

Free Standing Range (FSR/FSR3) and Slide-In Range (SIR) Service Manual

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Model Numbers – Free Standing (FSR, FSR3) & Slide In Ranges (SIR)

HDI7032C/U - SIR	HEI7132C/U - SIR	HES342U - FSR	HES7282U - FSR3	HGS442UC - FSR
HDI7052C/U - SIR	HEI7152C/U - SIR	HES3450U - FSR	HGS232UC - FSR	HGS445UC - FSR
HDI7132C/U - SIR	HEI7282C/U - SIR	HES345U - FSR	HGS2350UC - FSR	HGS446UC - FSR
HDI7152C/U - SIR	HES2220U - FSR	HES346U - FSR	HGS235UC - FSR	HGS5022UC - FSR3
HDI7282C/U - SIR	HES2250U - FSR	HES432U - FSR	HGS236UC - FSR	HGS5042UC - FSR3
HDS252C/U - FSR	HES2260U - FSR	HES435U - FSR	HGS242UC - FSR	HGS5052UC - FSR3
HDS255C/U - FSR	HES2320U - FSR	HES436U - FSR	HGS245UC - FSR	HGS5062UC - FSR3
HDS256C/U - FSR	HES232C/U - FSR	HES442U - FSR	HGS246UC - FSR	HGS7022UC - FSR3
HDS355U - FSR	HES2350U - FSR	HES445U - FSR	HGS247UC - FSR	HGS7052UC - FSR3
HDS442U - FSR	HES235C/U - FSR	HES446U - FSR	HGS252UC - FSR	HGS7062UC - FSR3
HDS445U - FSR	HES2360U - FSR	HES5022C/U - FSR3	HGS2530UC - FSR	HGS7132UC - FSR3
HDS446U - FSR	HES236C/U - FSR	HES5042C/U - FSR3	HGS255UC - FSR	HGS7152MX - FSR3
HDS7022C/U - FSR3	HES242C/U - FSR	HES5052C/U - FSR3	HGS256UC - FSR	HGS7282UC - FSR3
HDS7052C/U - FSR3	HES245C/U - FSR	HES5062C/U - FSR3	HGS3052UC - FSR3	
HDS7062C/U - FSR3	HES246C/U - FSR	HES7022C/U - FSR3	HGS342UC - FSR	
HDS7132U - FSR3	HES247U - FSR	HES7052C/U - FSR3	HGS345UC - FSR	
HDS7152U - FSR3	HES252C/U - FSR	HES7062C/U - FSR3	HGS346UC - FSR	
HDS7282U - FSR3	HES255C/U - FSR	HES7132U - FSR3	HGS432UC - FSR	
HEI7032C/U - SIR	HES256C/U - FSR	HES7152U - FSR3	HGS435UC - FSR	
HEI7052C/U - SIR	HES3052C/U – FSR3	HES7252U - FSR3	HGS436UC - FSR	

Model Number Explanation

The first three letters indicate product type:

HDI - Dual Fuel SIR, **HDS** - Dual Fuel FSR , **HEI** – Electric SIR, **HES** – Electric FSR, **HGS** – Gas FSR

The first two numbers indicate the level of features:

25 - Most features, **24** - Medium features, **23** - Standard features, **30/50** - Regular Convection, **70/71/72** – European Convection

The last number indicates the color:

2 - White, **5** - Stainless, **6** - Black, **7** - Biscuit

The next two letters....**UC**....Indicates United States & Canada. If model only has a **U**, it is not certified for Canada.

These last two letters will be followed in production by /01, /02, /03 etc., this indicates the service code level and must be included as part of the model number to ensure that the correct parts are ordered for service.

Installation/Service Tools

The following list are most of the tools and parts necessary for installation and may be necessary for service:

- 30 (at least) Amp Power Supply Cord Kit (not necessary for Canadian installation)

- Measuring tape

- Phillips head screwdriver

- 1¼" (31.8mm) wrench

- T-20 torx screwdriver

- Level

- Cloth or cardboard (to protect surfaces)

- Flexible conduit (for hard-wire installation only)

- Torque wrench (for hard-wire installation only)

- Pipe wrench

- Teflon tape or pipe joint compound

- Gas leak test solution

- Gas supply line











- Gas shut off valve (if not already present)

Display at Power Up

When the range is powered up the display shows the following for approx. 3 seconds before prompting for CLOCK:

- The orange temp display will flash **ZZZ** where ZZZ is the model number the control is configured to
- For electric ranges the alpha display will flash **ELC XXXX YY** where XXXX indicates the Flash version and YY is the EEPROM version
- For gas ranges the alpha display will flash **GAS XXXX YY**

Available Cooking Modes & Symbols for Electric Oven

COOKING MODE	SYMBOL	DEFAULT TEMPERATURE	TEMPERATURE RANGE	ELEMENTS
Convection Bake		325 Deg. F	100 – 525 Deg. F	Upper, lower, third rear
Thermal Bake		350 Deg. F	100 – 550 Deg. F	Upper and lower
Convection Roast		325 Deg. F	100 – 525 Deg. F	Upper and lower
Thermal Broil		450 or 550 Deg. F	Low or High	Upper
Convection Broil		550 Deg. F	High (550 Deg. F)	Upper and convection fan
Temperature Probe		0 Deg. F	100 – 300 Deg. F	Refer to all bake models
Dehydrate		140 Deg. F	100 – 160 Deg. F	Third rear and convection fan
Proof		100 Deg. F	85 – 110 Deg. F	Upper and lower
Sabbath		350 Deg. F	100 – 550 Deg. F	Upper and lower Light on or off
Keep Warm		170 Deg. F	140 – 225 Deg. F	Upper and lower

Dual Fuel & All Gas Range Top

Burner Ratings:

RF Burner Power-Sim™ – 15,000 to a low of 1200 but with cap takes heat output down to 400 to 500 BTUs

RR Burner 800 – 5,500

LF Burner 1,200 – 9,100

LR Burner 1,400 – 12,500



All Gas Range Oven

- **Bake**...17,000 BTUs
- **Broil**...14,500BTUs
- Electronically controlled
- Flame diffuser
- Even heat distribution
- Glow-bar silicon carbide igniter
- Low profile cover for more usable cooking surface



Warranty

- **One full year** Parts & Labor from date of installation or occupancy
- **Additional four years** part only on the following cooktop section parts – electrical controls, heating elements and ceramic glass top.
- **Service must be performed** by an authorized service agency
- **Warranty Claim** must be submitted within 45 days of completion

All Electric Range

Electrical Connections:

Range requires a 30 Amp (at least) 120 / 240 VAC or 120 / 208 VAC dedicated circuit preferably with a four wire connection, however where local codes and ordinances permit grounding through the neutral and / or conversion to four wire is impractical, unit may be connected to the power supply via a three wire connection.

Connection can be made via a range cord or a flexible conduit. If a range cord is used it must meet the above rating requirements and be marked "For use with Ranges."

All Electric Range Con't

Electrical Connections

Power Supply Connections

Three Wire Connection

The Four Wire Connection is preferred, but where local codes and ordinances permit grounding through neutral and/or conversion to four wire is impractical, unit may be connected to the power supply via a three wire connection.

1. Disconnect electrical power at breaker box.
2. Remove the terminal block cover to expose the junction box (See Figure A).
3. Remove top nut, star washer, and round washer from each post.

Note: DO NOT remove last round washer, last nut or internal wiring leads.

4. Attach white wire, round washer, star washer and nut IN THIS ORDER on top of ground strap on center post.
5. Attach red wire, round washer, star washer and nut IN THIS ORDER to left post.
6. Attach black wire, round washer, star washer and nut IN THIS ORDER to right post (See Figure B).
7. Tighten all connections securely and replace terminal block cover (See Figure C).

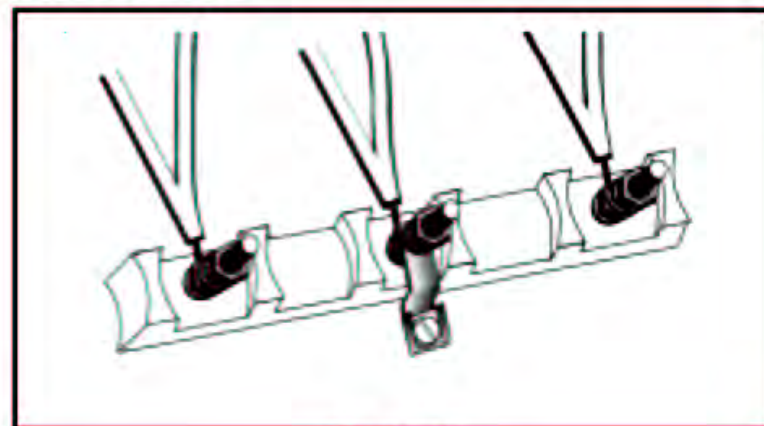


Figure A

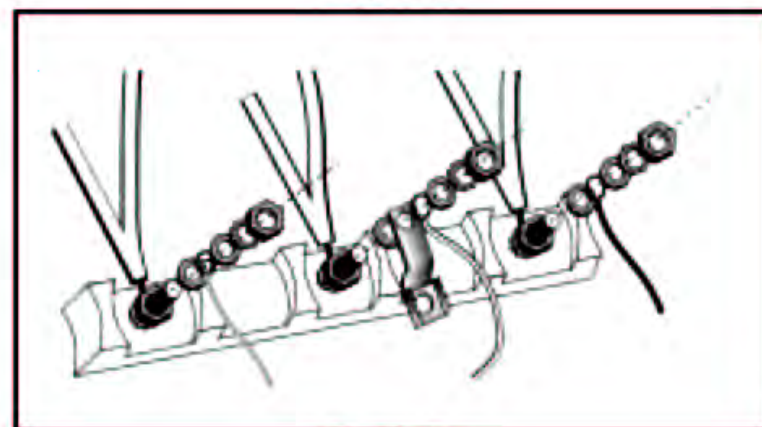


Figure B

All Electric Range Cont'd

Four Wire Connection (Preferred Method)

1. Disconnect electrical power at breaker box.
2. Remove the terminal block cover to expose the junction box (See Figure A).
3. Remove top nut, star washer, and round washer from each post.
Note: DO NOT remove last round washer, last nut or internal wiring leads.
4. Remove screw from bottom end of ground strap.
5. Remove ground strap from center post, rotate so that wide end is at top and attach wide end to range through hole below junction box. Attach green wire on top of ground strap. Tighten Screw (See Figure D).
6. Attach red wire, round washer, star washer and nut IN THIS ORDER to left post.
7. Attach white wire, round washer, star washer and nut IN THIS ORDER to center post.
8. Attach black wire, round washer, star washer and nut IN THIS ORDER to right post (See Figure E).
9. Tighten all connections securely and replace terminal block cover.

Figure B

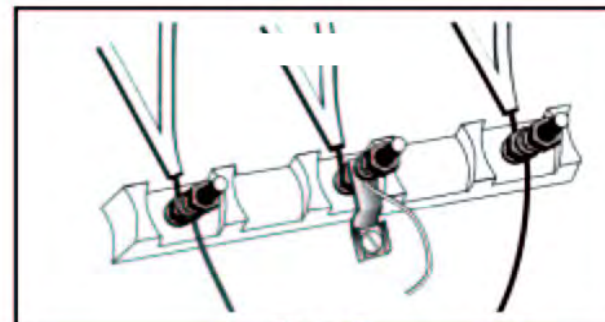


Figure C

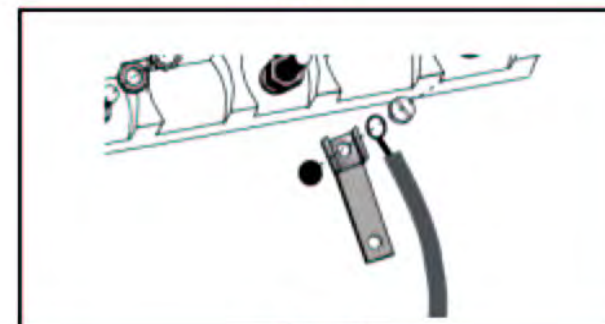


Figure D

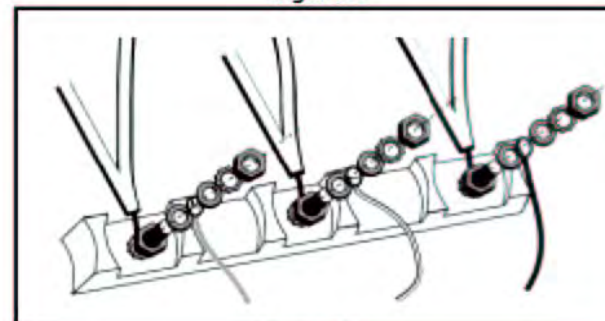


Figure E

Dual Fuel Range

The gas supply line and electrical outlet must be within the spaces indicated in the illustration below. The gas shut off valve must also be accessible without moving the range.

Instructions were determined using Standard American base cabinets measuring 36" high x 24" deep. If nonstandard cabinets are used, care should be taken to alter dimensions accordingly.

NOTICE: Some cabinet finishes cannot service the temperatures allowed by U.L., particularly self-cleaning ovens; the cabinets may discolor or stain. This is most noticeable with laminated cabinets

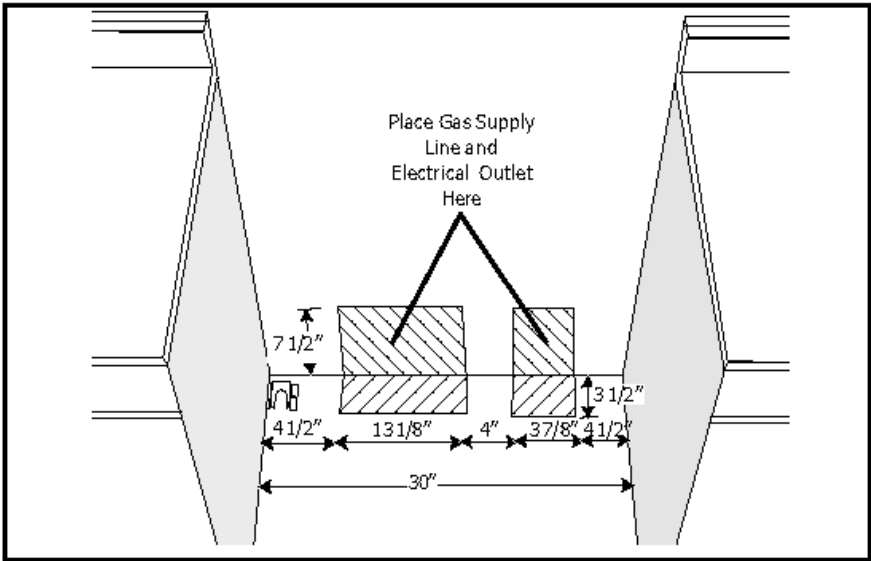


Figure 2: Gas Supply Line and Electrical Outlet Placement

Dual Fuel Range Cont'd

Connect Electric

Ranges are dual rated for use on either 120/240 VAC or 120/208 VAC. See table for power ratings and circuit breaker sizes based upon the supply voltage for each mode (See chart below).

VOLTS A.C.	HZ	RATING KW	CIRCUIT BREAKER
120/240	60	12.1	30 AMPS
120/208	60	9.1	25 AMPS

CAUTION: make certain that gas shutoff valve and all burner controls are in OFF position before beginning.

TO PREVENT ELECTRICAL SHOCK, THE GROUNDING PRONG SHOULD NOT, UNDER ANY CIRCUMSTANCES, BE CUT OR REMOVED. IT MUST BE PLUGGED INTO A MATCHING GROUNDING TYPE RECEPTACLE AND CONNECTED TO A CORRECTLY POLARIZED 240-VOLT CIRCUIT. A separate circuit is recommended which is in compliance with the NEC.

If there is any doubt as to whether the wall receptacle is properly grounded, have it checked by a qualified electrician.

This appliance may be connected to the power supply by installing flexible conduit or a power cord set. The electrical rating of the power cord set (not supplied) must be 240 volt, 30 amperes. The power cord set shall be marked "For Use with Ranges."

The power supply shall be connected to the range terminal block compartment located near the bottom of the back panel (See Figure 4, at right). It is accessible by removing the terminal block cover.

Place strain relief in knockout below terminal block (See Figure 4 below). Feed range cord through hole and strain relief up to terminal block. Allow for slack in the cord between the strain relief and terminal block. Once cord length/ slack has been adjusted, attach strain relief per instructions included with strain relief. Connect wiring as described below and on next page.

TIP

The knockout panel can be removed from the range to install the strain relief:
Remove panel from range, install strain relief in panel and re-attach.

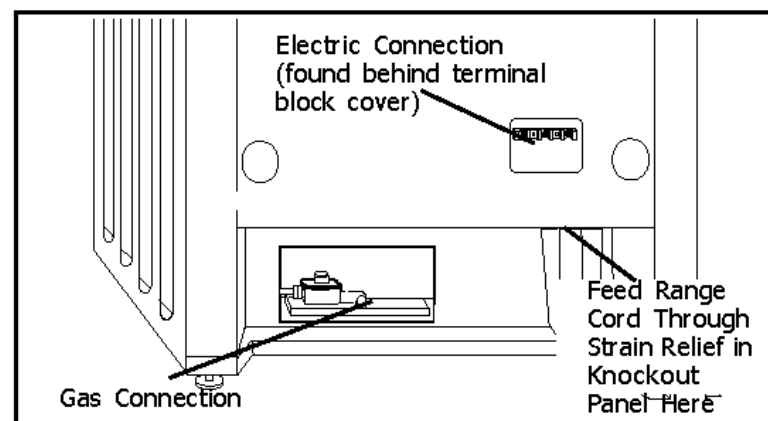


Figure 4

The strain relief provided with your range cord must be properly installed.

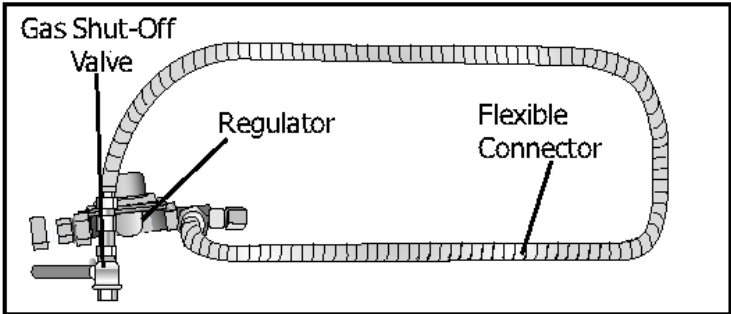
NOTE: When installing the regulator/valve assembly it is easy to knock down the red tab to close off gas flow. Be sure the red tab on the regulator is in the UP position when work is complete.

Dual Fuel Range Cont'd

Note: The installer should inform the consumer of the location of the gas shut-off valve.

Flexible Connector Method

1. Install male 1/2" flare adaptor at the 1/2" NPT internal thread of the range inlet. Use a backup wrench on the elbow fitting to avoid damage.
2. Install male 1/2" or 3/4" flare union adapter on the NPT internal thread of the manual shut-off valve.
3. Connect flexible metal appliance connector.
4. Make sure circuit breaker is off and then plug range cord in to electrical outlet.
5. Push range back into position insuring that range leg slides under the anti-tip bracket. The range will sit 3/4" away from the wall when properly installed. **Note:** Be careful not to crimp flexible connector!
6. Carefully tip range forward to insure that anti-tip bracket engages and prevents tip-over.

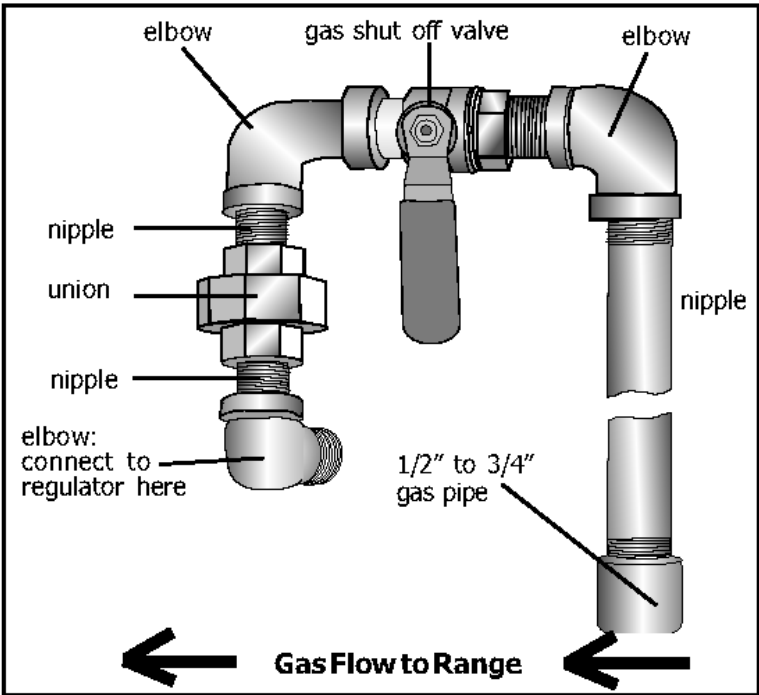


Rigid Pipe Method

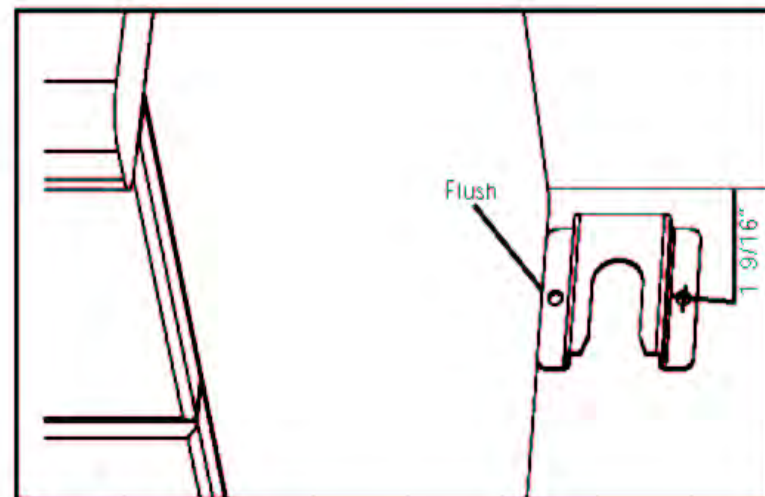
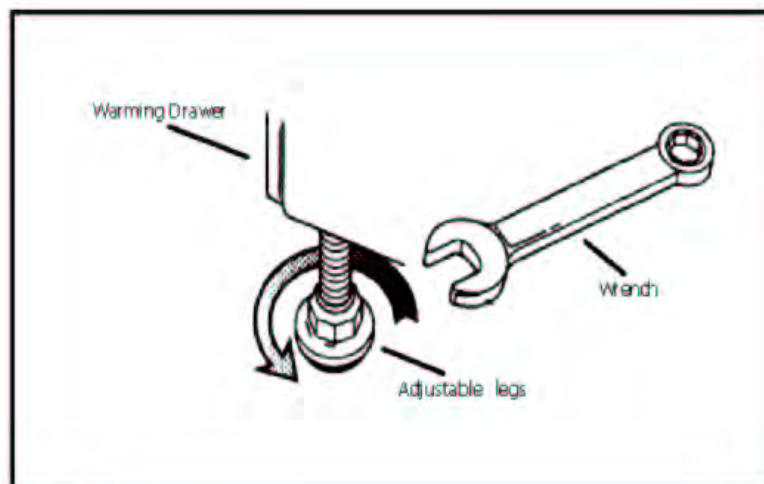
The configuration of the rigid pipe connection will vary depending on the location of the gas pipe stub.

1. Make sure circuit breaker is off and then plug range cord in to electrical outlet.
2. Push range back into position insuring that range leg slides under the anti-tip bracket. The range will sit 3/4" away from the wall when properly installed.
3. Carefully tip range forward to insure that anti-tip bracket engages and prevents tip-over.
4. Connect pipe to range at union. Access the connection through the access panel behind the warming drawer.

Note: Be careful not to apply pressure to warming drawer element during rigid pipe installation.

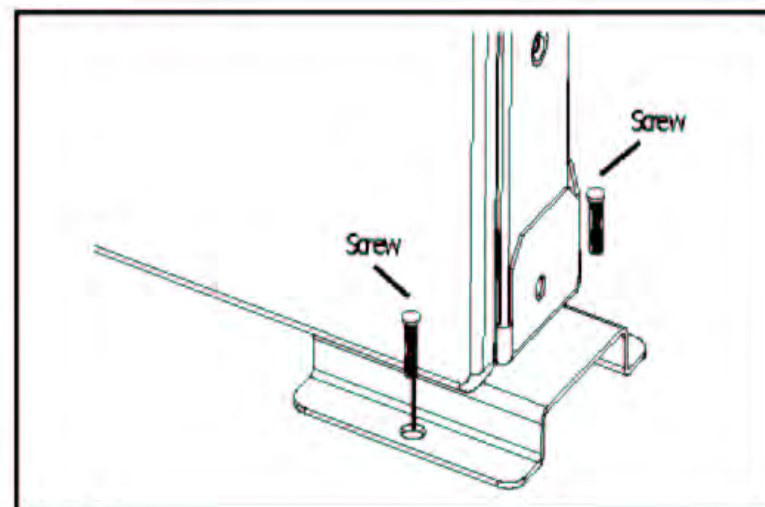


Anti-Tip Bracket - Anti-Tip bracket must be installed as shown below



INSTALL ANTI-TIP BRACKET:

1. Adjust height of range and level by rotating the adjustable leg supports, (see Figure 6) using 1-1/4" wrench.
2. Measure to locate bracket position as shown in Figure
3. Secure bracket with 2 screws.

