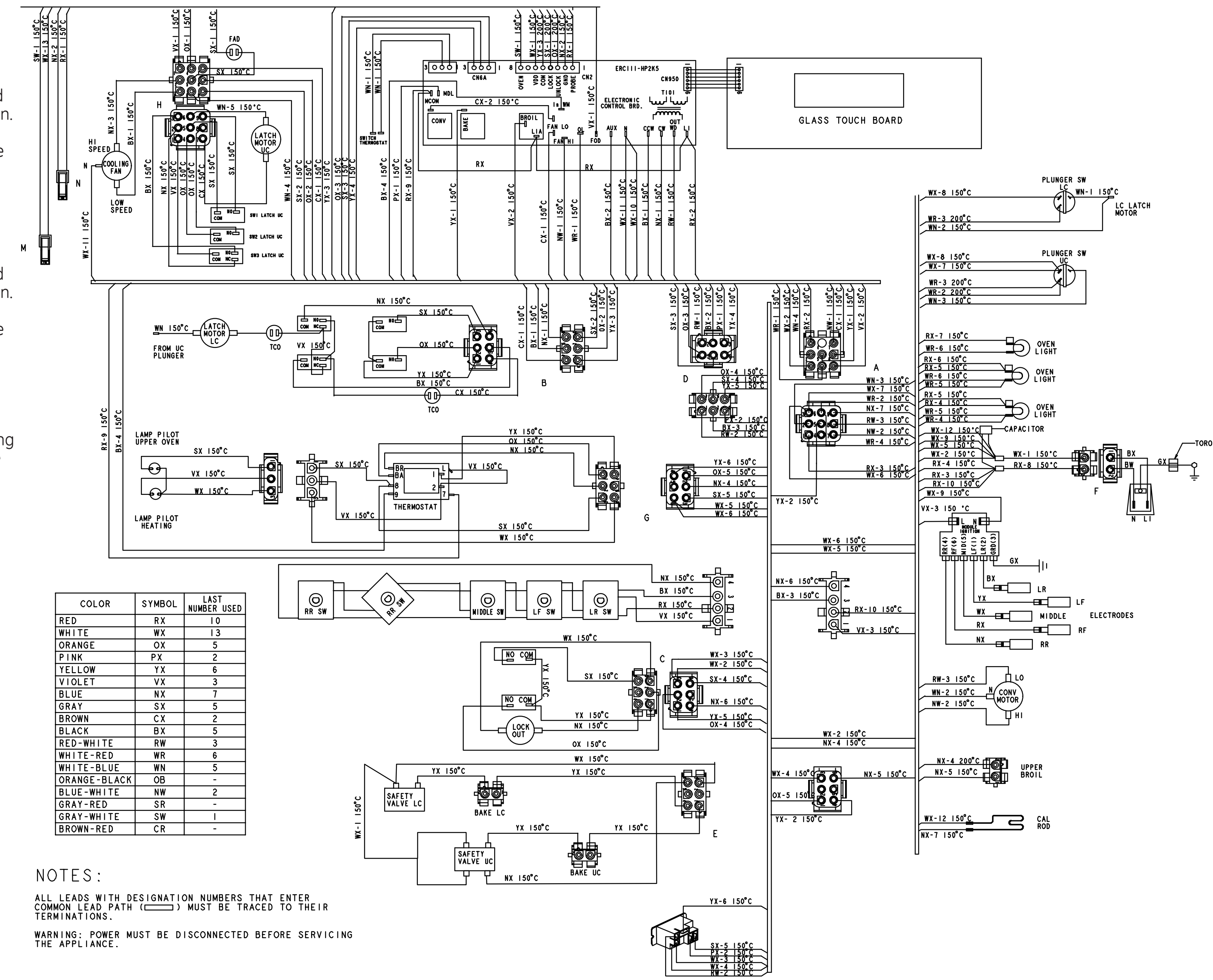
OVEN BURNER IGNITION SYSTEM

The ignitor is a "Norton" style rectangular glowbar. The ignition circuit consists of the electronic control, the igniter, and the oven safety valve (gas valve). The three components are wired in series.

The most important points to know about the ignition system are:

1. THE IGNITOR RESISTANCE DECREASES AS THE IGNITER SURFACE TEMPERATURE INCREASES.
2. THE SAFETY VALVE OPERATES BY CURRENT, NOT VOLTAGE.

From a cold start, the ignitor needs 30-60 seconds, with voltage applied, to reduce the electrical resistance enough to provide a minimum of 2.9 amps of current flow in the series circuit. This is the required current flow needed for the safety valve to open to supply gas to the burner. The glowbar should provide a steady current flow of between 3.2 to 3.6 amps flowing in the circuit. The igniter will remain energized at all times during burner operation. If the igniter glows red but does not draw at least 2.9 amps, the fault is usually with the igniter, not the valve. Always check the oven shut-off valve for a "No Oven" condition.



COLOR	SYMBOL	LAST NUMBER USED
RED	RX	10
WHITE	WX	13
ORANGE	OX	5
PINK	PX	2
YELLOW	YX	6
VIOLET	VX	3
BLUE	NX	7
GRAY	SX	5
BROWN	CX	2
BLACK	BX	5
RED-WHITE	RW	3
WHITE-RED	WR	6
WHITE-BLUE	WN	5
ORANGE-BLACK	OB	-
BLUE-WHITE	NW	2
GRAY-RED	SR	-
GRAY-WHITE	SW	1
BROWN-RED	CR	-

NOTES:

ALL LEADS WITH DESIGNATION NUMBERS THAT ENTER COMMON LEAD PATH ( ) MUST BE TRACED TO THEIR TERMINATIONS.

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVICING THE APPLIANCE.

CIRCUIT	TERMINALS	OHMS	CONDITION
OVEN SENSOR	6 to 8	1100	OVEN AT ROOM TEMPERATURE
DOOR UNLATCHED	3 to 5	0	DOOR LATCH IN BAKE/BROIL POSITION
DOOR LATCHED	4 to 5	0	DOOR LATCH IN CLEAN POSITION
MEAT PROBE	1 to 2	55000	AT ROOM TEMPERATURE MEAT PROBE INSERTED

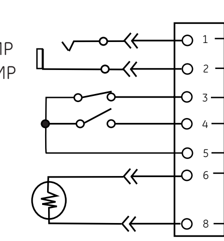
222D6585P010

WIRING DIAGRAM

WARNING Power must be disconnected before servicing this appliance.

SENSOR AND LOCK SWITCH CIRCUIT

OVEN TEMP SENSOR
1100 OHMS AT ROOM TEMP
2650 OHMS AT CLEAN TEMP



RELAY CONTACT TO OPERATION TEST			
RELAY	TERMINALS	VOLTAGE IN MODE	VOLTAGE IN OFF
BAKE	BAKE to N	120 VAC IN BAKE*	0 VAC IN OFF
BROIL	BROIL to N	120 VAC IN BROIL**	0 VAC IN OFF
LATCH	MDL to N	120 VAC	0 VAC IN OFF
OVEN LIGHT	LIGHT to L1	120 VAC	0 VAC IN OFF
FAN LO SPEED	FAN L to N	120 VAC IN CONVECTION BAKE*	0 VAC IN OFF
FAN HI SPEED	FAN H to N	120 VAC IN CONVECTION ROAST*	0 VAC IN OFF

* Be sure to select a temperature or setting

** Must be in Bake cycle. Wait until preheat has completed and call for heat initializes.

CGS990 DOUBLE OVEN -2K5
31-14982-2 07-11