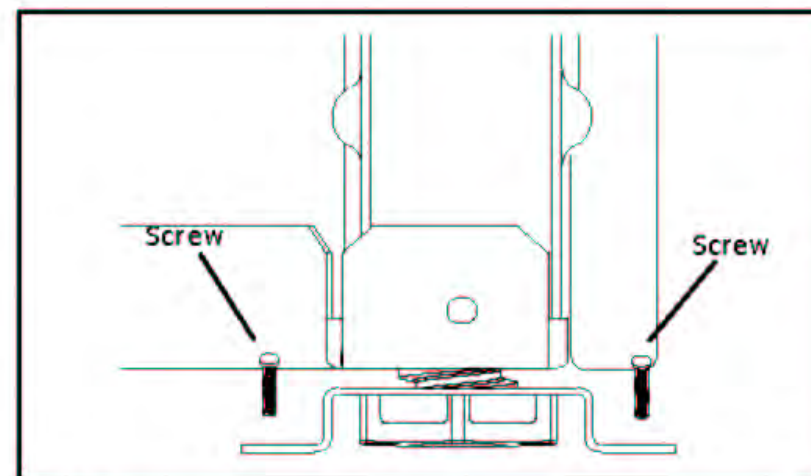


Anti-Tip Bracket Installation Cont'd

FINAL INSTALL:

1. Move range close enough to the opening to plug into the receptacle.
2. Slide range into position insuring that the left back leg slides under the anti-tip bracket. Range will sit 3/4" away from back wall when properly installed.
3. Carefully tip range forward to insure that the anti-tip bracket engages the range back brace and prevents tip-over.
4. Turn on electrical power. Check range for proper operation as described in Use and Care Manual.

Note: if LCD screen flashes and beeps, the wiring is incorrectly installed. Immediately disconnect power at breaker and return to step 3: CONNECT RANGE CORD.



Conversion of Range to LP Gas - Kit is supplied with the range

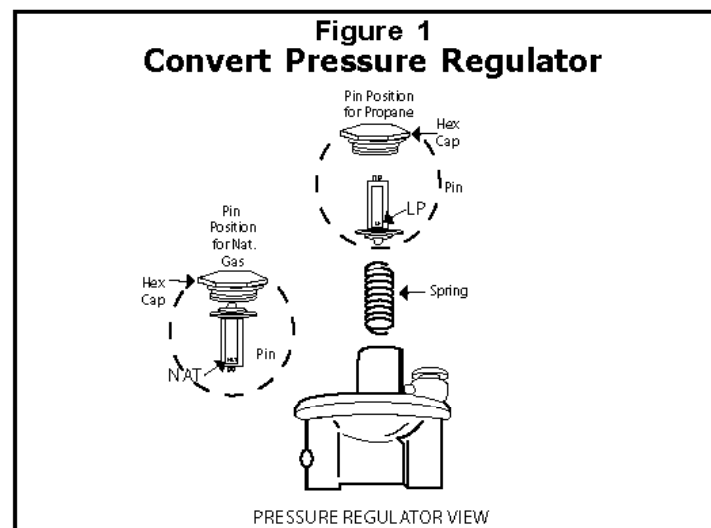
Conversion Instructions - Before you begin

- 1.  CAUTION: Turn off Gas and Electricity**
Before Proceeding with the conversion; shut off the gas supply to the appliance prior to disconnecting the electrical power.

Shut off the outside propane tank gas valve to the range. Remove range power cord from electrical outlet or turn breaker off at breaker box, and turn all control knobs to the "OFF" position.

2. Convert Pressure Regulator from 5" W.C. to 10" W.C.

1. Remove Warming Drawer; Pull drawer out until stop is reached. Push clip on right side up and clip on left side down. Pull drawer the rest of the way out.
2. Remove cover plate from interior back wall by removing single screw on left side of panel.
3. Remove the hexagon cap from the top of the regulator with an adjustable wrench.



LP Conversion – Cont'd

4. Pop out the plastic stem in the cap and turn it over pressing it firmly in place so that the letters "LP" can now be seen upright in the stem, rather than "NAT".

5. Replace the cap and button assembly into the top of the regulator sealing it firmly. Make certain spring is still in place (See Fig. 1). DO NOT OVER TORQUE.

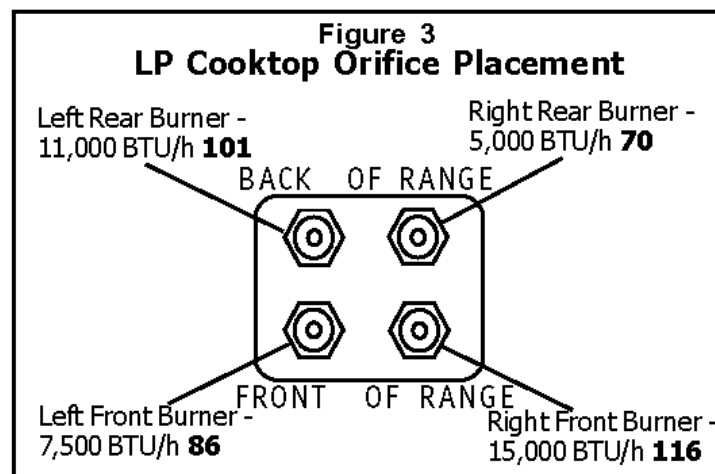
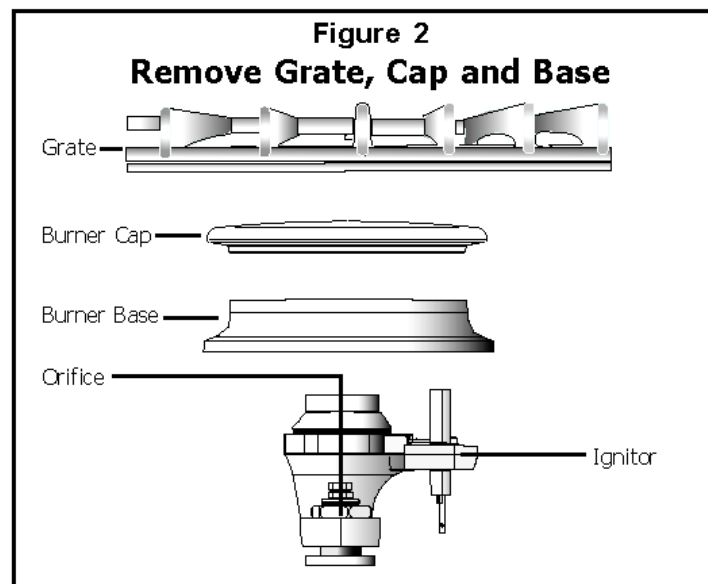
6. Install the FOIL CONVERSION STICKER on the back side of the cover plate so that it appears on the back side of range next to the regulator.

3. Replace Main Cooktop Orifices

Remove Grates, Burner Caps and Burner Bases. Remove burner grates and burner caps. Unscrew 2 T20 screws inside each base and remove burner bases (See Figure 2). Reinsert screws in jet holder to hold tubing assembly in place.

Remove Natural Gas Cooktop Orifices. Insert the socket driver with 3" minimum extension into the jet holders to remove existing orifices. Place the old orifices in the space provided on page 5 in case future conversion back to natural gas is necessary.

Assemble LP Cooktop Orifices. Place in cooktop exactly as layed out in the cover of this manual (also shown in Figure 3). If the orifices become separated from the cover, placement can be determined by matching the number stamped into the orifice with the placement specifications displayed in Figure 4. Place the new orifice into the socket then insert each orifice into its respective threaded hole in the jet holder. Tighten until the orifice stops turning. DO NOT OVER TIGHTEN.



LP Conversion – Cont'd

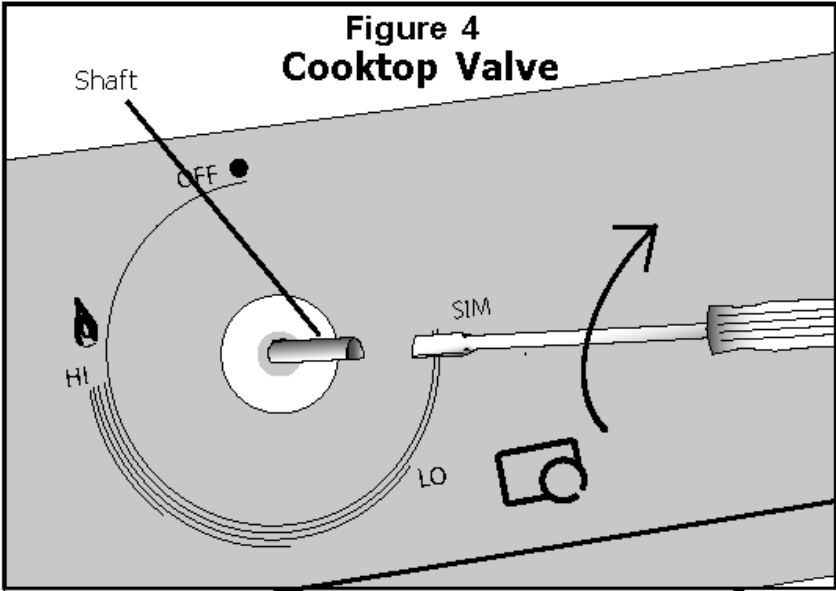
Replace burner base, burner cap and burner grate.

Note: Burner cap must be properly positioned on burner base for burner to light.

4. Convert Cooktop Valves for Propane Use

Adjust Bypass Jets on Valves.

- 1. Verify that all knobs are in the "Off" position.
- 2. Remove knobs, springs and bezels by pulling straight out.
- 3. Insert flat head screwdriver into shaft and turn bypass screw clockwise until it stops turning (See Figure 4). DO NOT OVER TIGHTEN. Replace knobs, springs and bezels.



If your range is **dual fuel** your conversion is complete. Replace the cover plate and warming drawer and proceed to step 9 to test your conversion.

For **gas range** conversions, continue to step 5.

Burner	BTU/h - LP Gas
Cooktop - Left Rear	11,000
Cooktop - Right Rear	5,000
Cooktop - Left Front	7,500
Cooktop - Right Front	15,000
Oven - Broil (Gas Ranges Only)	14,500
Oven - Bake (Gas Ranges Only)	17,000

LP Conversion – Cont'd

5. Adjust Broil Burner Orifice

Remove oven door (see section "Removing Oven Door" in Installation Instructions).

Remove broil burner assembly. The broil burner assembly is attached to the top of the oven cavity with 7 screws. Remove screws and gently pull broil burner assembly straight out being careful not to detach electrical wires. Place broil burner against back wall of oven cavity.

Adjust Orifice. The orifice is located behind the broil burner in the back oven wall (See Figure 5). Use a 1/2" deep socket driver with 3" minimum extension to turn orifice clockwise until it stops (2 - 2 1/2 times) . DO NOT OVERTIGHTEN.

Replace Broil Assembly. Replace broil assembly being careful to feed all wires through back wall of oven. Reinsert all 7 screws.

Note: The air shutter on the broil burner fits over the orifice when installed correctly.

6. Adjust Oven Burner Orifice

Tighten Orifice. The oven burner orifice is located below the air shutter (See Figure 6). Reach it through the access hole in the interior back panel of the warming drawer cavity. Use a 1/2" wrench to turn orifice clockwise until it stops (2 - 2 1/2 turns). DO NOT OVER TIGHTEN.

Figure 5
Oven Cavity - Side View

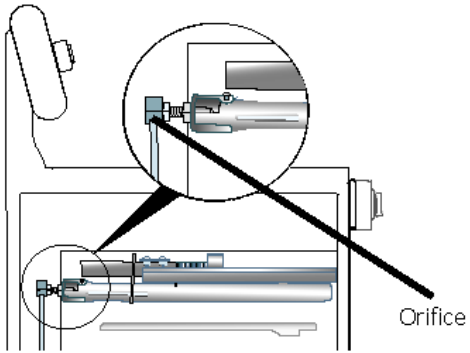
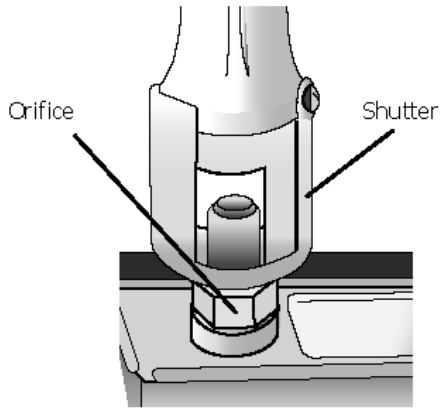


Figure 6
Oven Orifice and Air Shutter



LP Conversion – Cont'd

7. Test for Gas Leaks.

Leak testing is to be conducted by the installer according to the instructions given in this section.

Turn on supply line gas shut off valve. Apply a non-corrosive leak detection fluid to all joints and fittings in the gas connection between the supply line shut-off valve and the range. Include gas fittings and joints in the range if connections were disturbed during installation. **Bubbles appearing around fittings and connections indicate a leak.**

If a leak appears, turn off supply line gas shut-off valve and tighten connections. Retest for leaks by turning on the supply line gas shut-off valve. When leak check is complete (no bubbles appear), test is complete. Wipe off all detection fluid residue.



CAUTION

NEVER CHECK FOR LEAKS WITH A FLAME.

DO NOT CONTINUE TO THE NEXT STEP UNTIL ALL LEAKS ARE ELIMINATED.

8. Test Electric Ignition.

Test Cooktop Burner Ignition. Select a rangetop burner knob. Push down and turn to the flame symbol. If the ignitor/spark module is operating correctly, it will click. Once the air has been purged from the supply lines, the burner should light within four (4) seconds. After burner lights, turn knob to the off position.

Test each rangetop burner in this fashion.

Test Broil Burner Ignition. Set cooking mode to Hi Broil. The burner will ignite after 30-75 seconds.

Test Bake Burner Ignition. Set the oven to bake at 350° F. After 30-75 seconds, the burner will ignite. The burner will stay lit until the 350° F is reached and then shut off. From this point forward, the burner will cycle on and off to maintain the temperature.

LP Conversion – Cont'd

9. Test/Adjust Flame.

The combustion quality of the flame for each burner must be visually inspected. If your range is a gas range, the bake burner and broil burner flames must also be visually inspected. The flame should be blue with yellow tips. It should carry over, or surround, the entire burner and should not lift or blow off the burner.

To inspect, turn the burner on. See Figure 7 for appropriate flame characteristics. To view the bake burner, the oven bottom cover must be removed; remove two rear thumb screws, slide forward and out.

If the flame is completely or mostly yellow, the corresponding air shutter and/or the orifice must be adjusted. Verify that the orifice is all the way tightened. If the flame is still yellow, adjust the air shutter. After adjustment, retest.

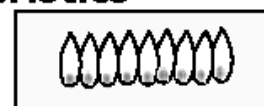
Note: With LP use, some yellow tipping on outer cones is normal.

All burners must also be inspected for carryover. The flame should completely surround the burner. If the cooktop burners do not carry over, the bypass jet must be adjusted (See step 4, page 4). If the broil or bake burner does not carry over, adjust the corresponding air shutter (see steps 10 and 11, below and next page).

Figure 7
Flame Characteristics

Yellow Flames:

Further adjustment is required.



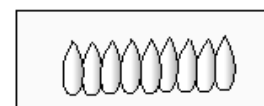
Yellow Tips on Outer Cones:

Normal for LP Gas.



Soft Blue Flames:

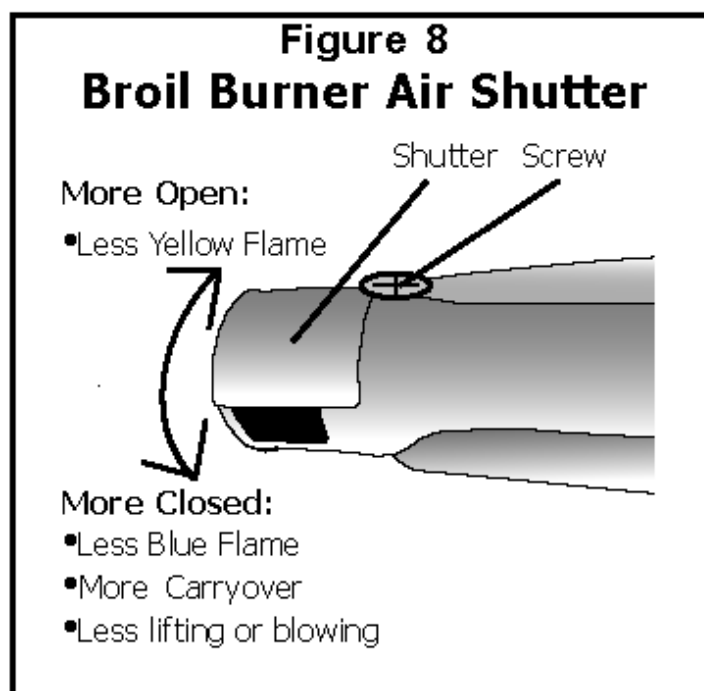
Normal for Natural Gas.



LP Conversion – Cont'd

10. Adjust Broil Burner Air Shutter (if necessary)

Adjust Air Shutter. The air shutter is located on the back end of the broil burner. Loosen screw and turn shutter. Close the shutter if the flame is lifting or blowing or not carrying over; Open the shutter if it is too yellow. (See Figure 8). Tighten screw.

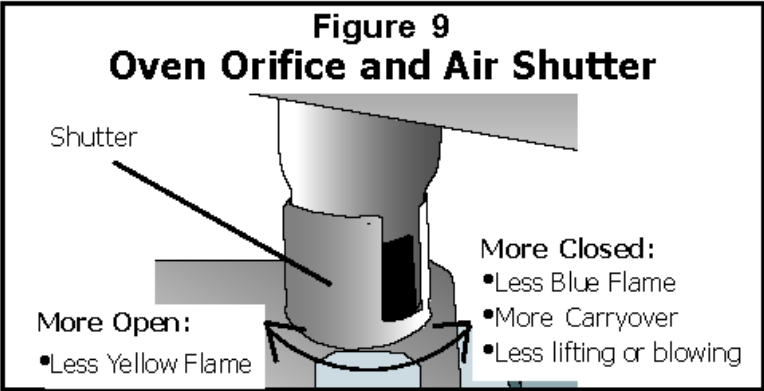


LP Conversion – Cont'd

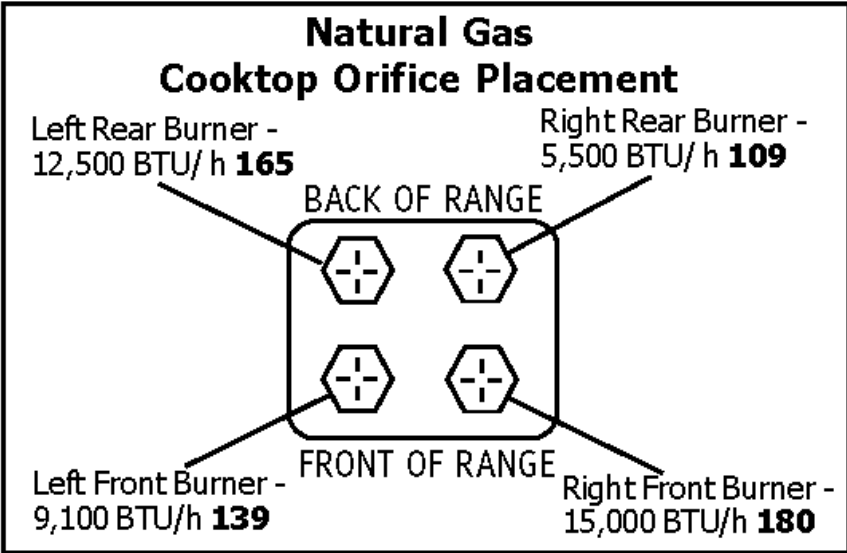
11. Adjust Oven Burner Air Shutter (if necessary)

Adjust Air Shutter. The oven burner air shutter is located to the left of the oven regulator. Reach it through the access hole in the interior back panel of the warming drawer. Loosen screw on shutter. Close the shutter if the flame is lifting or blowing or not carrying over; Open the shutter if it is too yellow. Tighten screw. (See Figure 9). Tighten screw.

Reattach cover plate and replace warming drawer.



Save natural gas orifices for future conversion by placing them in the appropriate space below.



Door Removal

Removing the Door



WARNING

- Make sure oven is cool and power to the oven has been turned off before removing the door. Failure to do so could result in electrical shock or burns.
- The oven door is heavy and fragile. Use both hands to remove the oven door. The door front is glass. Handle carefully to avoid breakage.
- Grasp only the sides of the oven door. Do not grasp the handle as it may swing in your hand and cause damage or injury.
- Failure to grasp the oven door firmly and properly could result in personal injury or product damage.

1. Be sure to read the above **WARNING** before attempting to remove oven door.
2. Open the door completely.
3. Flip lever on hinge toward you. (see Figure A).
4. Close the door to approximately halfway open.
5. Holding the door firmly on both sides using both hands, pull the door straight out of the hinge slots. Hold firmly, the door is heavy (See Figure B).
6. Place the door in a convenient and stable location for cleaning.



Figure A

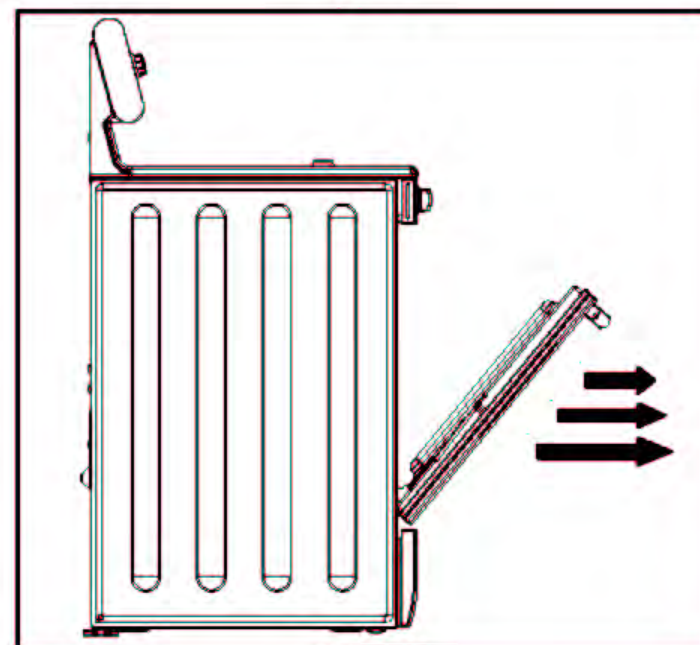
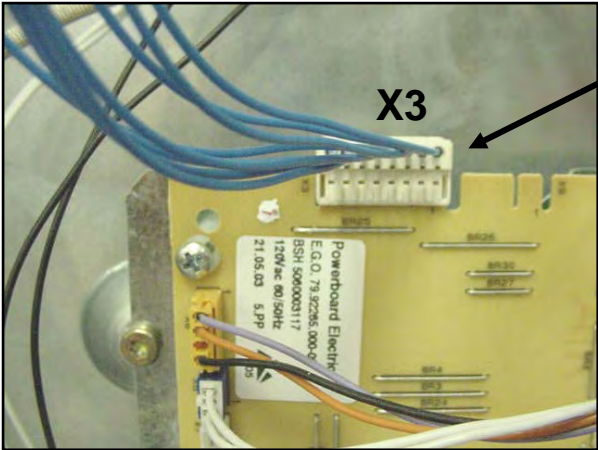


Figure B

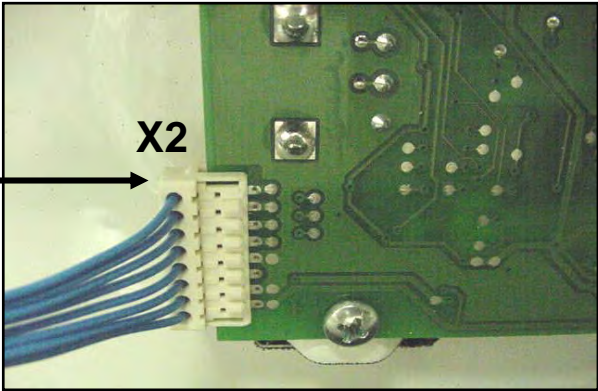
Range Operation - Oven Control



Connector to Power Relay Board from "Touch & Turn" User Interface Board (clock)



Connector to "Touch & Turn" User Interface Board (clock) from Power Relay Board



When the range is powered up, the interface board receives the voltages at X2 from the power relay board shown in the chart on the next page, and the clock illuminates.



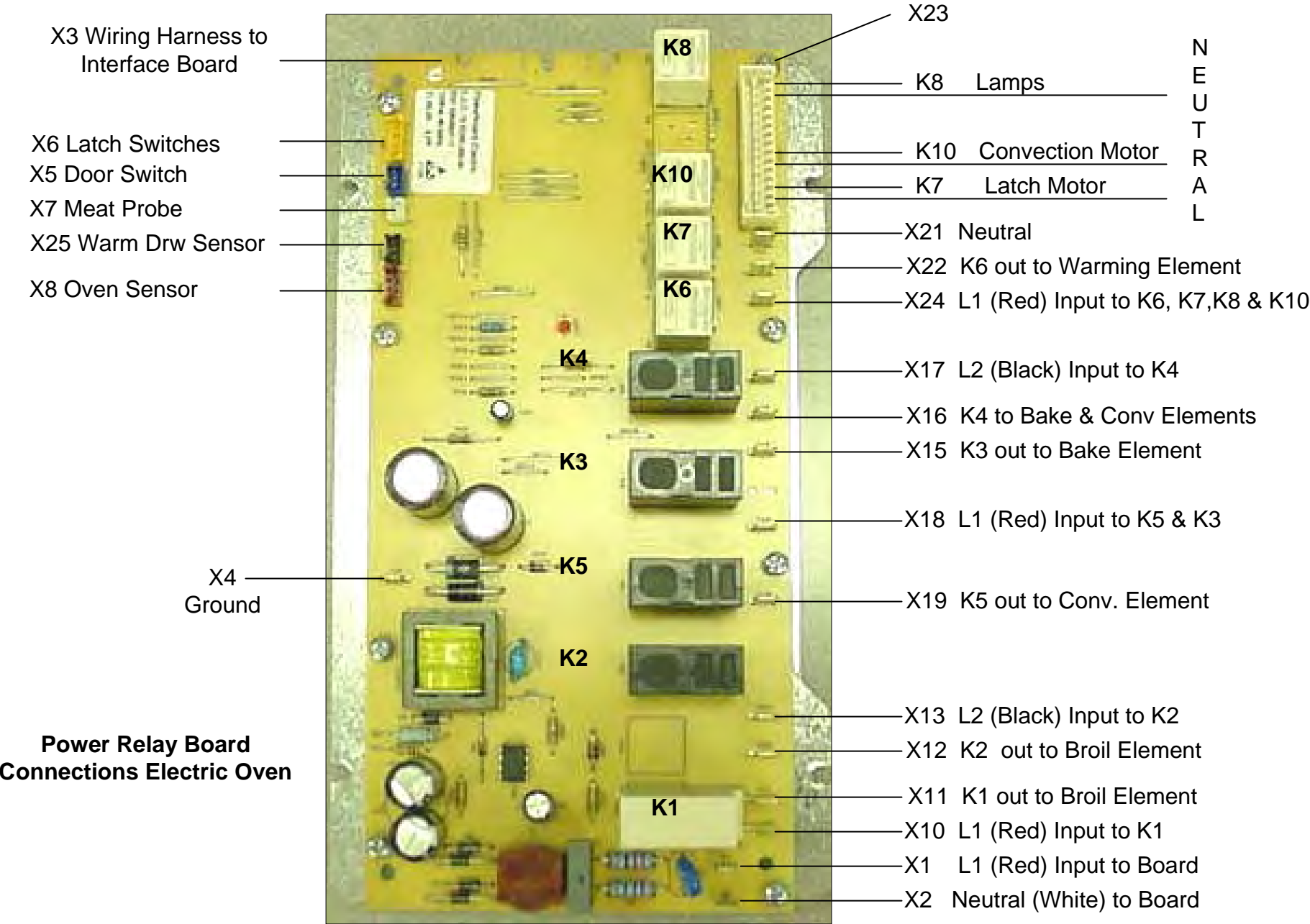
This board controls all the functions of the oven and contains the program data

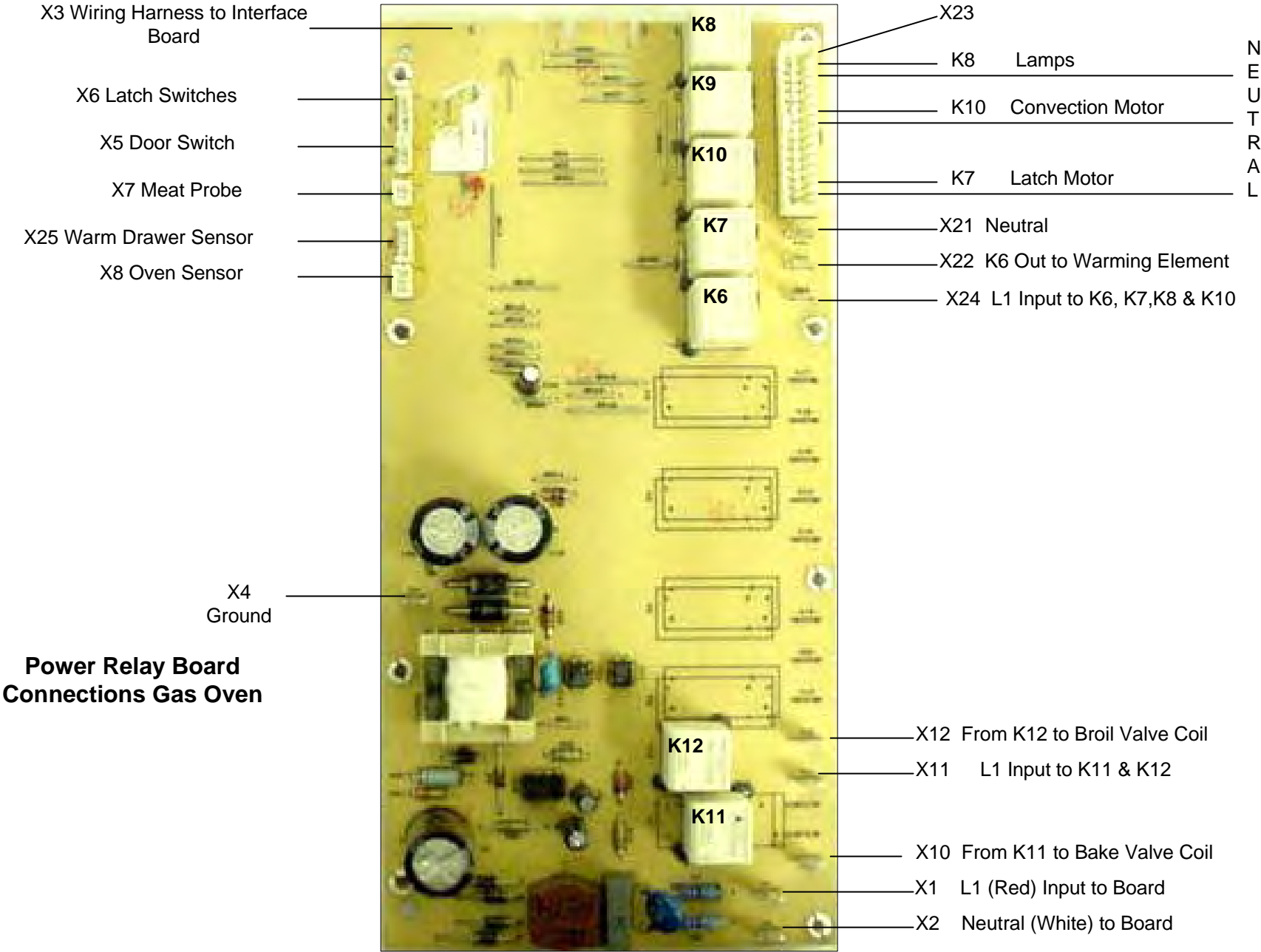
Voltage Checks at the “Touch & Turn” Interface Board (Clock)



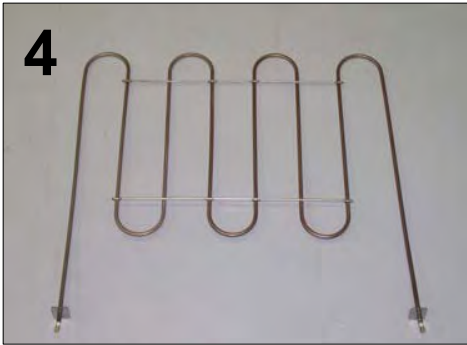
Voltage readings at X2 <u>NOTE</u> pin connections are not marked	
1)	1.5 VDC
2)	0 VDC
3)	0 VDC
4)	5 VDC
5)	0 VDC
6)	8 VDC
7)	0 VDC
8)	32 VDC

Remove connector from board, set scale to +50VDC, put one meter lead to ground and the other lead to pins 1, 4, 6 and 8 in turn. Voltage should read as indicated in the chart. If voltages are good and no display is present, replace the interface board.





Operation of the Electric Oven

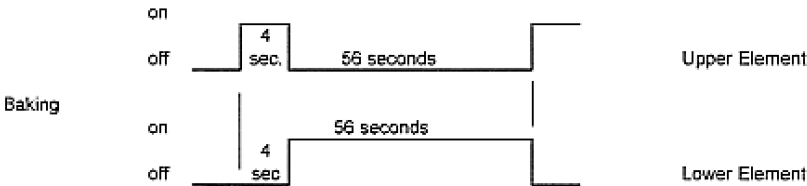
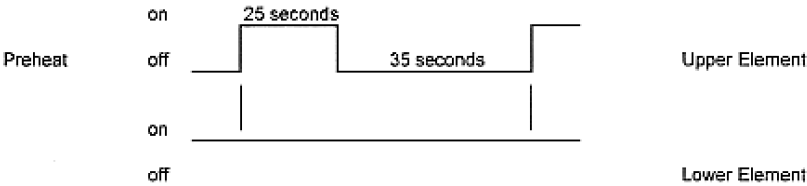


Touch Bake and set temperature at the control, relay board receives input and checks resistance of sensor. If heat is required then the following relays will close: K3 & K4 for the bake element and K1 & K2 for the broil element. The output voltages from the board should be as follows: X15-L1 to bake element, X16-L2 to bake element. X11-L1 to broil element, X12-L2 to broil element. This supplies 120volts from L1 & L2 giving each element 240 volts and oven heats.

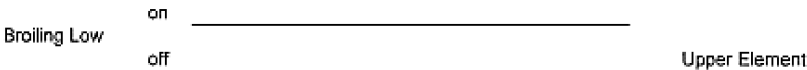
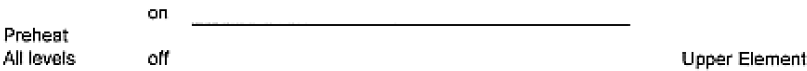
NOTE: See charts on next page for element “On Times”.

Element Cycle Charts

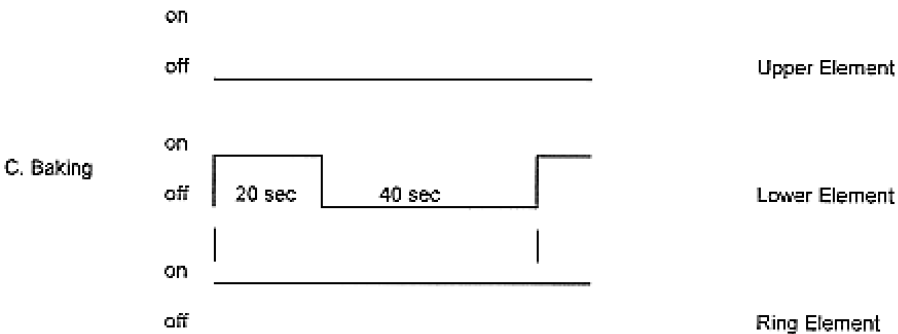
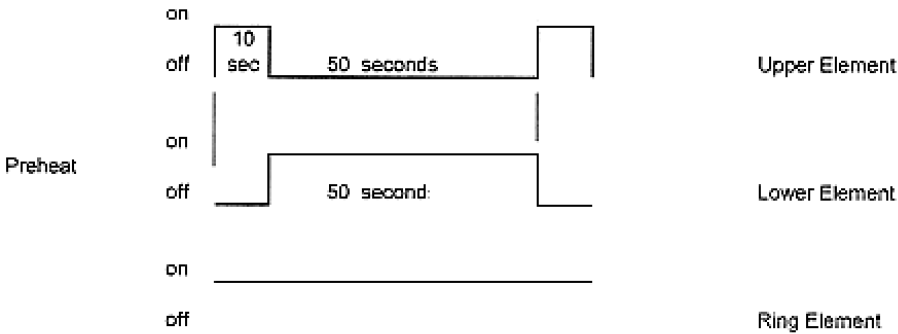
BAKE MODE



BROIL MODE



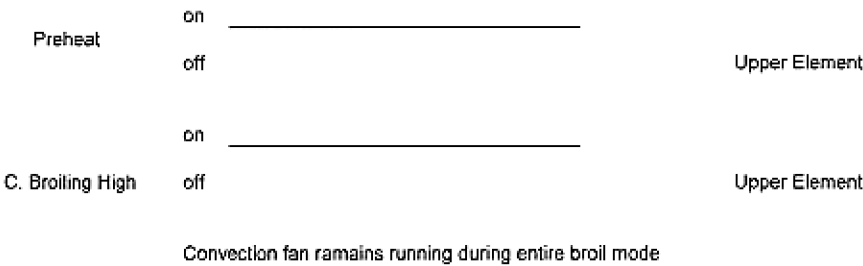
CONVECTION BAKE MODE



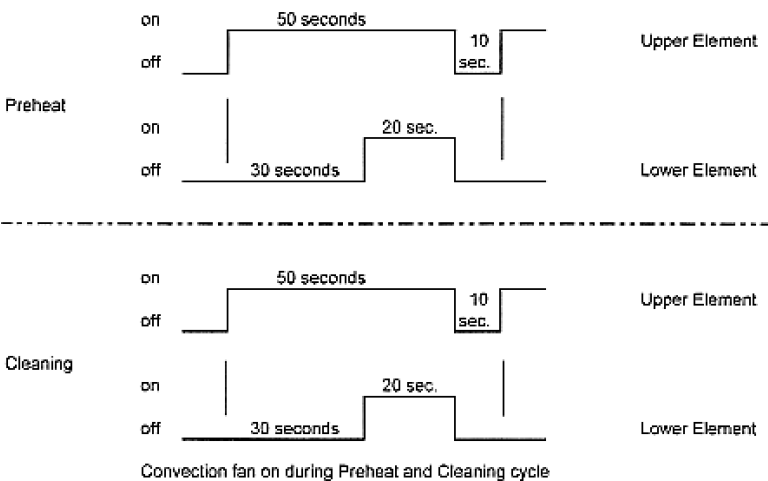
Convection fan remains running during Preheat and C. Baking

Element Cycle Charts Cont'd

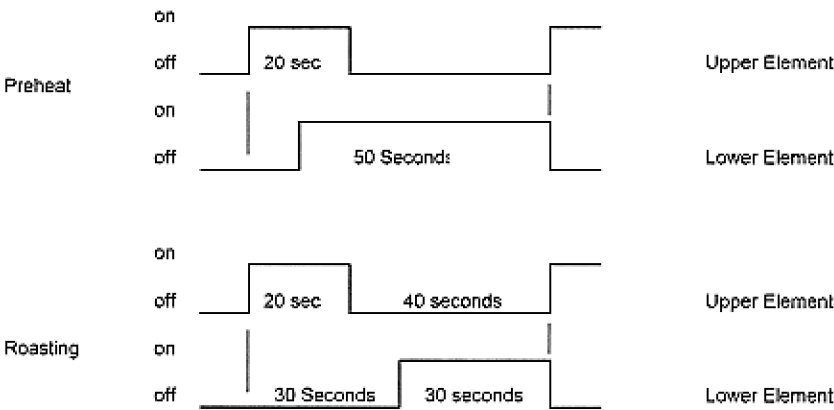
CONVECTION BROIL MODE



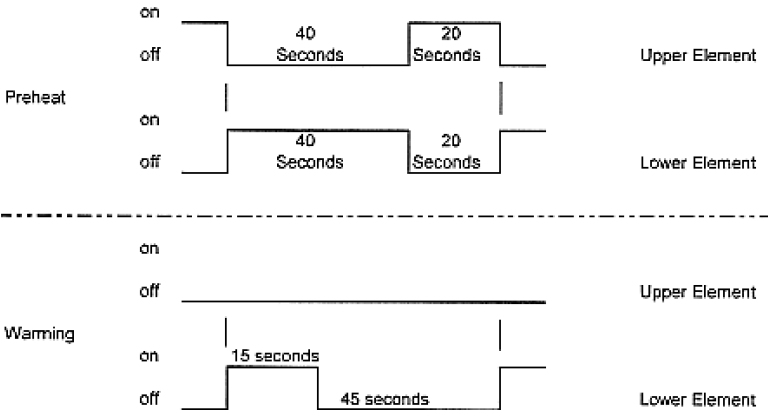
SELF CLEAN MODE



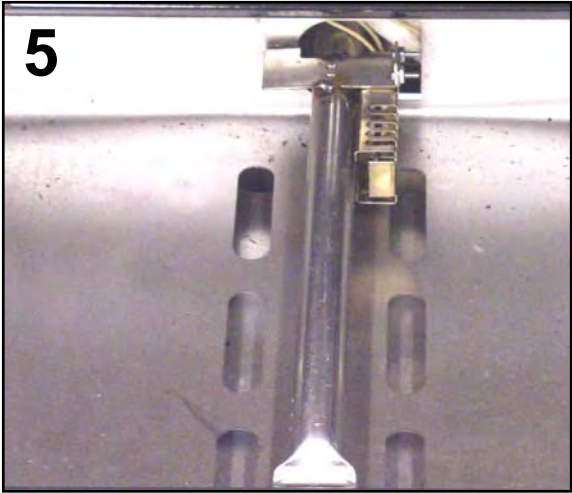
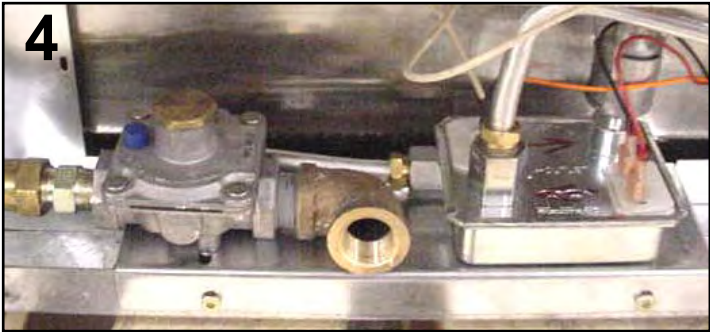
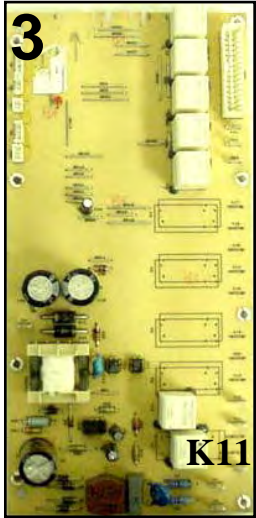
CONVECTION ROAST MODE



OVEN WARMING



Operation of the Oven Gas Burner



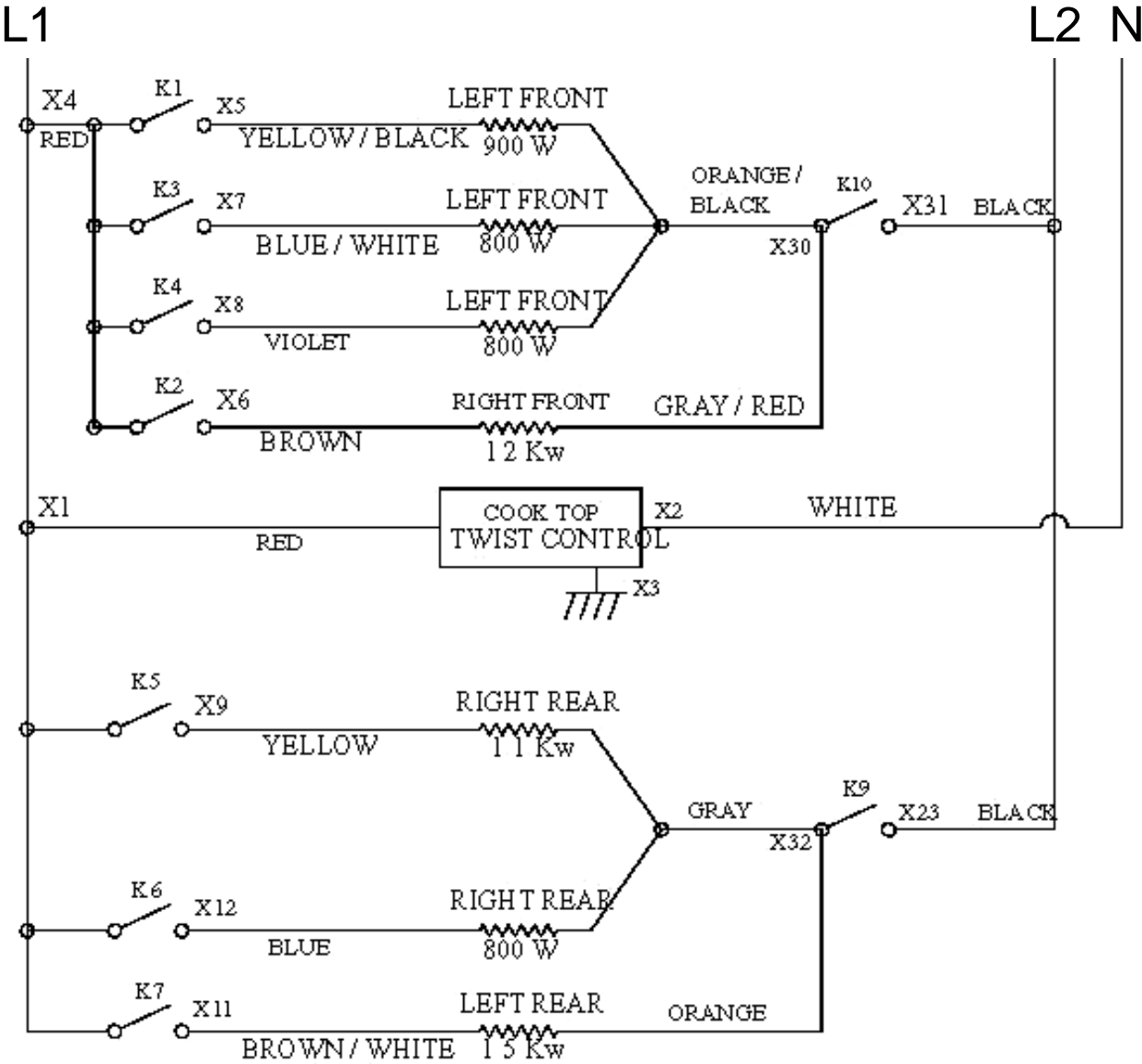
Touch Bake and set temperature at the control, relay board receives input and checks resistance of sensor. If heat is required then Bake relay K11 is closed. 120VAC is sent to the gas safety valve. The glow igniter which is wired in series with the valve starts to heat up, as it does so the voltage drops across the valve. When the glow bar draws 3.2 amps and is glowing the valve opens sending gas to the burner and it ignites. Bake is 17,000 BTUs.

Electric Top - How the Elements Heat

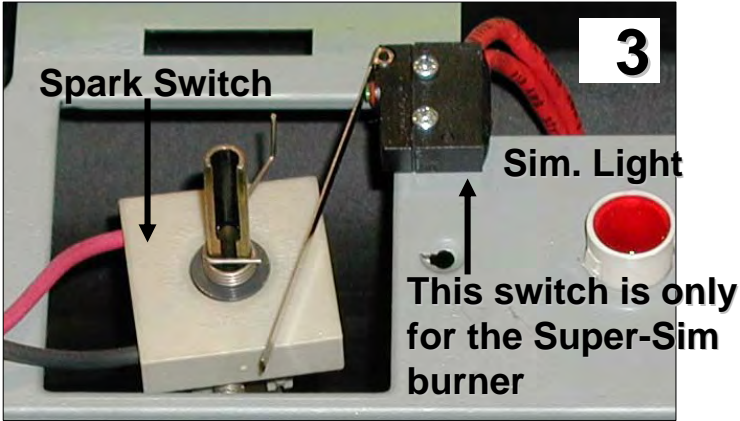
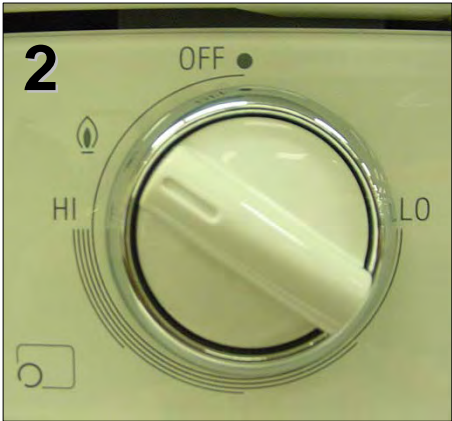
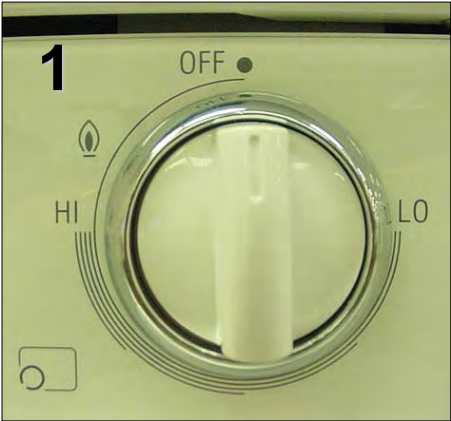
Each element or section of an element is controlled by a relay. Touch the glass to select element, turn knob to select the power level. For the element to heat the following relays must close:

Left Front & Right Front	L2 from K10 measured at X30.	
Left Front	L1 from K1 900 watt measured at X5	
	L1 from K3 800 watt measured at X7	triple element
	L1 from K4 800 watt measured at X8	
Right Front	L1 from K2 1200 watt measured at X6	single element
Right Rear & Left Rear	L2 from K9 measured at X32	
Right Rear	L1 from K5 1100 watt measured at X9	double element
	L1 from K6 800 watt measured at X12	
Left Rear	L1 from K7 1500 watt measured at X11	single element

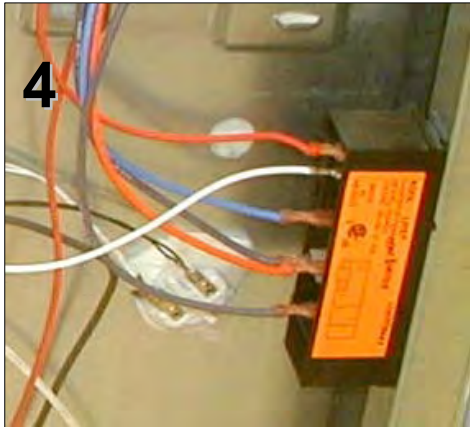
Electric Top - How the Elements Heat Cont'd



Gas Top Operation



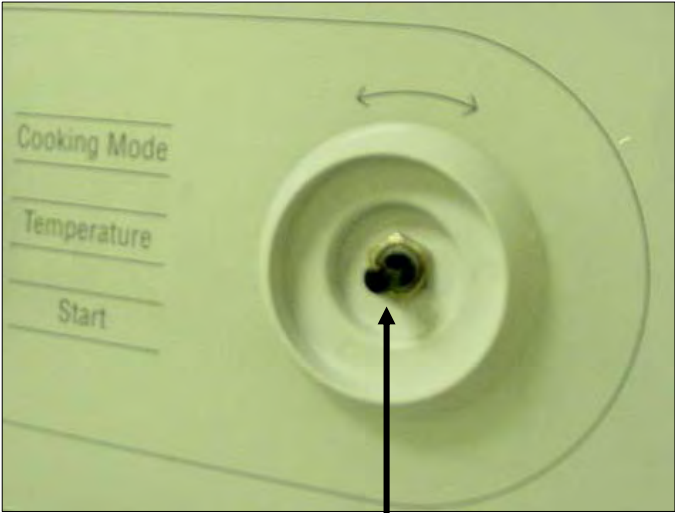
Turn the control knob to the light position. The spark switch closes and sends 120VAC to the spark module. The spark module output sends 14,000VDC to the burner igniter creating a spark to the underside of the burner cap. The action of turning the knob to the light position allows gas to flow to the burner and it ignites



How to Replace the “Touch & Turn” Interface Board (Clock) - FSR



Remove the Knob (if it is a tight fit, wrap some scotch tape around the knob & pull gently to remove)

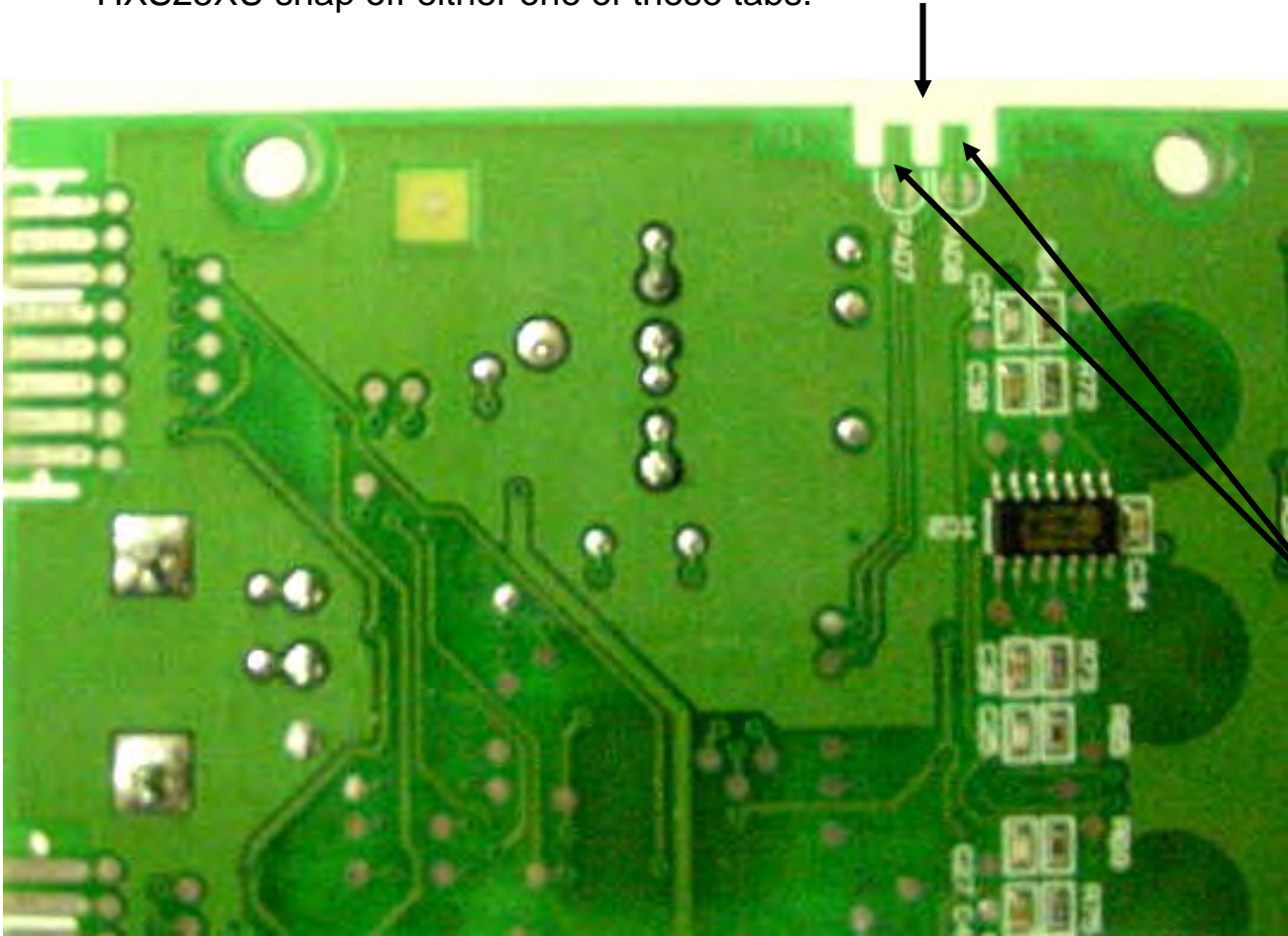


Remove the locknut



Remove upper rear access panel, remove connector from board, remove the 4 or 6 screws holding the board. Reassemble new board in reverse order after checking the board configuration. See next page for instructions.

When a replacement board is ordered, all “Touch & Turn” interface boards are programmed for the MEDIUM featured models for example HXS24XU: For the MOST featured model HXS25XU snap off either one of these tabs.



For the LEAST featured model example HXS23XU, snap off both tabs.

Note be sure to check the model # of the range and configure the board correctly before installing.

Interface Board for All Models w/First Two Numbers of 50, 70, 71, 72 Replacement – FSR3

1. For models beginning with 50, 70, 71, 72 (FSR3 and SIR) there is one interface board. To replace the board follow the directions below:
2. Remove the control knob on the front of the upper back panel.
3. Remove the knob bezel hex nut using a 7/16" socket.



Hex nut

4. Remove the upper back panel cover by removing the torx screws on the left and right sides of the unit.
5. Using a Phillips screwdriver, remove the four screws of the display board and disconnect the cable from the connector.
6. Insert the screws from the old board into the standoffs and **HAND TIGHTEN** the screws. **DO NOT USE A POWER SCREWDRIVER TO TIGHTEN THESE SCREWS. Hand tightening only will secure the board. Over torque on these screws can cause damage to the touch zones.**
7. Reconnect the cable to the connector.
8. Reinstall the hex nut using the 7/16" socket. Again, **DO NOT OVER-TIGHTEN THE HEX NUT.** A slight tug to tighten the hex nut will secure the knob bezel.
9. Reinstall the upper back cover.
10. Configure the board for the correct model.

Interface Board For All Models W/First Two Numbers Of 30, 50, 70, 71, 72 Configuration – FSR3 Cont'd

The Service Configuration Mode can be accessed only when the system is turned on and the display shows **CLOCK** and “12” is flashing. Once **OFF** is pressed or the knob is turned access to the Service Configuration Mode is denied and cannot be accessed unless the system is turned off and then back on. To access the Service Configuration Mode, turn the power on and wait until the display shows the type – **ELECTRIC** or **GAS** – and the software version.

READ THROUGH THESE STEPS BEFORE STARTING MODEL CONFIGURATION

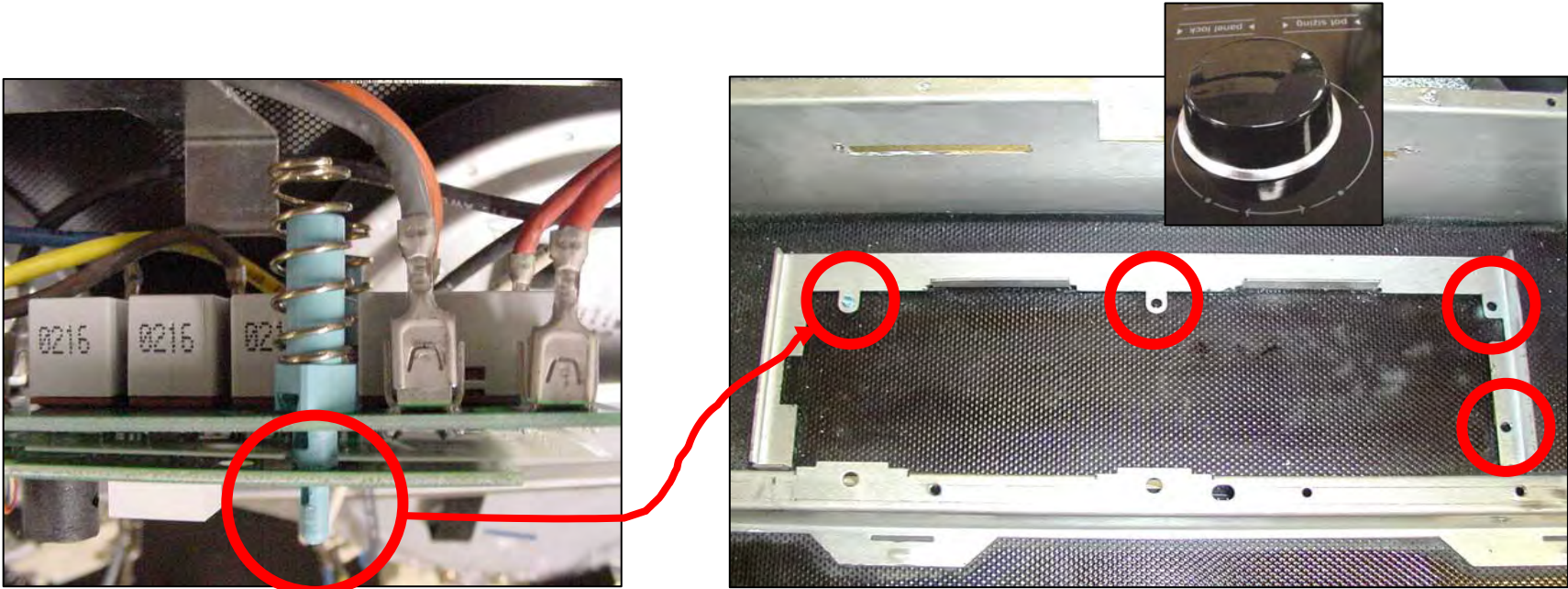
1. Switch to the set clock mode.
2. Simultaneously press the **LIGHT** and **TEMPERATURE** (or **BROIL** if the model number begins with 30) and hold for 5 seconds.
3. After 5 seconds the display will show **SYSTEM CONFIG** and beep once.
4. You have 10 seconds to select **START** or the control will automatically return to operation.
5. When **START** is pressed the display will change to **SET SYSTEM** and beep once.
6. Starting immediately you have 10 seconds to rotate the knob to select a model or the control will automatically return to operation. See the following page for model and corresponding number.

Model Number & Description

- MODEL 1** - HEI7152C, HEI7152U
- MODEL 2** - HEI7022C, HEI7022U, HEI7052C, HEI7052U, HEI7062C, HEI7062U
- MODEL 3** - HDI7052C, HDI7052U, HDI7062C, HDI7062U
- MODEL 4** - HDI71522U, HDI7282U
- MODEL 5** - HES5022U, HES5042U, HES5052U, HES5062U, HE2224U
- MODEL 6** - HES7022U, HES7042U, HES7052U, HES7062U, HE2425U
- MODEL 7** - HES7132U, HES7152U, HES7252U, HES7282U, HES2528U
- MODEL 8** - HES7022C, HES7042C, HES7052C, HES7062C, HE2425C
- MODEL 9** - HDS7022U, HDS7052U, HDS7062U, HDS7022C, HDS7052C, HDS7062C
- MODEL 10** - HGS7282UC
- MODEL 11** - HES3052U
- MODEL 12** - HGS3052UC
- MODEL 13** - HGS5022UC, HGS5042UC, HGS5052UC, HGS5062UC
- MODEL 14** - HGS7022UC, HGS7052UC, HGS7062UC, HG2415UC, HG2416UC, HG2425UC
- MODEL 15** - HGS7132UC, HGS7152UC
- MODEL 16** - HDS7132U, HDS1752U, HDS7282U, HD2525U
- MODEL 17** - HES3052C
- MODEL 18** - HES5022C, HES5042C, HES5052C, HES5062C, HE2224C

Control Board - FSR

The control board must be reassembled so 4 of the 6 standoffs (“pins”) engage the 4 holes in the metal plate glued to the Ceran glass maintop (the other 2 standoffs don’t engage any holes in the plate). If not, the magnetic knob & digital displays will not line up.

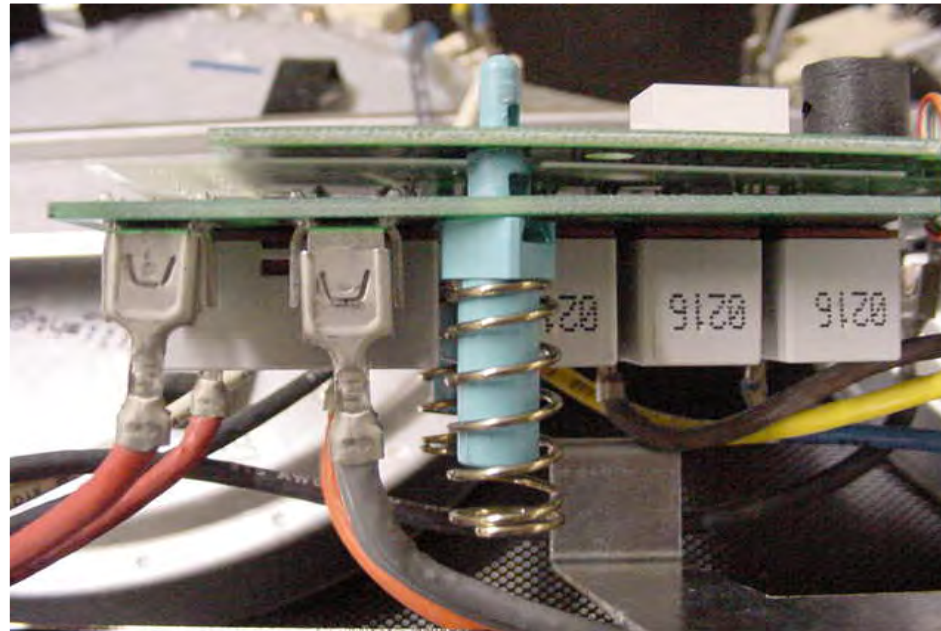


CAUTION: Don’t force the standoffs in place (so they’re not broken).

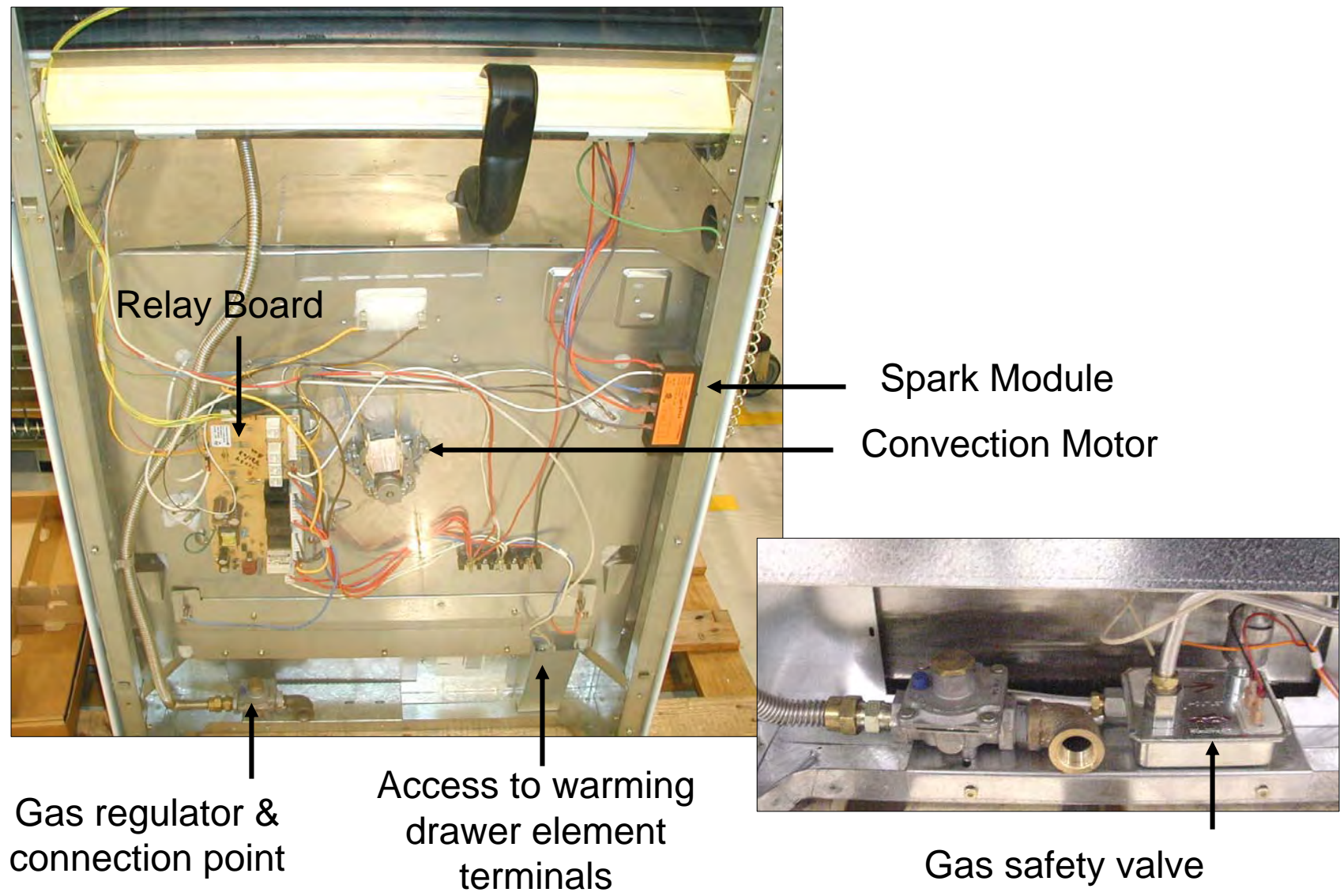
Control Board – FSR Cont'd

Before mounting the control board, make sure each of the 6 standoffs (“pins”) are inserted properly into the component boards. The two boards should be parallel.

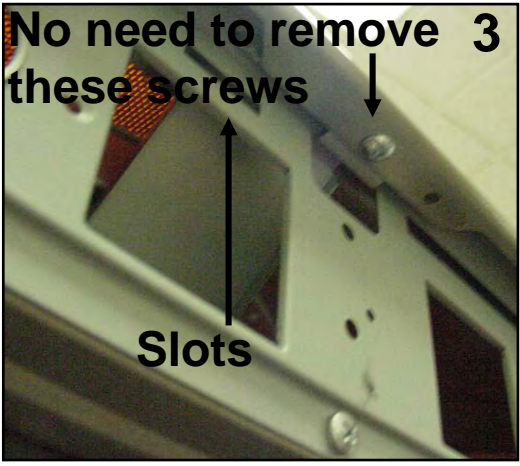
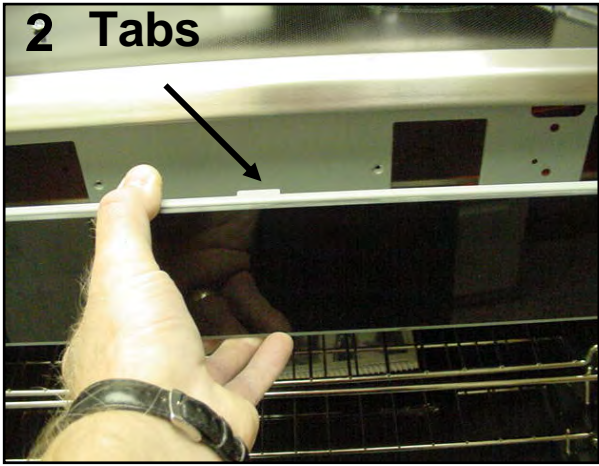
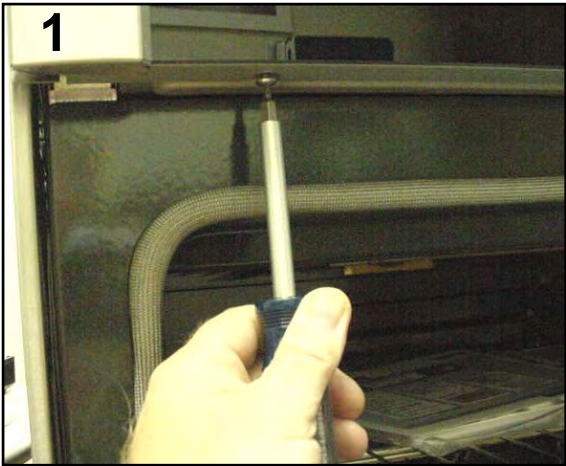
In addition, make sure there is no debris between the touch pads and the glass, and that the pads are making good contact with the glass. If not it will not work and may show an error code.



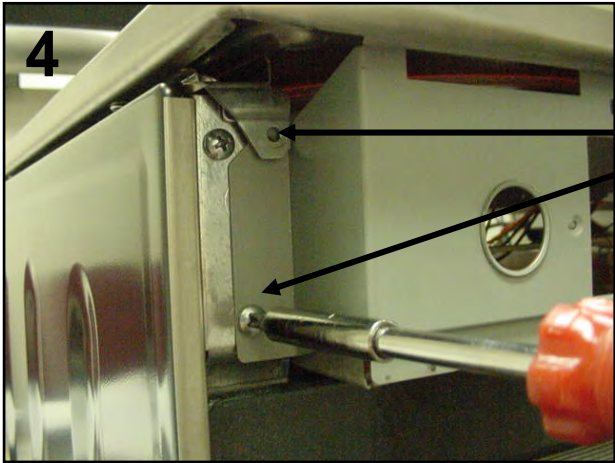
Location of Components Dual Fuel & All Gas Range



Disassembly - Access to Maintop



Remove knobs first if unit has mechanical controls or is a gas top. Remove the two screws under the front panel, support the panel as you take out the second screw so that it won't fall. Panel is also held in place with two support tabs which fit into slots on sub-panel.



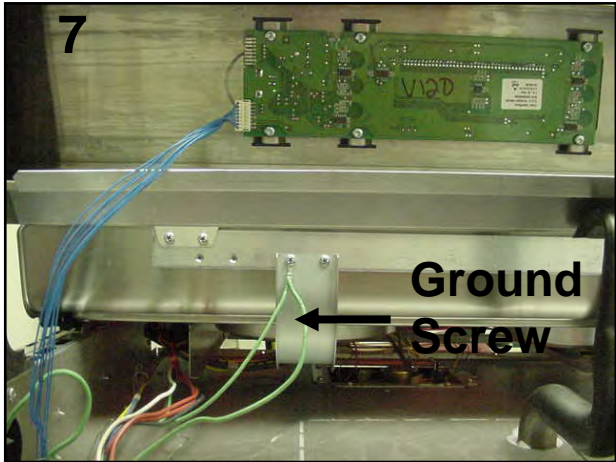
Remove these screws



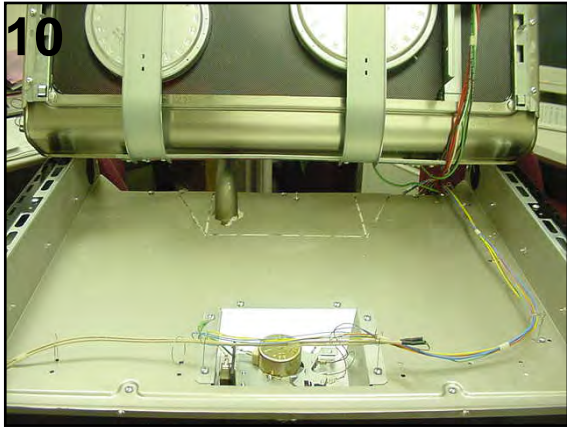
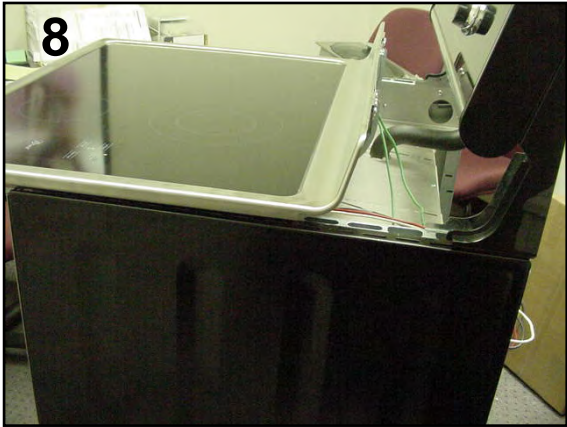
Disassembly - Access to Maintop Cont'd



Remove the 12 screws which hold the 2 rear panels and disconnect the ground screw from the maintop support



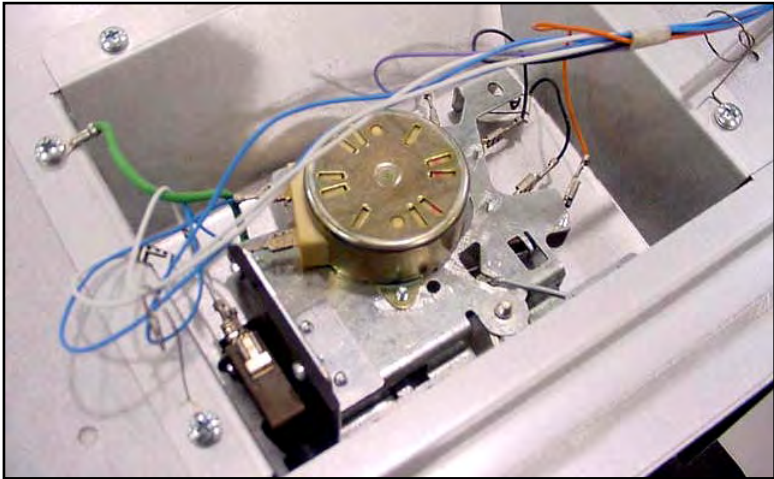
Lift the maintop a couple of inches to disengage the locking tabs and slide towards the front of the unit. Lift the front of the maintop and fold back against the control panel. (place towel or blanket over control panel to avoid scratching panel or maintop) The elements, control, and latch assembly can now be accessed.



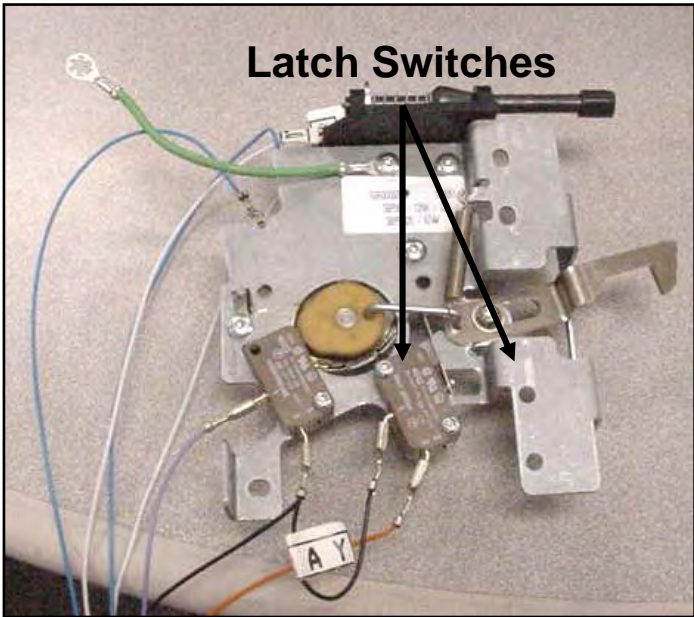
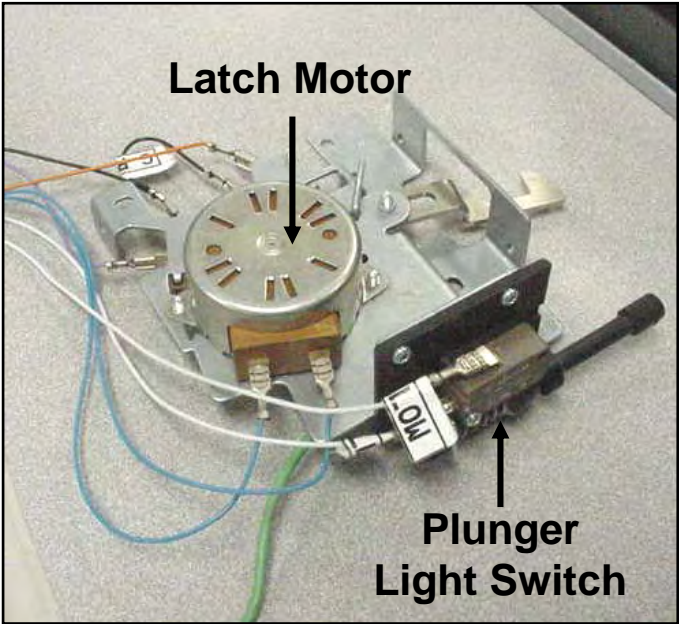
Motorized Latch Assembly & Door Switch



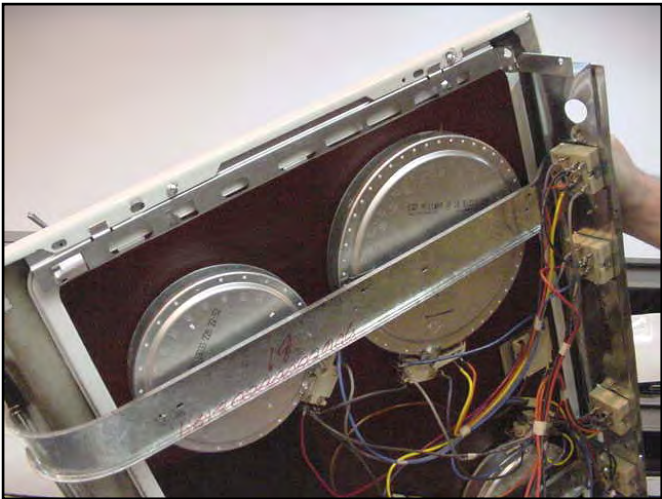
Remove 2 screws from front frame



Latch can be accessed from under the cooktop

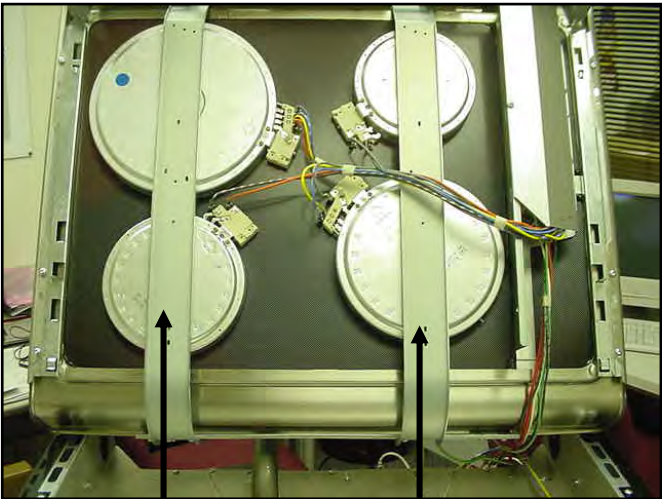


Disassembly - Access to Maintop



Mechanical version

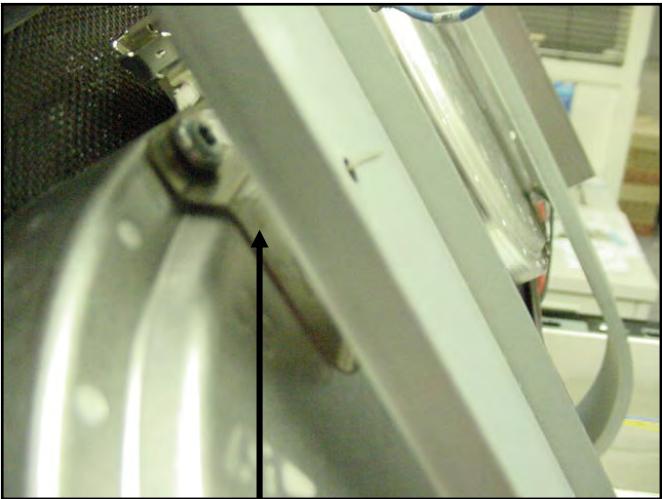
Each pair of elements are held in place by a single bracket & two tension clips per element



Retaining brackets



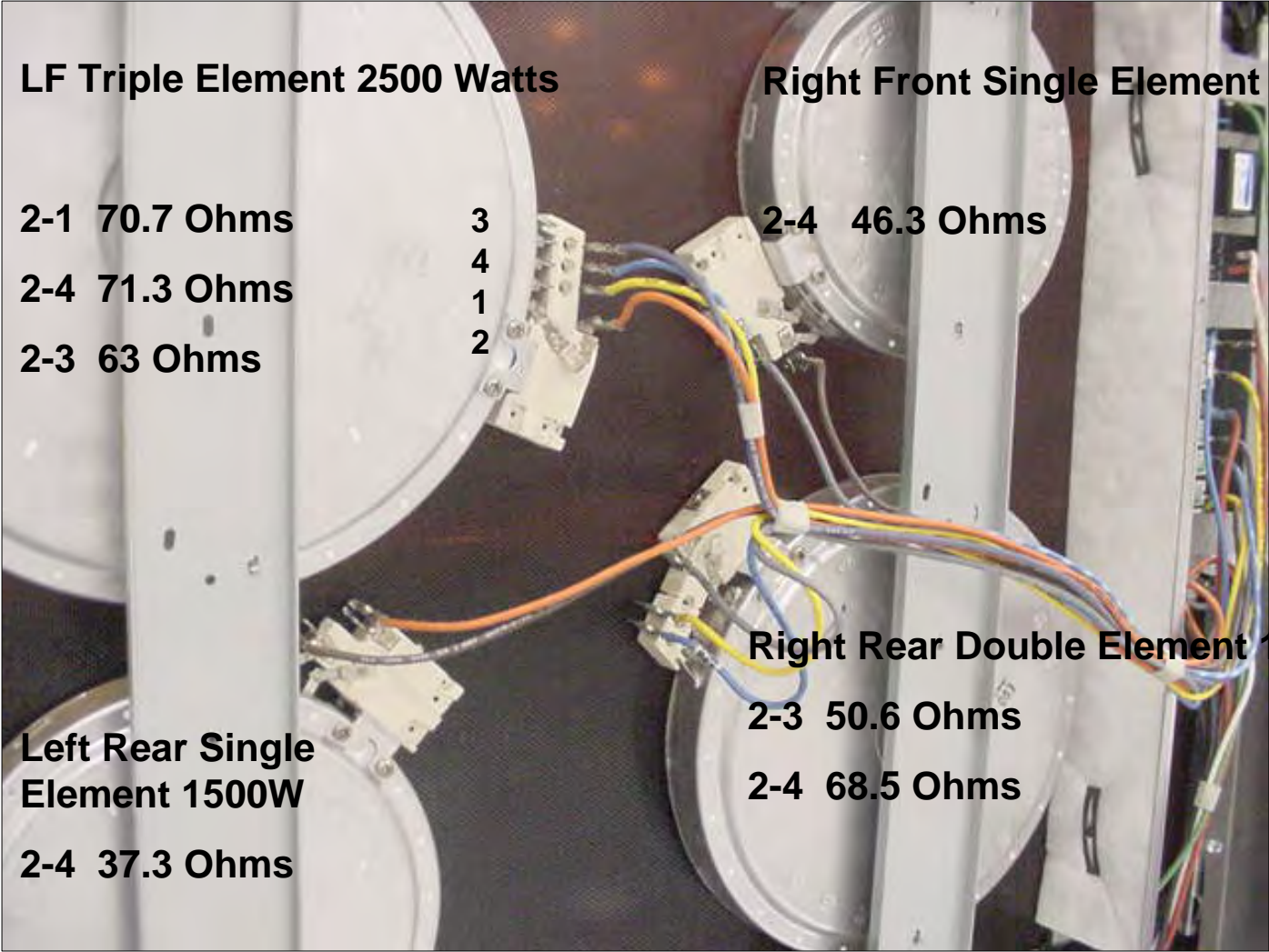
Touch & Turn control version



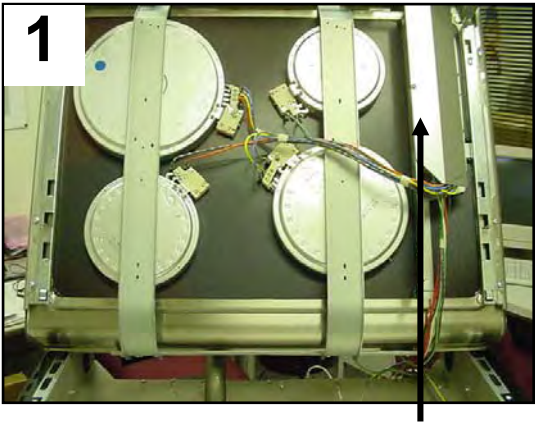
Tension clips

Resistance Checks - at the Element Terminals

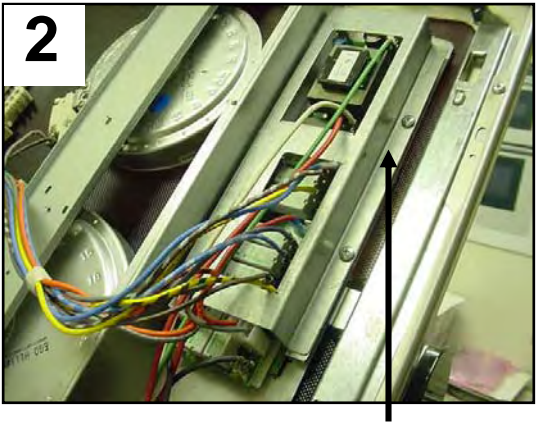
Turn off power before beginning resistance checks



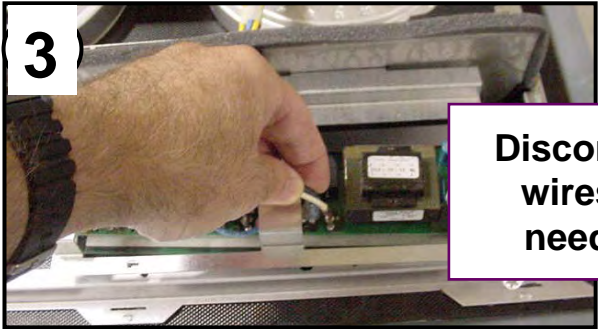
Disassembly - Touch & Turn Control



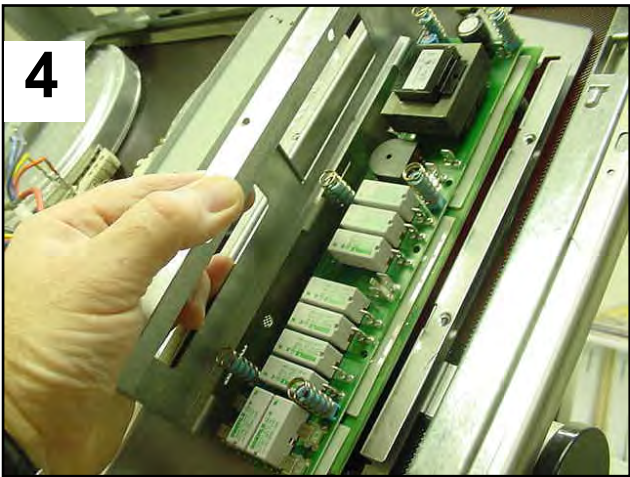
Remove 2 screws holding cover



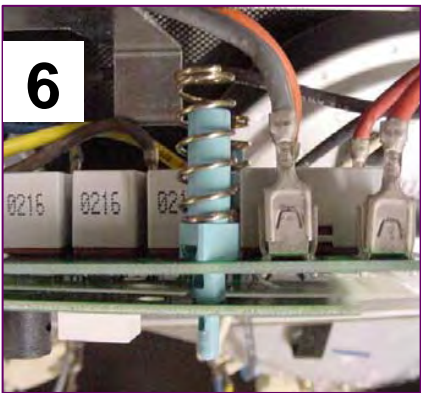
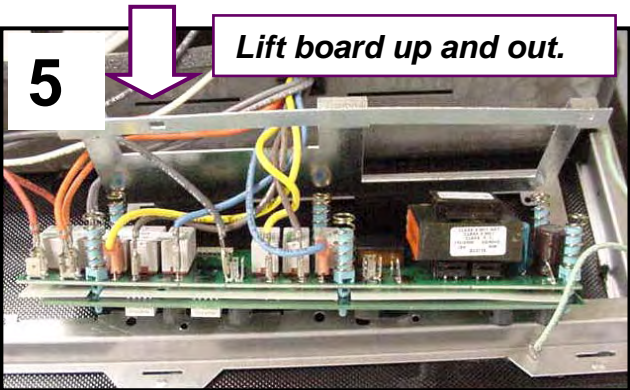
Support bracket is held with 2 screws



Disconnect wires as needed.



Remove the support bracket



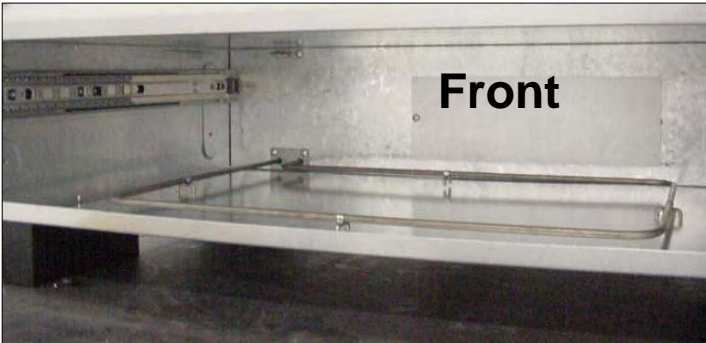
CAUTION: Take care not to break the plastic board standoffs.

Access to Concealed Bake Element & Warming Element



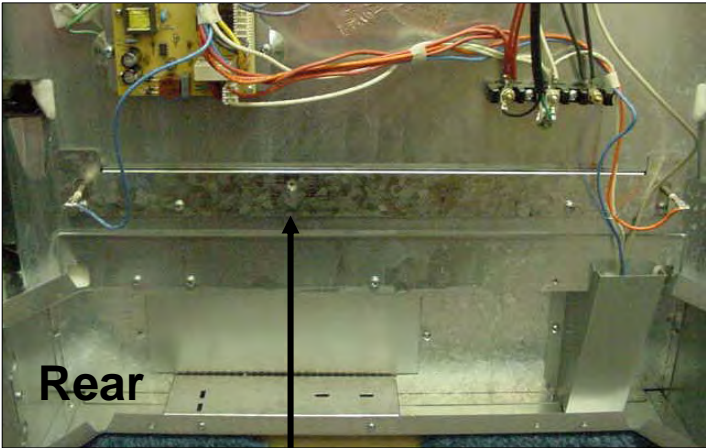
Rear

Warming element is removed from front by removing the drawer



Front

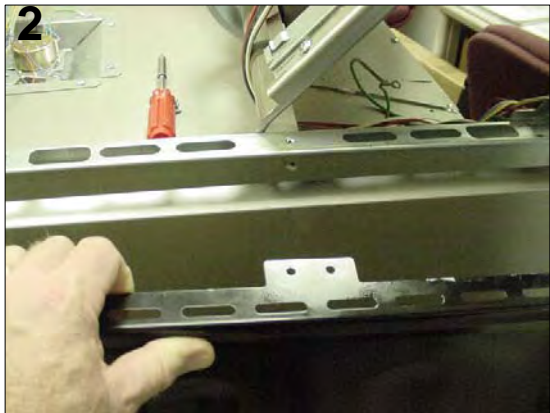
Remove this cover for access to the warming drawer element terminals



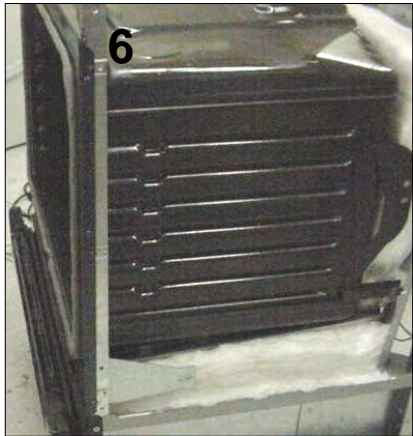
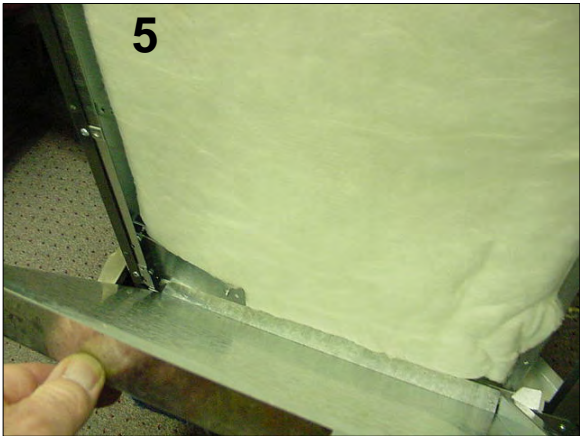
Rear

Remove this cover for access to the bake element

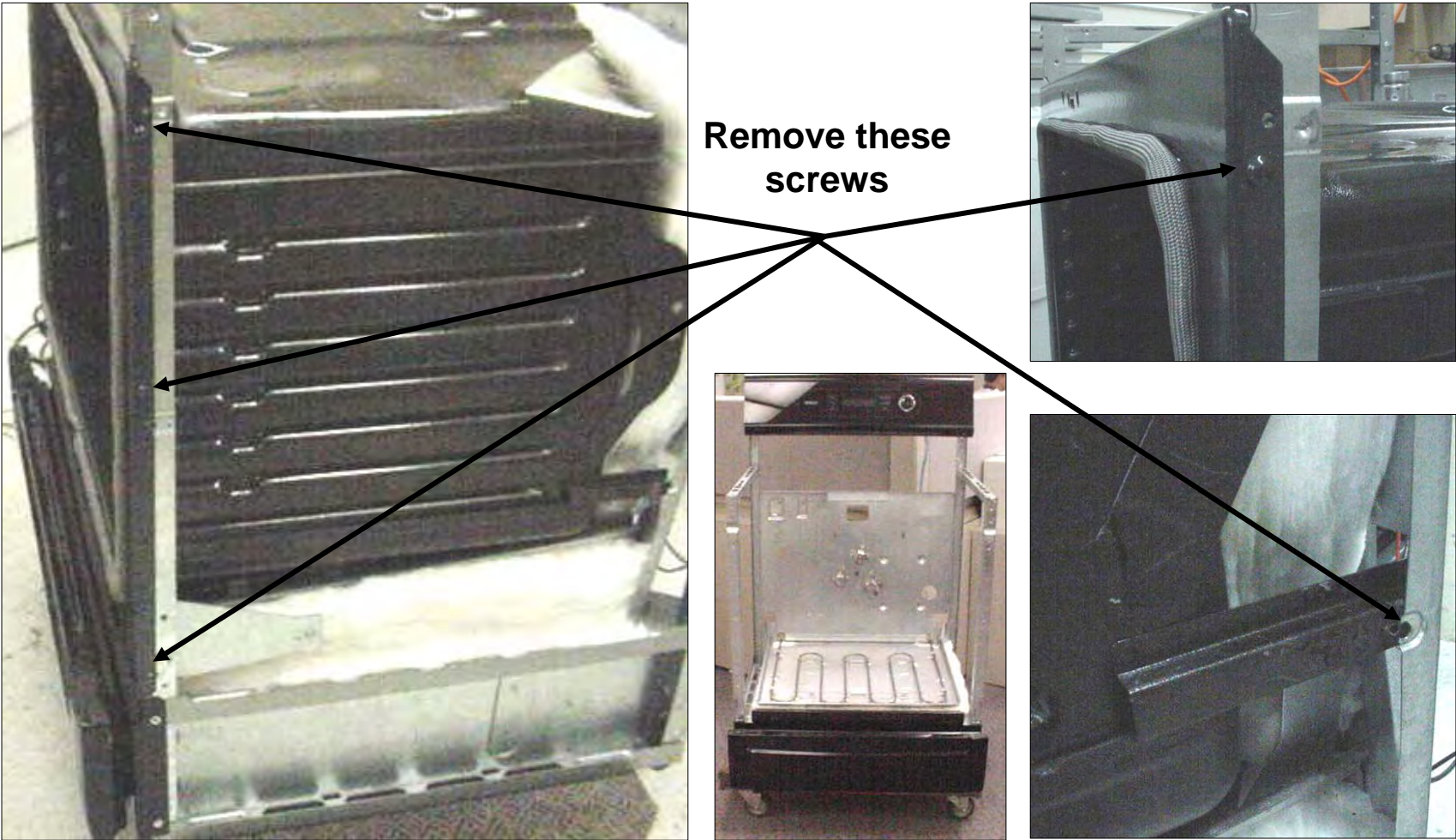
Access to Oven Can and Hinge Assembly



Remove latch assembly & top panels. Remove 3 screws on top of side panel, lift up & out to disengage tabs at the bottom. Remove screws holding outer & inner galvanized panels. Remove insulation (it is all in one piece) oven can is easily removed from chassis by removing front and rear chassis frame screws (see instructions on next page).



Access to Oven Can and Hinge Assembly – Cont'd



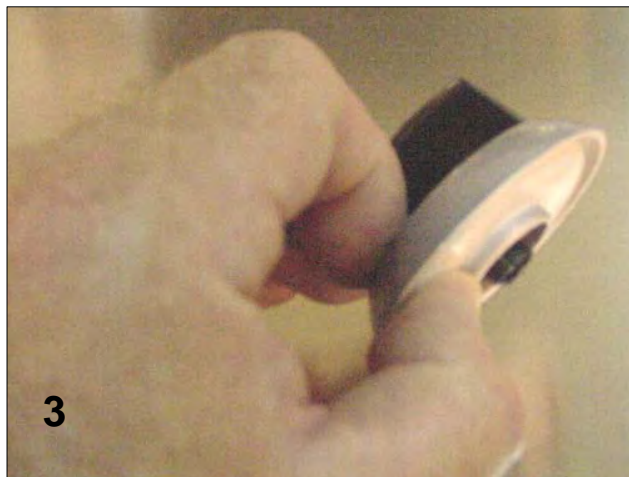
Reassembly of Cooktop Control Knob, Spring & Bezel

**1**

Assemble knob
spring & bezel.

**2**

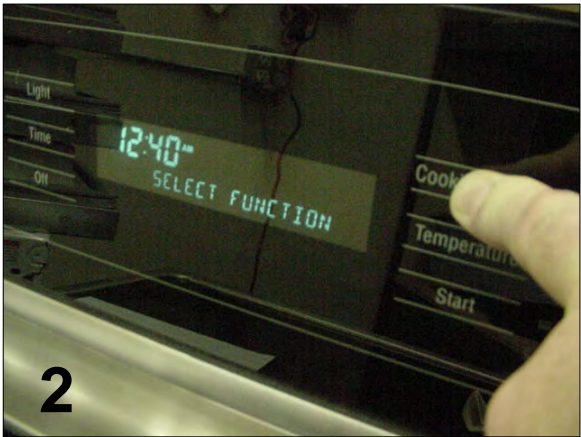
Hold assembly
together and
install on shaft

**3****4**

Calibrate the Thermostat (Change the Offset)



Touch cooking mode & keep your finger on there until **“SELECT FUNCTION”** appears (about 5 secs.)



Using control knob, scroll through menu until **“OVEN TEMP OFFSET”** appears. Touch **START** and a number will appear in the temperature window. If the oven has never been calibrated before it will be 0 degrees F





Using the control knob scroll through the temperature options. The temperature ranges from -25 degrees F to + 25 degrees F . Select the number of degrees that the temperature needs to be changed by and touch “**START**”. Display will show “**SELECT FUNCTION**”, touch “**OFF**” to complete the change.



Range Test / Service Program

The range control has a service program that can be accessed by the service technician to check component and /or function.

To enter the service program, do the following:

Place a finger on the cooking mode, temperature and start zones simultaneously for 5 seconds... the word “**TEST**” will display. Touch cooking mode and “**SERVICE**” will display.



Touch start and “**LIGHT**” will display, at this point the light function can be tested by touching start again, or use the rotary control knob to scroll through the different test functions. To check a particular function rotate to that function then touch start. To exit the program at any time touch **cancel**.

Note: During all functions the maximum oven temperature is 200 degrees F, if reached the display shows “**TOO HOT**” and any function in operation stops, except the **Cancel** (which allows exit from the program).The test can be resumed once the temperature falls below 200 degrees F.



Electric Oven

Function 1:

1. Display LIGHT
2. Press Start Zone to activate oven light relay
3. Display LIGHT ON
4. Press Start Zone to deactivate oven light relay
5. Display LIGHT
6. Allow user to continue toggling
7. Rotating the selection knob will deactivate the light relay (if on) and scroll display to function select (Light, Conv Fan, Ring, etc).

Function 2:

1. Display CONV FAN
2. Press Start Zone to activate Convection fan relay
3. Display FAN ON
4. Press Start Zone to deactivate Convection fan relay
5. Display FAN
6. Allow user to continue toggling
7. Rotating the selection knob will deactivate the Fan relay (if on) and scroll display to function select (Light, Conv Fan, Ring, etc.)

Function 3:

1. Display RING (if applicable for version)
2. Press Start Zone to activate Conv. Fan relay and Ring element relay
3. Display RING ON
4. Press Start Zone to deactivate Conv. Fan relay and Ring element relay
5. Display RING
6. Allow user to continue toggling
7. Rotating the selection knob will deactivate the Ring and Fan relay (if on) and scroll display to function select (Light, Conv Fan, Ring, etc.)

Function 4:

1. Display BROIL
2. Press Start Zone to activate Broil element relay
3. Display BROIL ON
4. Press Start Zone to deactivate Broil element relay
5. Display BROIL
6. Allow user to continue toggling
7. Rotating the selection knob will deactivate the fan relay (if on) and scroll display to function select (Light, Conv Fan, Ring, etc.)

Function 5:

1. Display BAKE
2. Press Start Zone to activate Bake element relay
3. Display BAKE ON
4. Press Start Zone to deactivate Bake element relay
5. Display BAKE
6. Allow user to continue toggling
7. Rotating the selection knob will deactivate the Bake relay (if on) and scroll display to function select (Light, Conv Fan, Ring, etc.)

Function 6:

1. Display WARMING DRAWER (if applicable for version)
2. Press Start Zone to activate Warming Drawer element relay
3. Display WARMING D ON
4. Press Start Zone to deactivate Warming Drawer element relay
5. Display WARMING DRAWER
6. Allow user to continue toggling
7. Rotating the selection knob will deactivate the Warming Drawer relay (if on) and scroll display to function select (Light, Conv Fan, Ring, etc.)

Function 7:

1. Display SENSOR CHECK
2. Press Start Zone to activate control to automatically perform self check of:
 - Meat probe resistance (if applicable for version)
 - Oven sensor resistance
 - Warming drawer sensor resistance (if applicable for version)
3. If self check finds a failure during this sensor check the alpha display shows which one with FAILURE PROBE, FAILURE OVEN or FAILURE W D. If no failure is found, the display shows SENSORS OK. Rotating the selection knob will deactivate the sensor check mode and scroll display to function select (Light, Conv Fan, Ring, etc.)

Function 8:

1. Display CHECK LATCH
2. Press Start Zone. Control activated door latch. Control operates as if in normal self-clean mode, checking for switch logic and time out function. Lock icon should operate as in normal operation. Once latch is locked, motor stops and icon is steady state. All errors should show if malfunction or non-locking is detected. Further pressing of the Start Zone will be ignored.
3. Press Start Zone. Control deactivated door latch. Control operates as if in normal self-clean mode, with all checks, icon change (lock flashing, then off) and error detection. Further pressing of the Start Zone will be ignored until the latch has un-locked or an error has been detected. If an error is detected the latch motor will stop and the display will show that code and beep.
4. Allow user to continue toggling.
5. Rotating the selection knob will deactivate the Check Latch mode and reset to home (if locked) and scroll display to function select (Light, Conv Fan, Ring, etc.).

Gas Oven

Function 1:

- 1. Display LIGHT
- 2. Press Start Zone to activate oven light relay
- 3. Display LIGHT ON
- 4. Press Start Zone to deactivate oven light relay
- 5. Display LIGHT
- 6. Allow user to continue toggling
- 7. Rotating the selection knob will deactivate the light relay (if on) and scroll display to function select (Light, Conv Fan, Warming Drawer, etc.)

Function 2:

- 1. Display CONV FAN
- 2. Press Start Zone to activate Convection fan relay
- 3. Display FAN ON
- 4. Press Start Zone to deactivate Convection fn relay
- 5. Display FAN
- 6. Allow user to continue toggling
- 7. Rotating the selection knob will deactivate the fan relay (if on) and scroll display to function select (Light, Conv Fan, Warming Drawer, etc.)

Function 3:

1. Display WARMING DRAWER (if applicable for version)
2. Press Start Zone to activate Warming Drawer element relay
3. Display WARMING D ON
4. Press Start Zone to deactivate Warming Drawer element relay
5. Display WARMING DRAWER
6. Allow user to continue toggling
7. Rotating the selection knob will deactivate the Warming Drawer relay (if on) and scroll display to function select (Light, Conv Fan, Warming Drawer, etc.)

Function 4:

1. Display SENSOR CHECK
2. Press Start Zone to activate control to automatically perform self check of:
 - Meat probe resistance (if applicable for version)
 - Oven sensor resistance
 - Warming Drawer resistance (if applicable for version)

If self-check finds a failure during this sensor check the alpha display shows which one with FAILURE PROBE or FAILURE OVEN or FAILURE W D. If no failure is found, the display shows SENSORS OK.
3. Rotating the selection knob will deactivate the sensor check mode and scroll display to function select (Light, Conv Fan, Warming Drawer, etc.)

Function 5:

1. Display BROIL
2. Pressing Start Zone activates Broil relay for 120 seconds
3. Display BROIL ON
4. Pressing Start Zone deactivates Broil relay
5. Display BROIL
6. Allow user to continue toggling. While Broil is on Controller times for 120 seconds. If user does not turn off broil relay within the 120 seconds, controller turns off automatically (also max temp of 200 F is monitored).
7. Rotating the selection knob will deactivate the Check Latch mode and reset to home (if locked) and scroll display to function select (Light, Conv Fan, Warming Drawer, etc.)

Function 6:

1. Display BAKE
2. Pressing Start Zone activates Bake relay for 120 seconds
3. Display BAKE ON
4. Pressing Start Zone Deactivates Bake relay
5. Display BAKE
6. Allow user to continue toggling. While Bake relay is on, Controller times for 120 seconds. If user does not turn off broil relay within the 120 seconds, controller turns off automatically (also max temp of 200 F is monitored).
7. Rotating the selection knob will deactivate the Check Latch mode and reset to home (if locked) and scroll display to function select (Light, Conv Fan, Warming Drawer, etc.)

Function 7:

1. Display CHECK LATCH
2. Press Start Zone. Control activates door latch. Control operates as if in normal self-clean mode, checking for switch logic and time out function. Lock icon should operate as in normal operation. Once latch is locked, motor stops and icon is steady state. All errors should show if malfunction or non-locking is detected. Further pressing of the Start Zone will be ignored until the latch has locked or an error has been detected.
3. Press Start Zone. Control deactivated door latch. Control operates as if in normal self-clean mode, with all checks, icon change (lock flashing then off) and error detection. Further pressing of the Start Zone will be ignored until the latch has un-locked or an error has been detected. If an error is detected, the latch motor will stop and the display will show that code and beep.
4. Allow user to continue toggling
5. Rotating the selection knob will deactivate the Check Latch mode and reset to home (if locked) and scroll display to function select (Light, Conv Fan, Warming Drawer, etc.)

Range Error Codes

CODE	DESCRIPTION	WHEN CHECKED	FAULT LIMIT
F1	Meat probe failure during test or service mode	Only during test or service	None
F2	Oven sensor failure during test or service mode	Only during test or service	None
F3	Warming drawer sensor failure during test or service mode	Only during test or service	None
F31	Oven temperature sensor failure	Cook or clean programmed	20 sec.*
F33	Warming drawer sensor failure	When warming drawer is active	20 sec.*
F41	Motorized latch will not lock	Latch should be locked	1 min.
F43	Motorized latch will not unlock	Latch should be unlocked	1 min.
F45	Motorized latch both locked and unlocked	Always	1 min.
F111	Runaway oven temperature 585° F	Latch unlocked	5 sec.
F113	Runaway oven temperature 950° F	Latch locked	5 sec.
F120	Any key (except Cancel) pressed longer than 60 sec.	Always	1 min.

Range Error Codes Cont'd

CODE	DESCRIPTION	WHEN CHECKED	FAULT LIMIT
F121	Touch key voltage out of limits (except cancel key)	Always	Max. 1 min.
F122	Selection mechanism for touch keys faulty	Always	Max. 1 min.
F124	Cancel key pressed for more than 60 sec.	Always	1 min.
F125	Cancel touch key voltage out of limits	Always	Max. 1 min.
F141	Slave micro not functioning	Always	1 min.
F151	EEPROM failure or communication circuit failure	Cook or clean programmed	1 sec.
F153	User interface too hot	Always	1 sec.
F154	Power board too hot	Always	1 sec.
F155	Cook profile corrupted in EPROM	Cook or clean programmed	1 sec.
F160	Cooling fan hall effect feedback not present	Always, NTC temp in built-in range only	1 sec.
F170	Power failure	Always	2 ms.

Range Error Codes Cont'd

CODE	DESCRIPTION	WHEN CHECKED	FAULT LIMIT
F190	Power over voltage	At power on	
F200	Time out and stop function	During production test mode	110 sec.
F210	Range exceeded safe test limits	During service test mode	200° F

* F31 and F33 fault limit set to 20 sec. to avoid erroneous faults due to line noise on long lengths of wires of sensors.

Fault Codes for MTwiST Control

- ER 22 /* Keyboard */
- ER 3 /* Selection of Keys */
- ER 25 /* False connection mains */
- ER 26 /* Relay supply voltage too high (off state of control) */
- ER 12 /* Mismatch of relay port pin and software register */
- ER 13 /* Invalid EPROM data */
- ER 23 /* PWM-frequency oft of limit */
- ER 24 /* Wrong number of relays */

Range Error Codes - Additional Information

LATCH FAILURE MODE

Error 41 Locking mode – All heating functions stop with error indicated

- If the latch does not lock and the control does not see a changed state of the feedback switch (probably indicating that the motor did not rotate), the display will fault out and the latch motor shuts off.
- If the control senses that contact A is open and B is still open (possibly due to disconnected wire or bad switch), the control will fault out and the motor will continue to operate until the cam returns to home position – contact A closed.
- If the control senses that contact B is closed and contact A remains closed (possibly due to bad switch), the control will fault out and the motor will continue to operate until contact B is open again (back to home).

Error 43 Unlocking mode – All heating functions should be off

- If the latch does not unlock and the control does not see a changed state of the feedback switch (due to motor not rotating), the display will fault out and the latch motor shuts off.
- If the control senses that contact B is open and A is still open, the control will fault out and the motor shuts off (should be in home position).
- If the control senses that contact A is closed and contact B remains closed, the control will fault out and the motor shuts off.

Range Error Codes - Additional Information Cont'd

LATCH FAILURE MODE Cont'd

Error 45 Locked and Unlocked mode – All heating functions should shut off

If the control senses that contacts A and B are either both open or both closed during any operation (cooking or self-cleaning), the display will fault out and the latch motor will not rotate until the oven temp is below 585° F. The control will then look for contact A open and contact B closed. If it does not find that state within 1 minute, the control will look for Contact B closed and shut off the motor.

The user can press the cancel button once and the beep will stop and the display and control will go to home state. If the latch is not in the home state when power is applied (or reapplied after a power outage), the control will reset the latch to home without a beep alarm or display error message. This is important if the latch was not in the home position when powered down or if the latch moved during shipping from the factory.

When self-clean or delayed self-clean is started, the lock will activate immediately. While self-clean is active, the oven lights and warming drawer are switched off and cannot be switched on until the conclusion of self-clean. If the door is opened before the door is locked, the control will pause heating, flash CLOSE DOOR and the beeper will produce a reminder tone. The latch will return to home position and pause until the door is closed. The user will then have 60 sec. to close the door and allow the control to complete the operation. After 60 sec. the display will show SELF CLEAN END. After acknowledge (start or cancel), the controls reset to home state.

Range Error Codes - Additional Information Cont'd

After the oven has cooled down and the door lock unlatches at the unlock set temperature, the operator can open the door without the display showing CLOSE DOOR. The cool down time of the cycle continues to operate until it times out or CANCEL is pressed.

If the self-clean cycle has been started and the user decides to CANCEL, if the oven is above the unlock temperature, the oven stays in the locked condition and stays locked until the oven temp falls below the unlock temperature. During this time, the user can only access the warming drawer. Once the door unlocks all cooking functions are available.

If CANCEL is pressed before the unlock temperature is reached, the display clears and the door unlocks and the control returns to home state.

If any Timers are operating they are to be cancelled or disabled while in self-clean mode.

The control is programmed with an unlock setting of 300° F.

Range Error Codes - Additional Information Cont'd

BASIC (300 SERIES) RANGE CONTROL (FSR3 Only)

The specification for the Basic range consist of utilizing the same FSR3 interface and power board hardware, however with less features for electric and gas application. The construction of the range reflects the features offered (or not offered). The features, operations and all safety protocols are identical to the standard FSR except for the following:

BAKE MODE – The bake mode is activated by the upper right zone (COOKING ZONE of the standard FSR control). When this zone is selected, the control shows bake flashing and the temp defaults to 350° F. The rotation knob is used to adjust the temp from 200° F to 525° F. Rotation of the knob counter-clockwise past 200° F displays WARM HIGH, WARM LOW and PROOFING. The START zone activates the mode. To assure that the control has the two-step activation, there is no automatic start up. When the operator selects the bake zone the START zone must be selected regardless if the temp was adjusted or not. The operating limits/parameters for warm high, and proofing incorporates the base limits, using the set temps.

BROIL MODE – The broil mode is activated by the middle right zone (TEMPERATURE ZONE of the standard control). When this zone is selected, the control shows Broil flashing and the temp defaults to HI. Rotating the knob adjusts the temp from HI to LOW. When the operator selects the BROIL zone, the START zone must be selected regardless if the temp was adjusted or not.

SELF CLEAN MODE – The self cleaning mode is activated by holding the upper right zone and the middle right zone for 5 seconds. The only other variation to this mode is the control does not have the convection fan (no convection cooking features).

Range Error Codes - Additional Information Cont'd

TIMER MODE – The time modes remain the same. The selection and setting is identical to the standard FSR control for all features. Time delay is the same.

Changing Temperature Settings

To change the temperature of Bake or Broil, the operator touches that zone. The temperature numerical display (orange) displays the current setting and flash. Rotate the knob to select the new temperature and then press the START zone to initiate. If the user does not rotate the knob within 5 seconds, the control will revert back to the original temperature setting. If the knob is rotated but the START zone is not pressed within 5 seconds, the control will set to the new temperature setting.

FAQs – FREQUENTLY ASKED QUESTIONS

When is the convection fan for convection bake and convection roast supposed to come on? When the temperature is reached or is it timed?

Gas Range – The convection fan does not come on while in preheat for Convection Bake & Convection Roast, but will turn on when the preset temperature is reached OR at 6 minutes (whichever is longer).

Example

Oven Temp °F	Approx. Preheat Time	Convection Fan On
200	4:59	6:00
325	9:19	9:19

During Dehydrate, only the bake burner is used and a delay of 6 minutes will occur before the convection fan turns on.

During self-clean, the broil burner is on first without the convection fan. Then the bake burner turns on (the broil burner turns off). The convection fan turns on 6 minutes after the bake burner turns on.

Electric Range – The convection fan comes on at the beginning of all convection modes.

FAQs – FREQUENTLY ASKED QUESTIONS Cont'd

What is the difference between convection bake and convection roast?

Gas Range

- Convection bake uses heat from the lower burner. The convection fan circulates the heat.
- Convection roast also uses heat from the lower burner and uses the convection fan to circulate heat. In convection roast, the burner will cycle more often than in convection bake because the temp is kept closer to the set temperature.

Electric Range (HES Series)

Better-Best Models

- Convection bake uses heat from the lower heating element and a third element located behind the back wall. The convection fan circulates the heat
NOTE: The broil element operates during preheat but not while cooking.
- Convection roast uses heat from the top and bottom elements as well as heat circulated by the convection fan.

FAQs – FREQUENTLY ASKED QUESTIONS Cont'd

What is the difference between convection bake and convection roast? Cont'd

Good Models

- Convection bake uses heat from the top and bottom elements. Heat is circulated by the convection fan.
- Convection roast also uses heat from the top and bottom elements and uses the convection fan to circulate heat.

NOTE: In convection roast, the elements will cycle more often than in convection bake because the temp is kept closer to the set temperature

Does the convection fan stay on when the door is opened?

Gas and Electric Range (all models)

The convection fan shuts down when the door is opened. It will take a few seconds for the convection fan blade to stop turning.

NOTE: Exception – The convection fan stays on when the door is open in the Dehydrate mode.

The timers time doesn't display when oven is in use

Gas and Electric Range (all models)

After the time is set, turn the knob a few clicks until the time is shown in the display. It will then remain displayed along with the cooking mode temperature.

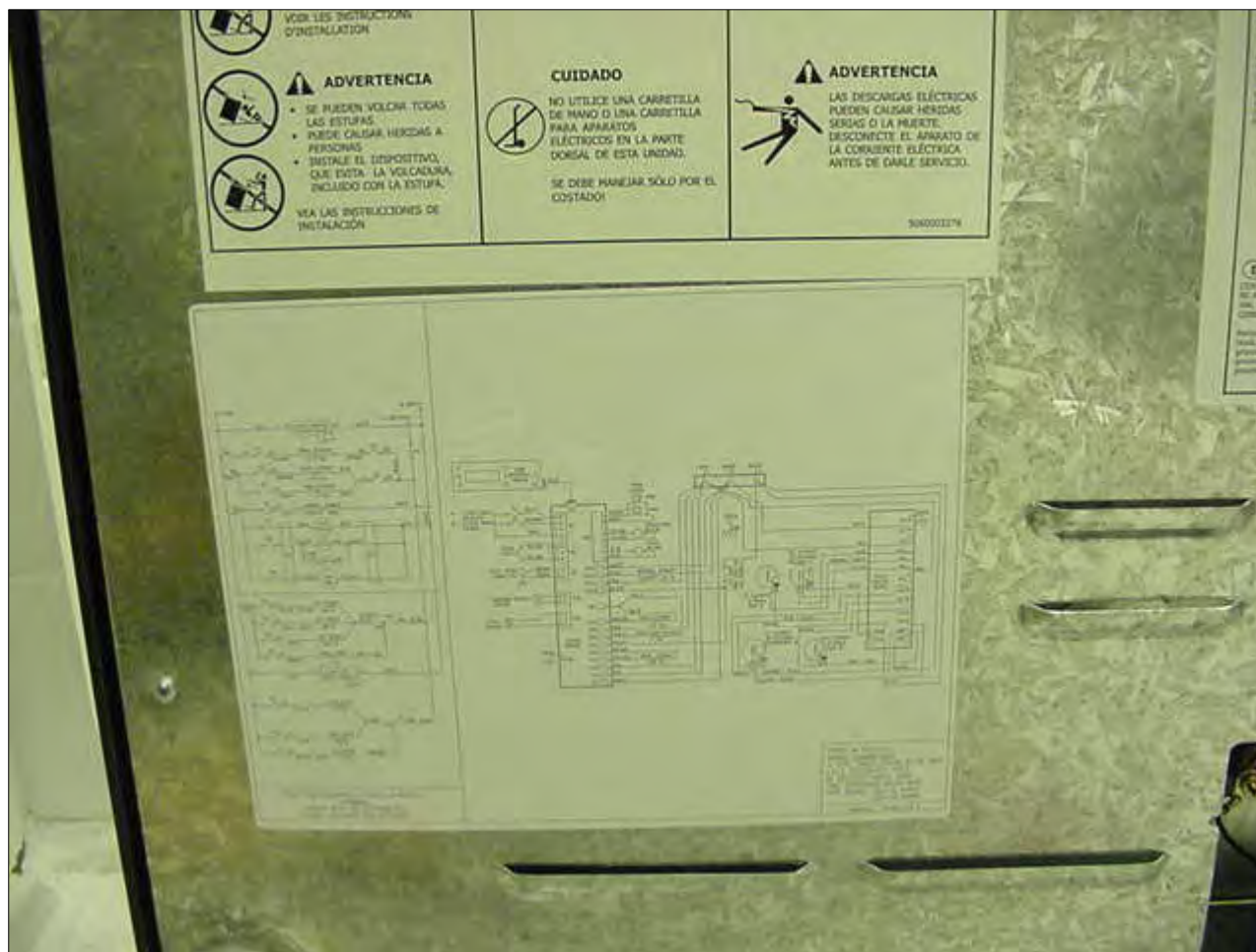
How do you get the door light to remain on after opening and shutting the door?

Gas and Electric Range (all models)

The oven light can only be turned on manually using the control panel. Once the door is opened and closed, the light will turn off and you must use the control panel to turn it on again.

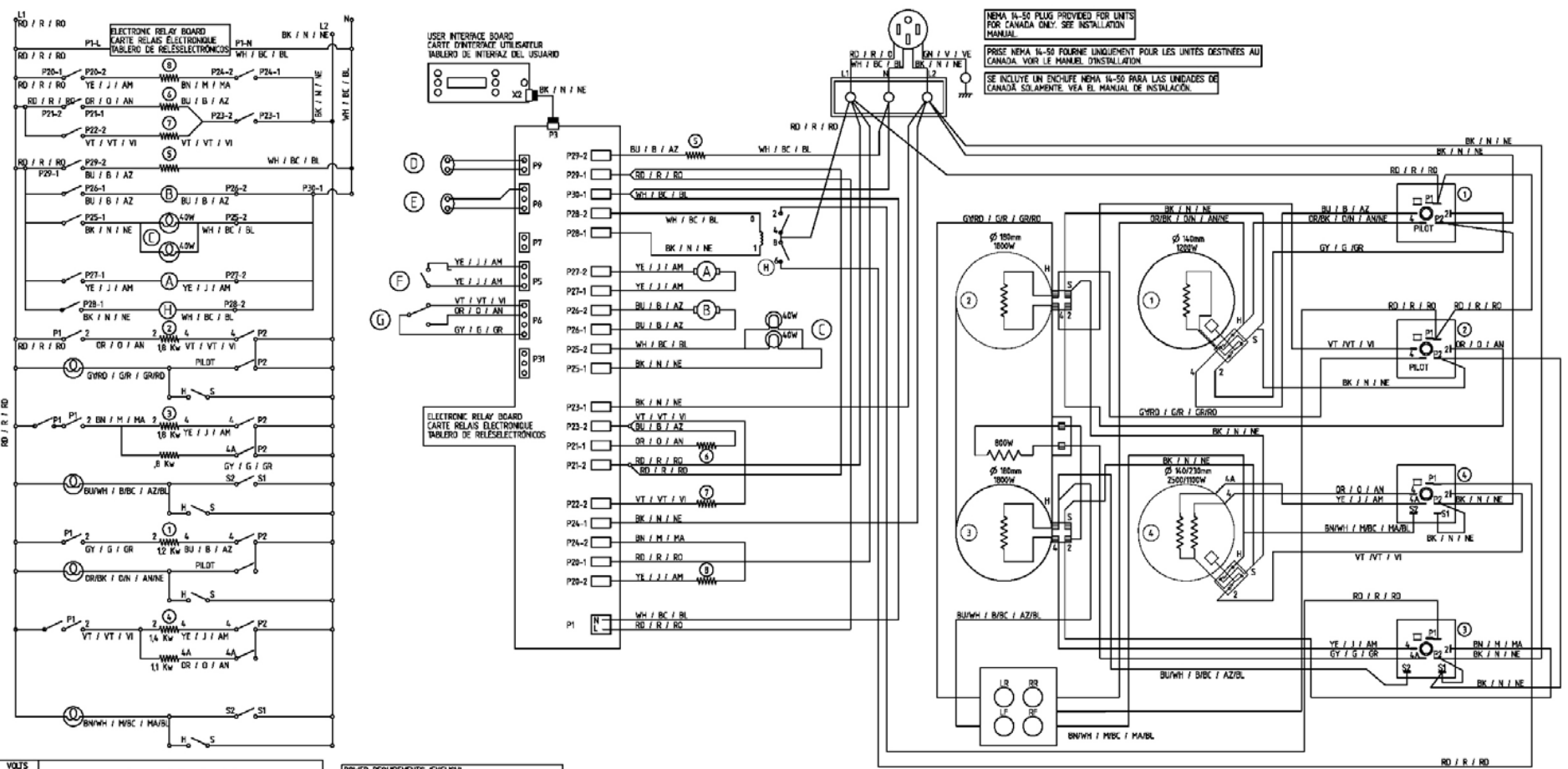
Wiring Diagrams & Schematics

There is a wiring diagram & schematic on the rear cover of each range



Wiring Diagram: HD2525U HD2528U

Wiring Diagram: HES7022C HES7052C HES7062C



VOLTS VOLTS VOLTS		
CIRCUIT / CIRCUIT / CIRCUITO		
ENGLISH REFER TO LOCAL ELECTRICAL CODE 40 OR 50 AMPERES		
ANGAIS: VÉRIFIEZ LE CODE ÉLECTRIQUE LOCAL 40 OU 50 AMPÈRES		
INGLES: CONSULTE EL CÓDIGO ELÉCTRICO LOCAL 40 O 50 AMPERES		
ENGLISH	ANGAIS	INGLES
BK (BLACK)	N (NOIR)	NE (NEGRO)
BN (BROWN)	M (MARRON)	MA (MARRÓN)
RD (RED)	R (ROUGE)	RO (ROJO)
YE (YELLOW)	Y (JAUNE)	AM (AMARILLO)
GN (GREEN)	V (VERT)	VE (VERDE)
BU (BLUE)	B (BLEU)	AZ (AZUL)
VT (VIOLET)	V (VIOLET)	VI (VIOLETA)
GY (GRAY)	G (GRIS)	GR (GRIS)
WH (WHITE)	OC (BLANC)	BL (BLANCO)
OR (ORANGE)	O (ORANGE)	AN (ANARANJADO)
ORBK (ORANGE/BLACK)	ON (ORANGE/NOIR)	ANNE (ANARANJADO/NEGRO)
YBK (YELLOW/BLACK)	JN (JAUNE/NOIR)	ANNE (AMARILLO/NEGRO)
BNWH (BROWN/WHITE)	MBK (MARRON/BLANC)	MAVL (MARRÓN/BLANCO)
BUWH (BLUE/WHITE)	BK (BLEU/BLANC)	AZVL (AZUL/BLANCO)
GYD (GRAY/RED)	GR (GRIS/ROUGE)	GRD (GRIS/ROJO)

POWER REQUIREMENTS (ENGLISH)	
4 WIRE SINGLE PHASE 60HZ ONLY	
L1 - L2 120/208-240 VOLTS	
N: GROUNDING WHITE WIRE	
GND: GROUNDING GREEN WIRE	
RATING: 200V - 10.4 Kw / 240V - 13.8Kw	
CARACTERISTIQUES DE PUISSANCE (Anglais)	
APPLICATIONS MONOPHASE 4 FILS 60HZ UNIQUEMENT	
L1 - L2 120/208-240 VOLTS	
N: FIL BLANC MIS À LA TERRE	
GND: FIL VERT DE MISE À LA TERRE	
NOMINALE: 200V - 10.4 Kw / 240V - 13.8Kw	
REQUISITOS ELÉCTRICOS (INGLES)	
TETRAFILAR MONOFÁSICA 4 FILS 60HZ ÚNICAMENTE	
L1 - L2 120/208-240 VOLTS	
N: CABLE BLANCO CONECTADO A TIERRA	
GND: CABLE VERDE CONECTADO A TIERRA	
CLASIFICACIÓN: 200V - 10.4 Kw / 240V - 13.8Kw	

ELEMENT	ENGLISH
1	RIGHT REAR ELEMENT / SWITCH
2	LEFT REAR ELEMENT / SWITCH
3	LEFT FRONT ELEMENT / SWITCH
4	RIGHT FRONT ELEMENT / SWITCH
5	140W WARMING DRAWER
6	20KW BASE
7	19KW COVEY
8	340W BROIL

COMPONENT	ENGLISH
A	CONVECTION MOTOR
B	LATCH MOTOR
C	OVEN LAMPS
D	WARMING DRAWER SENSOR
E	OVEN SENSOR
F	DOOR SWITCH
G	LATCH LOCK SWITCH
H	RELAY

ELEMENT	ANGAIS
1	ELEMENT ARRIÈRE DROIT / CONTRAQUEUR
2	ELEMENT ARRIÈRE GAUCHE / CONTRAQUEUR
3	ELEMENT AVANT GAUCHE / CONTRAQUEUR
4	ELEMENT AVANT DROIT / CONTRAQUEUR
5	140W TIROR CHAUFFE-PLAT
6	20KW DE CUSSION
7	19KW DE CONVECTION
8	340W DE GRILLAGE

COMPONENT	ANGAIS
A	MOTEUR DE CONVECTION
B	MOTEUR DE VERROUILLAGE
C	LAMPES DE FOUR
D	CAPTEUR DE TIROR CHAUFFE-PLAT
E	CAPTEUR DE FOUR
F	BOUCLE DE PORTE
G	CONTACTEUR DE BLOC-DE-CANNE
H	RELAIS

ELEMENTO	INGLES
1	ELEMENTO TRASERO DERECHO / INTERRUPTOR
2	ELEMENTO TRASERO IZQUIERDO / INTERRUPTOR
3	ELEMENTO DELANTERO IZQUIERDO / INTERRUPTOR
4	ELEMENTO DELANTERO DERECHO / INTERRUPTOR
5	140W CAJÓN DE CALENTAMIENTO
6	20KW DE COCCION
7	19KW DE CONVECCION
8	340W DE ASADOR

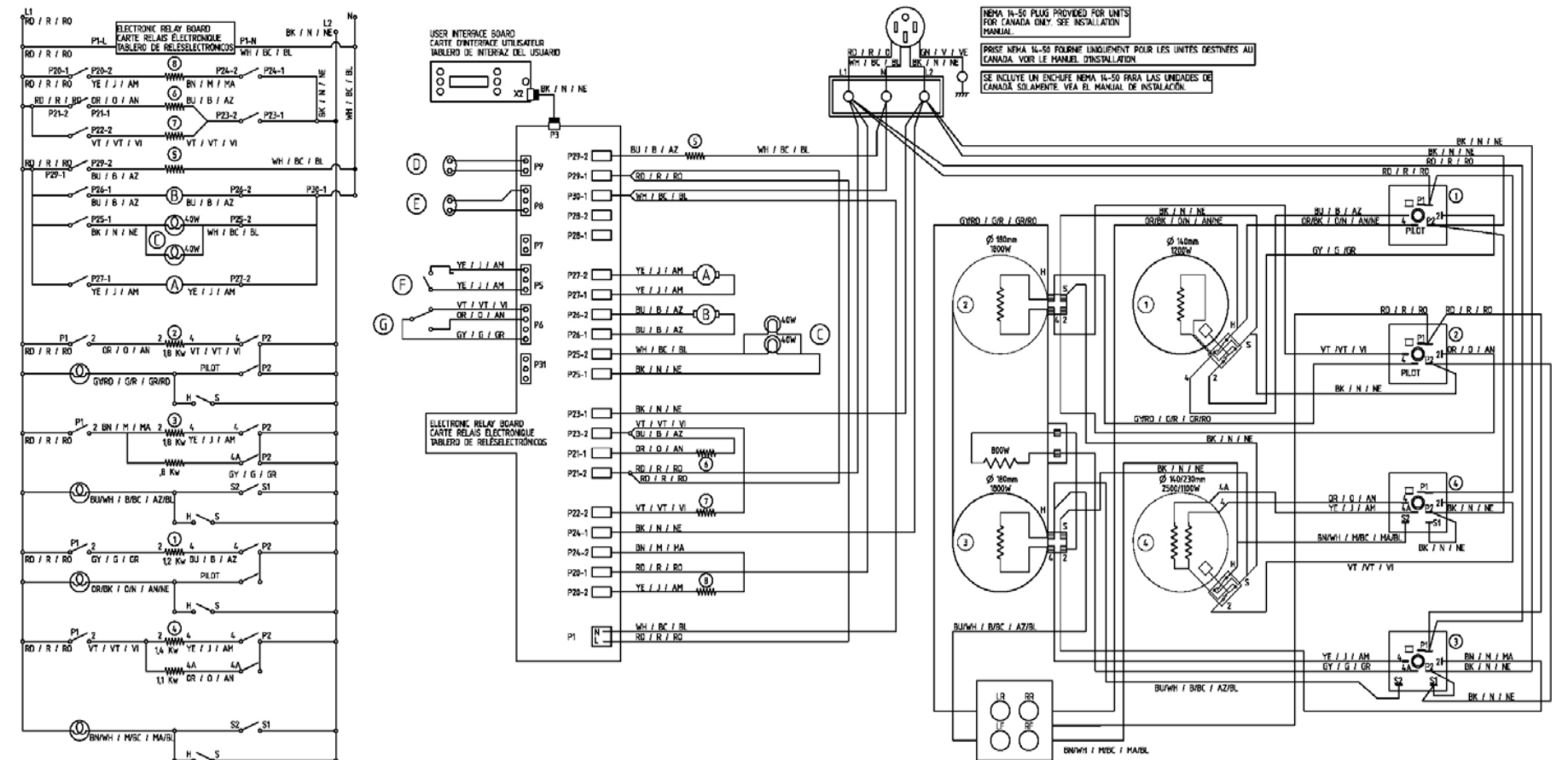
COMPONENTE	INGLES
A	MOTOR DE CONVECCION
B	MOTOR DE ENGANCHE
C	LAMPARAS DEL HORNO
D	SENSOR DE CAJÓN DE CALENTAMIENTO
E	SENSOR DE HORNO
F	INTERRUPTOR DE LA PUERTA
G	INTERRUPTOR DE TRABAJO DE ENGANCHE
H	RELES

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVICING THIS APPLIANCE. CAUTION LABEL: ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

AVERTISSEMENT: RISQUE DE CHOQUE ÉLECTRIQUE-DEBRANCHER L'APPAREIL AVANT D'EFFECTUER LE SERVICE. ATTENTION: ÉTIQUETTE: TOUTES LES ÉTIQUETTES À TOUTES LES FILS AVANT. DEBRANCHER EN ENTRETIENANT LES COMMANDES. LES ERREURS DE CÂBLAGE PEUVENT CAUSER L'OPÉRATION INADÉQUATE ET DANGEREUSE. VÉRIFIEZ L'OPÉRATION APPROPRIÉE DE L'ÉLECTROAPPAREIL APRÈS ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL SERVICIO DE ESTE APARATO. PRECAUCIÓN: ETIQUETA: TODOS LOS CABLES ANTES DE LA DESCONECCIÓN. LOS ERRORES DE LAS CONEXIONES PUEDEN CAUSAR UNA OPERACIÓN INDEBIDA Y PELIGROSA. VERIFIQUE LA OPERACIÓN APROPIADA DESPUÉS DEL SERVICIO.

Wiring Diagram: HES7022U HES7052U HES7062U



CIRCUIT / CIRCUIT / CIRCUIT		
ENGLISH: REFER TO LOCAL ELECTRICAL CODE 40 OR 50 AMPERES		
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BK (BLACK)	N (NEUTRAL)	NE (NEUTRO)
BN (BROWN)	PH (PHASE)	PH (PHASE)
RD (RED)	R (RED)	RD (ROJO)
YE (YELLOW)	J (YELLOW)	AM (AMARILLO)
GN (GREEN)	V (VERT)	VE (VERDE)
BU (BLUE)	B (BLEU)	AZ (AZUL)
VT (VIOLET)	VI (VIOLET)	VI (VIOLETA)
GY (GRAY)	G (GRIS)	GR (GRIS)
WH (WHITE)	BC (BLANC)	BL (BLANCO)
GR (ORANGE)	O (ORANGE)	AN (ANARANJADO)
GRBK (ORANGE/BLACK)	OM (ORANGE/NEUTRAL)	ANNE (ANARANJADO/NEUTRO)
YBKN (YELLOW/BLACK)	JN (YELLOW/NEUTRAL)	ANNE (AMARILLO/NEUTRO)
BNWH (BROWN/WHITE)	BNVC (BROWN/NEUTRAL)	MAVB (MARRON/BLANCO)
BNBH (BLUE/WHITE)	BNVC (BLUE/NEUTRAL)	AZBL (AZUL/BLANCO)
GYRD (GRAY/RED)	GR (GRAY/RED)	GRRO (GRIS/ROJO)

POWER REQUIREMENTS ENGLISH	
4 WIRE, SINGLE PHASE, 60HZ, ONLY	
L1 - L2: 120/208-240 VOLTS	
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RATING: 200V - 10.4 Kw / 240V - 13.8Kw	
CARACTERISTIQUES DE PUISSANCE (Anglais)	
APPLICATIONS MONOPHASE 4 FILS 60HZ UNILINÉAIRE	
L1 - L2: 120/208-240 VOLTS	
N: FIL BLANC MIS A LA TERRE	
GND: FIL VERT DE MISE A LA TERRE	
NOMINALE: 200V - 10.4 Kw / 240V - 13.8Kw	
REQUISITOS ELECTRICOS (INGLES)	
TETRAFILAR, MONOFASICA, 60HZ, SOLAMENTE	
L1 - L2: 120/208-240 VOLTS	
N: CABLE BLANCO CONECTADO A TIERRA	
GND: CABLE VERDE CONECTADO A TIERRA	
CLASIFICACION: 200V - 10.4 Kw / 240V - 13.8Kw	

ELEMENT ENGLISH	
1	RIGHT REAR ELEMENT / SWITCH
2	LEFT REAR ELEMENT / SWITCH
3	LEFT FRONT ELEMENT / SWITCH
4	RIGHT FRONT ELEMENT / SWITCH
5	400W WARMING DRAWER
6	200W BAKE
7	100W CONVECTION
8	300W BROIL
COMPONENT ENGLISH	
A	CONVECTION MOTOR
B	LATCH MOTOR
C	OVEN LAMPS
D	WARMING DRAWER SENSOR
E	OVEN SENSOR
F	DOOR SWITCH
G	LATCH LOCK SWITCH

ELEMENT ANGLAIS	
1	ELEMENT ARRIERE DROIT / CONTRACTEUR
2	ELEMENT ARRIERE GAUCHE / CONTRACTEUR
3	ELEMENT AVANT GAUCHE / CONTRACTEUR
4	ELEMENT AVANT DROIT / CONTRACTEUR
5	400W TIRER CHAUFFE-PLAT
6	200W DE CUISSON
7	100W DE CONVECTION
8	300W DE GRILLAGE
COMPONENT ANGLAIS	
A	MOTEUR DE CONVECTION
B	MOTEUR DE VERROUILLAGE
C	LAMPES DEL FOUR
D	CAPTEUR DE TIRER CHAUFFE-PLAT
E	CAPTEUR DE FOUR
F	CONTACTEUR DE PORTE
G	CONTACTEUR DE REC-DE-CAINE

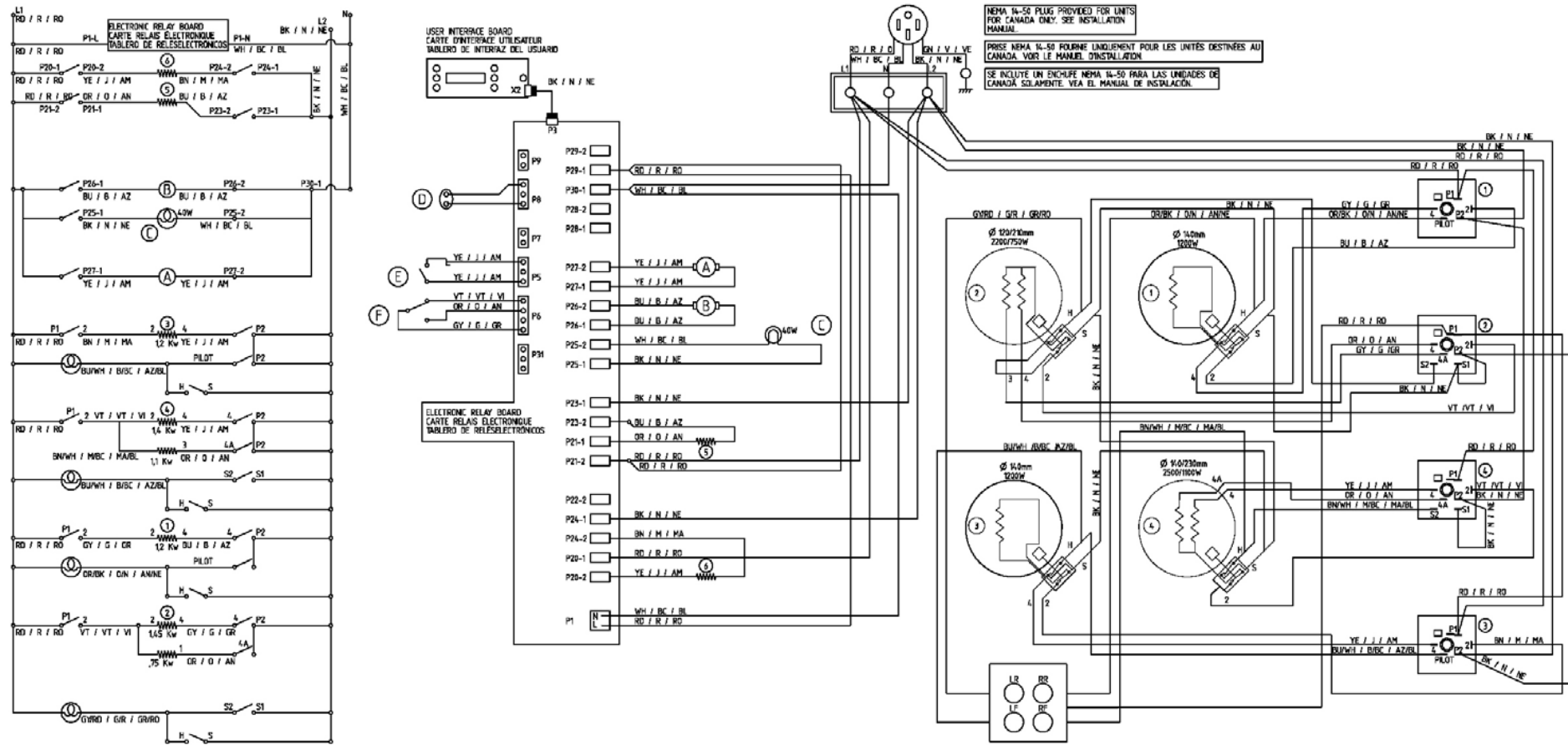
ELEMENTO INGLES	
1	ELEMENTO TRASERO DERECHO / INTERRUPTOR
2	ELEMENTO TRASERO IZQUIERDO / INTERRUPTOR
3	ELEMENTO DELANTERO IZQUIERDO / INTERRUPTOR
4	ELEMENTO DELANTERO DERECHO / INTERRUPTOR
5	400W CAJON DE CALENTAMIENTO
6	200W DE COCCION
7	100W DE CONVECCION
8	300W DE ASADOR
COMPONENTE INGLES	
A	MOTOR DE CONVECCION
B	MOTOR DE ENGANCHE
C	LAMPARAS DEL HORNO
D	SENSOR DE CAJON DE CALENTAMIENTO
E	SENSOR DE HORNO
F	INTERRUPTOR DE LA PUERTA
G	INTERRUPTOR DE TRABA DE ENGANCHE

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVICING THIS APPLIANCE. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

AVERTISSEMENT: RISQUE DE CHOC ELECTRIQUE-DEBRANCHER L'APPAREIL AVANT D'EFFECTUER LE SERVICE. ATTENTION: ETIQUETER LES ETIQUETTES A TOUT LE FILS AVANT. DEBRANCHAGE EN ENTRETIEN DES COMMANDES. LES ERREURS DE CABLEAGE PEUVENT CAUSER L'OPERATION INEXACTE ET DANGEREUSE. VERIFIEZ L'OPERATION APPROPRIEE APRES ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL SERVICIO DE ESTE APARATO. PRECAUCION: ETIQUETE TODOS LOS CABLES ANTES DE LA DESCONEXION. LOS ERRORES DE LAS CONEXIONES PUEDEN CAUSAR UNA OPERACION INDEBIDA Y PELIGROSA. VERIFIQUE LA OPERACION APROPIADA DESPUES DEL SERVICIO.

Wiring Diagram: HE2224U HES5022U HES5042U HES5052U HES5062U



VOLTS VOLTS VOLTS	CIRCUIT / CIRCUIT / CIRCUITO
120 / 240 120 / 208	ENGLISH: REFER TO LOCAL ELECTRICAL CODE 48 OR 50 AMPERES ANGLAIS: VOIR LE CODE ELECTRIQUE LOCAL 48 OU 50 AMPERES INGLES: CONSULT EL CODIGO ELECTICO LOCAL 48 O 50 AMPERES
ENGLISH	ANGLAIS
BN (BLACK)	N (NOIR)
BN (BROWN)	M (MARRON)
RD (RED)	RD (ROUGE)
YE (YELLOW)	J (JAUNE)
GN (GREEN)	V (VERT)
BU (BLUE)	AZ (AZUL)
VT (VIOLET)	VI (VIOLETT)
GY (GRAY)	G (GRIS)
WH (WHITE)	BL (BLANC)
OR (ORANGE)	AN (AMARANTE)
OR/BK (ORANGE/BLACK)	AN/BN (AMARANTE/NOIR)
YBK (YELLOW/BLACK)	JN (JAUNE/NOIR)
BN/WH (BROWN/WHITE)	MBL (MARRON/BLANC)
BU/WH (BLUE/WHITE)	BLZ (BLEU/BLANC)
GY/BD (GRAY/BLUE)	GR (GRIS/ROUGE)

POWER REQUIREMENTS (ENGLISH)
4 WIRE SINGLE PHASE 60HZ ONLY L1 - L2 100/208-240 VOLTS N GROUNDING WHITE WIRE GND GROUNDING GREEN WIRE RATING: 208V - 9.6 Kw / 240V - 12.8Kw
CARACTERISTIQUES DE PUISSANCE (ANGLAIS)
APPLICATIONS MONOPHASE 4 FILS 60HZ UNICHIQUENT L1 - L2 100/208-240 VOLTS N FIL BLANC MIS A LA TERRE GND FIL VERT DE MISE A LA TERRE NOMINALE: 208V - 9.6 Kw / 240V - 12.8Kw
REQUISITOS ELECTRICOS (INGLES)
TETRAFILAR MONOFASICA 400V SOLAMENTE L1 - L2 100/208-240 VOLTS N CABLE BLANCO CONECTADO A TIERRA GND CABLE VERDE CONECTADO A TIERRA CLASIFICACION: 208V - 9.6 Kw / 240V - 12.8Kw

ELEMENT ENGLISH
1 RIGHT REAR ELEMENT / SWITCH 2 LEFT REAR ELEMENT / SWITCH 3 LEFT FRONT ELEMENT / SWITCH 4 RIGHT FRONT ELEMENT / SWITCH 5 20KW BAKE 6 360W GRILL
COMPONENT ENGLISH
A CONVECTION MOTOR B LATCH MOTOR C OVEN LAMPS D OVEN SENSOR E DOOR SWITCH F LATCH LOCK SWITCH

ELEMENT ANGLAIS
1 ELEMENT ARRIERE DROIT / CONTRACTEUR 2 ELEMENT ARRIERE GAUCHE / CONTRACTEUR 3 ELEMENT AVANT GAUCHE / CONTRACTEUR 4 ELEMENT AVANT DROIT / CONTRACTEUR 5 20KW DE CUISSON 6 360W DE GRILLAGE
COMPONENT ANGLAIS
A MOTEUR DE CONVECTION B MOTEUR DE VERROUILLAGE C LAMPES DE FOUR D CAPTEUR DE FOUR E CONTACTEUR DE PORTE F CONTACTEUR DE BEC-DE-CAVE

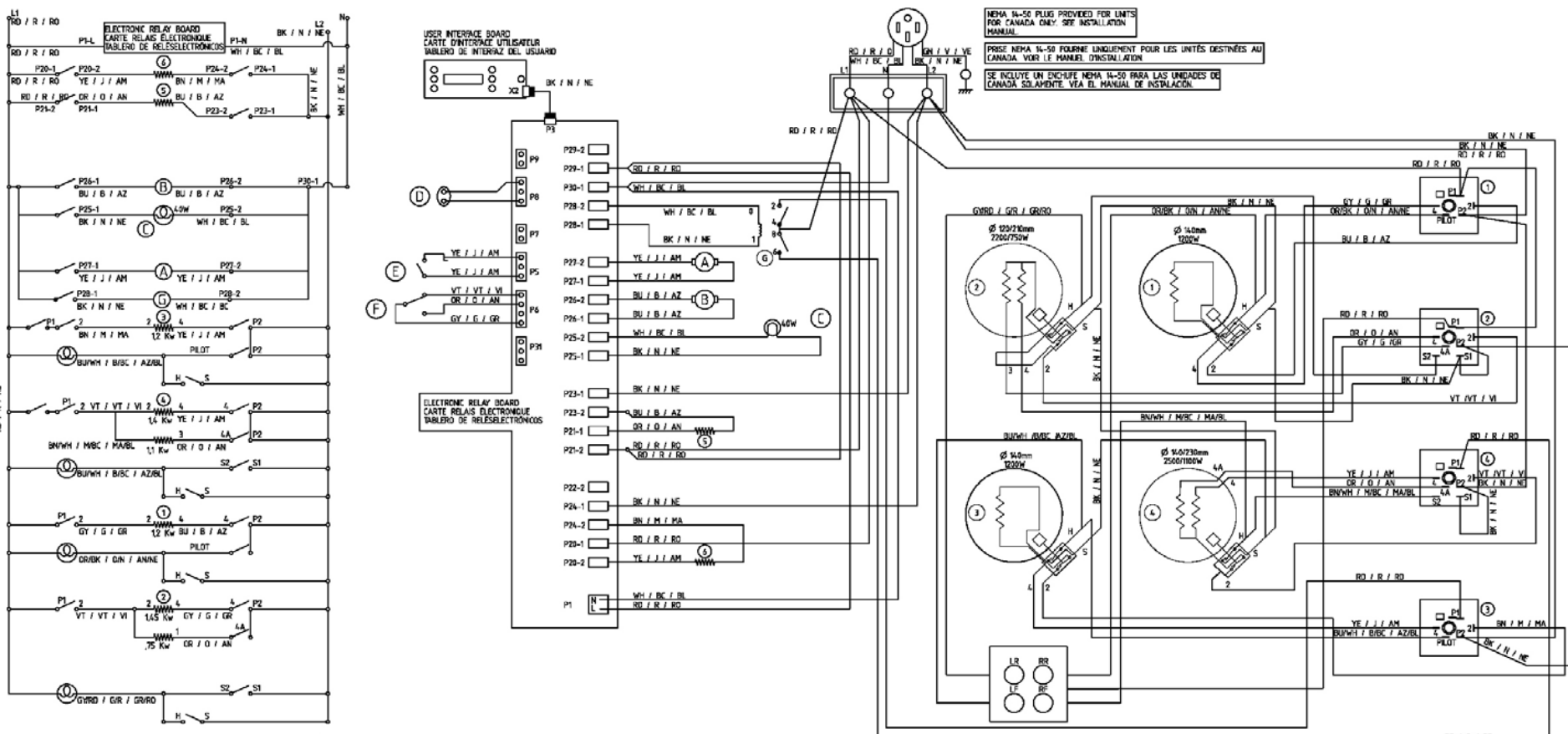
ELEMENTO INGLÉS
1 ELEMENTO TRASERO DERECHO / INTERRUPTOR 2 ELEMENTO TRASERO IZQUIERDO / INTERRUPTOR 3 ELEMENTO DELANTERO IZQUIERDO / INTERRUPTOR 4 ELEMENTO DELANTERO DERECHO / INTERRUPTOR 5 20KW DE COCCIÓN 6 360W DE ASADOR
COMPONENTE INGLÉS
A MOTOR DE CONVECCIÓN B MOTOR DE ENGANCHE C LAMPARAS DEL HORNO D SENSOR DE HORNO E INTERRUPTOR DE LA PUERTA F INTERRUPTOR DE TRABAJO DE ENGANCHE

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVICING THIS APPLIANCE.
CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING.
WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
VERIFY PROPER OPERATION AFTER SERVICING.

AVERTISSEMENT: RISQUE DE CHOCS ELECTRIQUE-DEBRANCHER APPAREIL AVANT DEFFECTUER LE SERVICE.
ATTENTION: ETIQUETER LES ENJEUETTES A TOUS LES FILS AVANT.
DEBRANCHAGE EN ENTRETIENANT LES COMMANDES.
LES ERREURS DE CÂBLAGE PEUVENT CAUSER L'OPERATION INECCATE ET DANGEREUSE.
VERIFIEZ L'OPERATION APPROPRIEE DE L'ECLECTROENGER APRES ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL SERVICIO DE ESTE APARATO.
PRECAUCION: ETIQUETE TODOS LOS CABLES ANTES DE LA DESCONEXION.
LOS ERRORES DE LAS CONEXIONES PUEDEN CAUSAR UNA OPERACION INECORRIA Y PELIGROSA.
VERIFIQUE LA OPERACION APROPIADA DESPUES DEL SERVICIO.

Wiring Diagram: HE2224C HES5022C HES5042C HES5052C HES5062C



CIRCUIT / CIRCUIT / CIRCUITO		
ENGLISH REFER TO LOCAL ELECTRICAL CODE 48 OR 50 AMPERES		
ANGLAIS VOIR LE CODE ELECTRIQUE LOCAL 48 OU 50 AMPERES		
INGLES CONSULTE EL CODIGO ELECTICO LOCAL 48 O 50 AMPERES		
ENGLISH	ANGLAIS	INGLES
BK (BLACK)	N (NOIR)	NE (NEGRO)
BN (BROWN)	N (MARRON)	NE (MARRON)
BR (RED)	R (ROUGE)	RO (ROJO)
YE (YELLOW)	J (JAUNE)	AM (AMARILLO)
GN (GREEN)	V (VERT)	VE (VERDE)
BU (BLUE)	B (BLEU)	AZ (AZUL)
VI (VIOLET)	V (VIOLET)	VI (VIOLETA)
GY (GRAY)	O (GREY)	GR (GRIS)
WH (WHITE)	BL (BLANC)	BL (BLANCO)
OR (ORANGE)	O (ORANGE)	AN (ANARANJADO)
OR/KB (ORANGE/BLACK)	ON (ORANGE/NOIR)	AN/NE (ANARANJADO/NEGRO)
YK (YELLOW/BLACK)	JN (JAUNE/NOIR)	AM/NE (AMARILLO/NEGRO)
BN/WH (BROWN/WHITE)	NB (MARRON/BLANC)	NE/BL (MARRON/BLANCO)
BN/WH (BLUE/WHITE)	BN/BL (BLEU/BLANC)	AZ/BL (AZUL/BLANCO)
GY/RO (GRAY/RED)	GR (GRIS/ROUGE)	GR/RO (GRIS/ROJO)

POWER REQUIREMENTS (ENGLISH)	
4 WIRE SINGLE PHASE 60HZ ONLY	
L1 - L2 120/208-240 VOLTS	
N GROUNDING WHITE WIRE	
GND GROUNDING GREEN WIRE	
RATING: 208V - 9.6 Kw / 240V - 12.8Kw	
CARACTERISTIQUES DE PUISSANCE (ANGLAIS)	
APPLICATIONS MONOPHASEE A FLS 60HZ UNIQUEMENT	
L1 - L2 120/208-240 VOLTS	
N FIL BLANC MIS A LA TERRE	
GND FIL VERT DE MISE A LA TERRE	
NOMINALE: 208V - 9.6 Kw / 240V - 12.8Kw	
REQUISITOS ELECTRICOS (INGLES)	
TETRAFILAR, MONOFASICA, 60HZ SOLAMENTE	
L1 - L2 120/208-240 VOLTS	
N CABLE BLANCO CONECTADO A TIERRA	
GND CABLE VERDE CONECTADO A TIERRA	
CLASIFICACION: 208V - 9.6 Kw / 240V - 12.8Kw	

ELEMENT (ENGLISH)	
1	RIGHT REAR ELEMENT / SWITCH
2	LEFT REAR ELEMENT / SWITCH
3	LEFT FRONT ELEMENT / SWITCH
4	RIGHT FRONT ELEMENT / SWITCH
5	200W BAKE
6	3600W BROIL
COMPONENT (ENGLISH)	
A	CONVECTION MOTOR
B	LATCH MOTOR
C	OVEN LAMPS
D	OVEN SENSOR
E	DOOR SWITCH
F	LATCH LOCK SWITCH
G	RELAY

ELEMENT (ANGLAIS)	
1	ELEMENT ARRIERE DROIT / CONTRACTEUR
2	ELEMENT ARRIERE GAUCHE / CONTRACTEUR
3	ELEMENT AVANT GAUCHE / CONTRACTEUR
4	ELEMENT AVANT DROIT / CONTRACTEUR
5	200W DE CUISSON
6	3600W DE GRILLAGE
COMPONENT (ANGLAIS)	
A	MOTEUR DE CONVECTION
B	MOTEUR DE VERROUILLAGE
C	LAMPES DE FOUR
D	CAPTEUR DE FOUR
E	CONTACTEUR DE PORTE
F	CONTACTEUR DE BEE-DE-CANE
G	RELAIS

ELEMENTO (INGLES)	
1	ELEMENTO TRASERO DERECHO / INTERRUPTOR
2	ELEMENTO TRASERO IZQUIERDO / INTERRUPTOR
3	ELEMENTO DELANTERO IZQUIERDO / INTERRUPTOR
4	ELEMENTO DELANTERO DERECHO / INTERRUPTOR
5	200W DE COCCION
6	3600W DE ASADOR
COMPONENTE (INGLES)	
A	MOTOR DE CONVECCION
B	MOTOR DE ENGANCHE
C	LAMPARAS DEL HORNO
D	SENSOR DE HORNO
E	INTERRUPTOR DE LA PUERTA
F	INTERRUPTOR DE TRABA DE ENGANCHE
G	RELES

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVING THIS APPLIANCE. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

AVERTISSEMENT: RISQUE DE CHOC ELECTRIQUE-DEBRANCHER L'APPAREIL AVANT D'ETRE SERVIE. ATTENTION: ETIQUETER LES ETIQUETTES A TOUT LE PLUS AVANT. DEBRANCHAGE EN ENTRETIEN DES COMMANDES. LES ERREURS DE CABLEAGE PEUVENT CAUSER L'OPERATION INEXACTE ET DANGEREUSE. VERIFIER LA OPERATION APPROPRIEE DE L'APPAREIL APRES ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL SERVIDO DE ESTE APARATO. PRECAUCION: ETIQUETAR TODOS LOS CABLES ANTES DE LA DESCONEXION. LOS ERRORES DE LAS CONEXIONES PUEDEN CAUSAR UNA OPERACION INEXACTA Y PELIGROSA. VERIFIQUE LA OPERACION APROPIADA DESPUES DEL SERVIDO.

NEHA 14-50 PLUG PROVIDED FOR UNITS
FOR CANADA ONLY. SEE INSTALLATION
MANUAL.



ELEMENTO	INGLÉS
1	ELEMENTO TRASERO DERECHO / INTERRUPTOR
2	ELEMENTO TRASERO IZQUIERDO / INTERRUPTOR
3	ELEMENTO DELANTERO IZQUIERDO / INTERRUPTOR
4	ELEMENTO DELANTERO DERECHO / INTERRUPTOR
5	400W CAJÓN DE CALENTAMIENTO

COMPONENTE	INGLÉS
A	MOTOR DE CONVECCIÓN
B	MOTOR DE ENGANCHE
C	LAMBRAS DEL HORNO
D	SENSOR DE CAJÓN DE CALENTAMIENTO
E	SENSOR DE HORNO
F	RECEPTÁCULO DE LA Sonda PARA LA CARNE
G	INTERRUPTOR DE LA PUERTA
H	INTERRUPTOR DE TRABAJO DE ENGANCHE

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVING THIS APPLIANCE.
CAUTION: LABEL ALARMS WHEN POWER TO DISCONNECTION WHEN SERVING.
VERIFIQUEZ L'ÉTAT DE LA TENSION AVANT D'OPÉRER ET DANGERS/OPÉRATIONS
VERIFIER VÉRIFIER OPÉRATION AVANT SERVICE.

ATTENTION: RISQUE DE CHOC ÉLECTRIQUE-DÉBRANCHER L'APPAREIL AVANT
D'OPÉRER LE SERVICE.

ATTENTION: ALERTEZ LES ÉTIQUETTES À TOUTS LES MOMENTS.
DÉBRANCER LA TENSION EN ÉTAT DES COMMANDES.

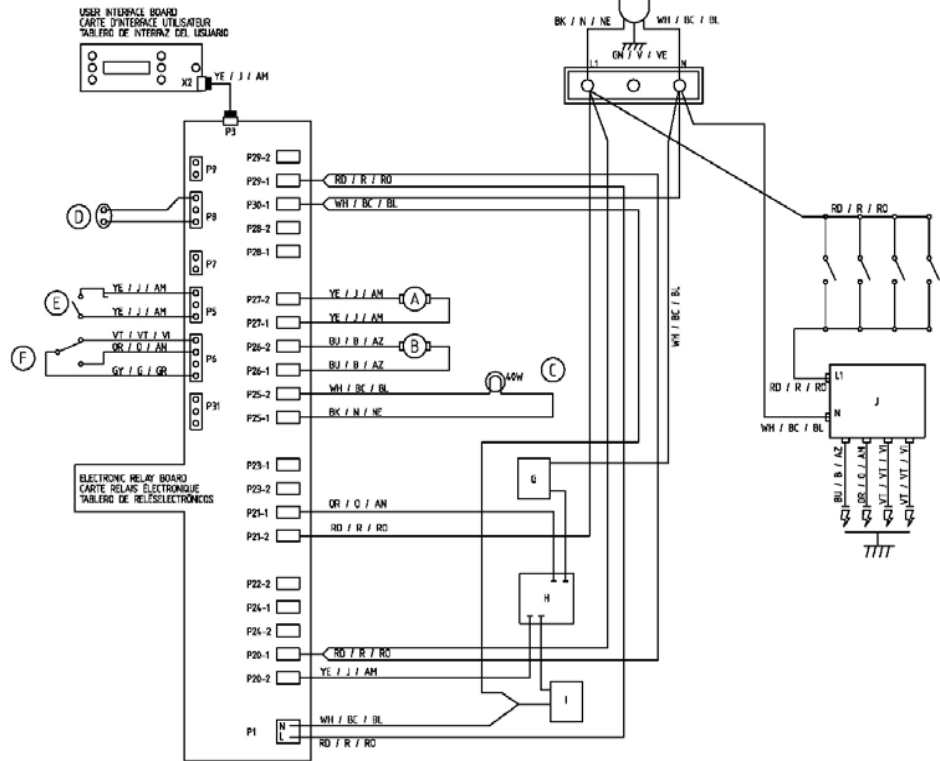
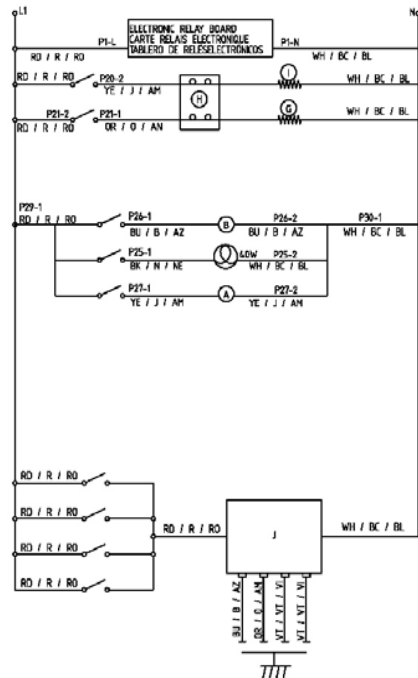
LES ERREURS DE CÂBLAGE PEUVENT CAUSER L'OPÉRATION INEFFECTIVE ET DANGEREUSE.
VÉRIFIEZ L'OPÉRATION APPROPRIÉE DE COLLECT/OPÉRATION APRÈS EXTINCTION.

PRÉCAUTION: SE DEBUT DE DISCONNECTER LA CORRIENTE AVANT DE SERVIR EL
SERVIDOR EL SE DEBUT DE DISCONNECTION EL SERVIDOR.

PREVENIR ÉTIQUETTE TOUTES LES CABLES ANTES DE LA DISCONNECTION.
LES ERREURS DE LA SONT CONNEXIONS PEUVENT CAUSER UNE OPÉRATION INEFFECTIVE
ET DANGEREUSE.

VÉRIFIEZ LA OPÉRATION APPROPRIÉE APRÈS LE SERVICE.

Wiring Diagram: HGS5022UC HGS5042UC HGS5052UC HGS5062UC



POWER REQUIREMENTS (ENGLISH)		
3 WIRE SINGLE PHASE 60HZ ONLY		
L1 = 120V - IS AMP DEDICATED BRANCH CIRCUIT		
N: GROUNDING WHITE WIRE		
GND: GROUNDING GREEN WIRE		
CARACTÉRISTIQUES DE PUISSANCE (Anglais)		
APPLICATIONS MONOPHASE 3 FILS 60HZ UNIQUEMENT		
L1 = 120V - IS AMPÉRAGE CIRCUIT DE DÉRIVATION SPÉCIALISÉ		
N: FIL BLANC MIS À LA TERRE		
GND: FIL VERT DE MISE À LA TERRE		
REQUISITOS ELÉCTRICOS (INGLÉS)		
TETRAFILAR, MONOFÁSICA, 3 ALAMBRE, 60HZ, SOLAMENTE		
L1 = 120V - IS AMPERIOS CIRCUITO DEL RAMAL ESPECIALIZADO		
N: CABLE BLANCO CONECTADO A TIERRA		
GND: CABLE VERDE CONECTADO A TIERRA		

ENGLISH	ANGLAIS	INGLÉS
BK (BLACK)	N (NOIR)	NE (NEGRO)
BN (BROWN)	M (MARRON)	MA (MARRÓN)
RD (RED)	R (ROUGE)	RO (ROJO)
YE (YELLOW)	J (JAUNE)	AM (AMARILLO)
GN (GREEN)	V (VERT)	VE (VERDE)
BU (BLUE)	B (BLEU)	AZ (AZUL)
VT (VIOLET)	VI (VIOLET)	VE (VIOLETA)
GY (GRAY)	G (GRIS)	GR (GRIS)
WH (WHITE)	BC (BLANC)	BL (BLANCO)
OR (ORANGE)	O (ORANGE)	AN (ANARANJADO)
OR/BK (ORANGE/BLACK)	ON (ORANGE/NOIR)	ANNE (ANARANJADO/NEGRO)
Y/BK (YELLOW/BLACK)	JN (JAUNE/NOIR)	AMNE (AMARILLO/NEGRO)
BN/WH (BROWN/WHITE)	MBN (MARRON/BLANC)	MA/BL (MARRÓN/BLANCO)
BU/WH (BLUE/WHITE)	B/BK (BLEU/BLANC)	AZ/BL (AZUL/BLANCO)
GY/RD (GRAY/RED)	G/R (GRIS/ROUGE)	GR/RO (GRIS/ROJO)

COMPONENT	ENGLISH
A	CONVECTION MOTOR
B	LATCH MOTOR
C	OVEN LAMPS
D	OVEN SENSOR
E	DOOR SWITCH
F	LATCH LOCK SWITCH
G	BAKE IGNITOR
H	ELECTRIC GAS VALVE
I	BROIL IGNITOR
J	SPARK MODULE

COMPONENT	ANGLAIS
A	MOTEUR DE CONVECTION
B	MOTEUR DE VERROUILLAGE
C	LAMPES DE FOUR
D	CAPTEUR DE FOUR
E	CONTACTEUR DE PORTE
F	CONTACTEUR DE BLOC-DE-CANE
G	ALLUMEUR DE CUISSON
H	ELECTRO-VALVE À GAZ
I	ALLUMEUR DE GRILLAGE
J	MODULE D'ÉCLAIREMENT

COMPONENTE	INGLÉS
A	MOTOR DE CONVECCIÓN
B	MOTOR DE ENGANCHE
C	LAMPARAS DEL HORNO
D	SENSOR DE HORNO
E	INTERRUPTOR DE LA PUERTA
F	INTERRUPTOR DE TRABAJO DE ENGANCHE
G	IGNITOR DE COCCIÓN
H	VALVULA DE GAS ELECTRICA
I	IGNITOR DE ASADOR
J	MÓDULO DE CHISPA

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVING THIS APPLIANCE.
CAUTION: LABEL: ALL WIRES PRIOR TO DISCONNECTION WHEN SERVING.
WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
VERIFY PROPER OPERATION AFTER SERVING.

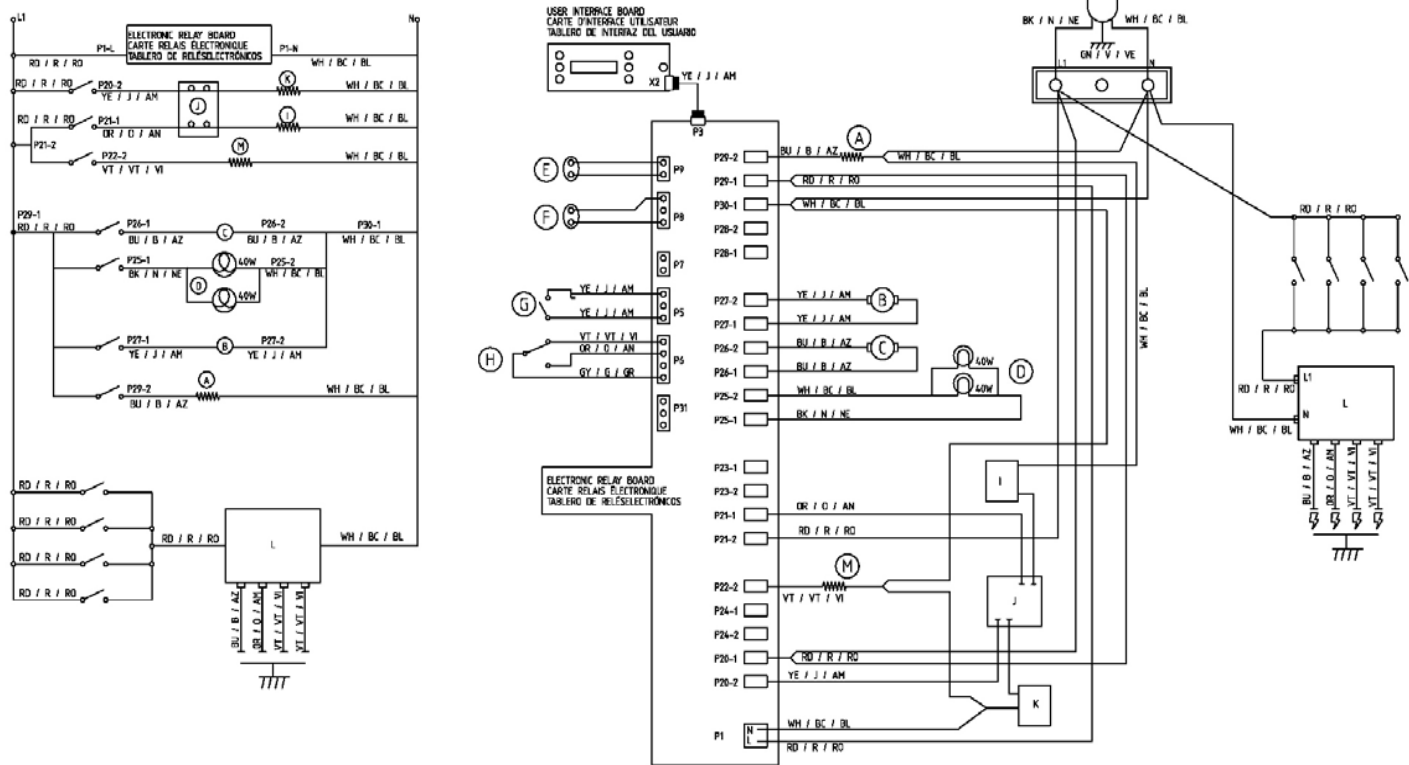
AVERTISSEMENT: RISQUE DE CHOC ÉLECTRIQUE. DÉBRANCHER L'APPAREIL AVANT D'EFFECTUER LE SERVICE.
ATTENTION: ATTACHEZ LES ÉTIQUETTES À TOUS LES FILS AVANT.

LES ERREURS DE CÂBLAGE PEUVENT CAUSER L'OPÉRATION INEXACTE ET DANGÉREUSE.
VÉRIFIEZ L'OPÉRATION APPROPRIÉE DE L'ELECTROMÉNAGER APRÈS ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL SERVICIO DE ESTE APARATO.
BRICAJE: ETIQUETA TODOS LOS CABLES ANTES DE LA DESCONEXIÓN.

LOS ERRORES DE LAS CONEXIONES PUEDEN CAUSAR UNA OPERACIÓN INEXACTA Y PELIGROSA.
VERIFIQUE LA OPERACIÓN APROPIADA DESPUÉS DEL SERVICIO.

Wiring Diagram: HGS7022UC HGS7052UC HGS7062UC HGS7132U HGS7152U HGS7282UC



POWER REQUIREMENTS (ENGLISH)		
3 WIRE SINGLE PHASE 60HZ ONLY		
L1 = 230V - 15 AMP DEDICATED BRANCH CIRCUIT		
N: GROUNDING WHITE WIRE		
GND: GROUNDING GREEN WIRE		
CARACTERÍSTICAS DE PUESTA (English)		
APPLICACIONES MONOFÁSICA 3 FILS 60HZ UNIDIRECCIONAL		
L1 = 230V - 15 AMP DEDICATED BRANCH CIRCUIT		
N: FIL BLANC MIS À LA TERRE		
GND: FIL VERT DE MISE À LA TERRE		
REQUISITOS ELÉCTRICOS (INGLÉS)		
TETRAFILAR, MONOFÁSICA, 3 ALAMBRES, 60HZ, SOLAMENTE		
L1 = 230V - 15 AMPEROS CIRCUITO DEL RAMPEL ESPECIALIZADO		
N: CABLE BLANCO CONECTADO A TIERRA		
GND: CABLE VERDE CONECTADO A TIERRA		

ENGLISH	ANGLAIS	INGLÉS
BK (BLACK)	N (NOIR)	NE (NEGRO)
BN (BROWN)	M (MARRON)	MA (MARRÓN)
RD (RED)	R (ROUGE)	RO (ROJO)
YE (YELLOW)	J (JAUNE)	JM (AMARILLO)
GN (GREEN)	V (VERT)	VE (VERDE)
BU (BLUE)	B (BLEU)	AZ (AZUL)
VT (VIOLET)	VI (VIOLET)	VI (VIOLETA)
GY (GRAY)	G (GRIS)	GR (GRIS)
WH (WHITE)	BC (BLANC)	BL (BLANCO)
OR (ORANGE)	O (ORANGE)	AN (ANARANJADO)
OR/BK (ORANGE/BLACK)	O/N (ORANGE/NOIR)	ANNE (ANARANJADO/NEGRO)
YBK (YELLOW/BLACK)	J/N (JAUNE/NOIR)	AMNE (AMARILLO/NEGRO)
BN/WH (BROWN/WHITE)	M/BC (MARRON/BLANC)	MA/BL (MARRÓN/BLANCO)
BN/WH (BLUE/WHITE)	B/BC (BLEU/BLANC)	AZ/BL (AZUL/BLANCO)
GY/RO (GRAY/RED)	G/R (GRIS/ROUGE)	GR/RO (GRIS/ROJO)

COMPONENT	ENGLISH
A	400W WARMING DRAWER
B	CONVECTION MOTOR
C	LATCH MOTOR
D	OVEN LAMPS
E	WARMING DRAWER SENSOR
F	OVEN SENSOR
G	DOOR SWITCH
H	LATCH LOCK SWITCH
I	BAKE IGNITOR
J	ELECTRIC GAS VALVE
K	BRAIL IGNITOR
L	SPARK MODULE
M	400W CONVECTION ELEMENT

COMPONENT	ANGLAIS
A	400W TIROR CHAUFFE-PLAT
B	MOTEUR DE CONVECTION
C	MOTEUR DE VERROUILLAGE
D	LAMPES DE FOUR
E	CAPTEUR DE TIROR CHAUFFE-PLAT
F	CAPTEUR DE FOUR
G	CONTACTEUR DE PORTE
H	CONTACTEUR DE BLOC-CLAVIER
I	ALLUMEUR DE CUISON
J	ELECTRO-VALVE À GAZ
K	ALLUMEUR DE GRILLAGE
L	MODULE D'ÉCLAIRAGE
M	400W ÉLÉMENT DE CONVECTION

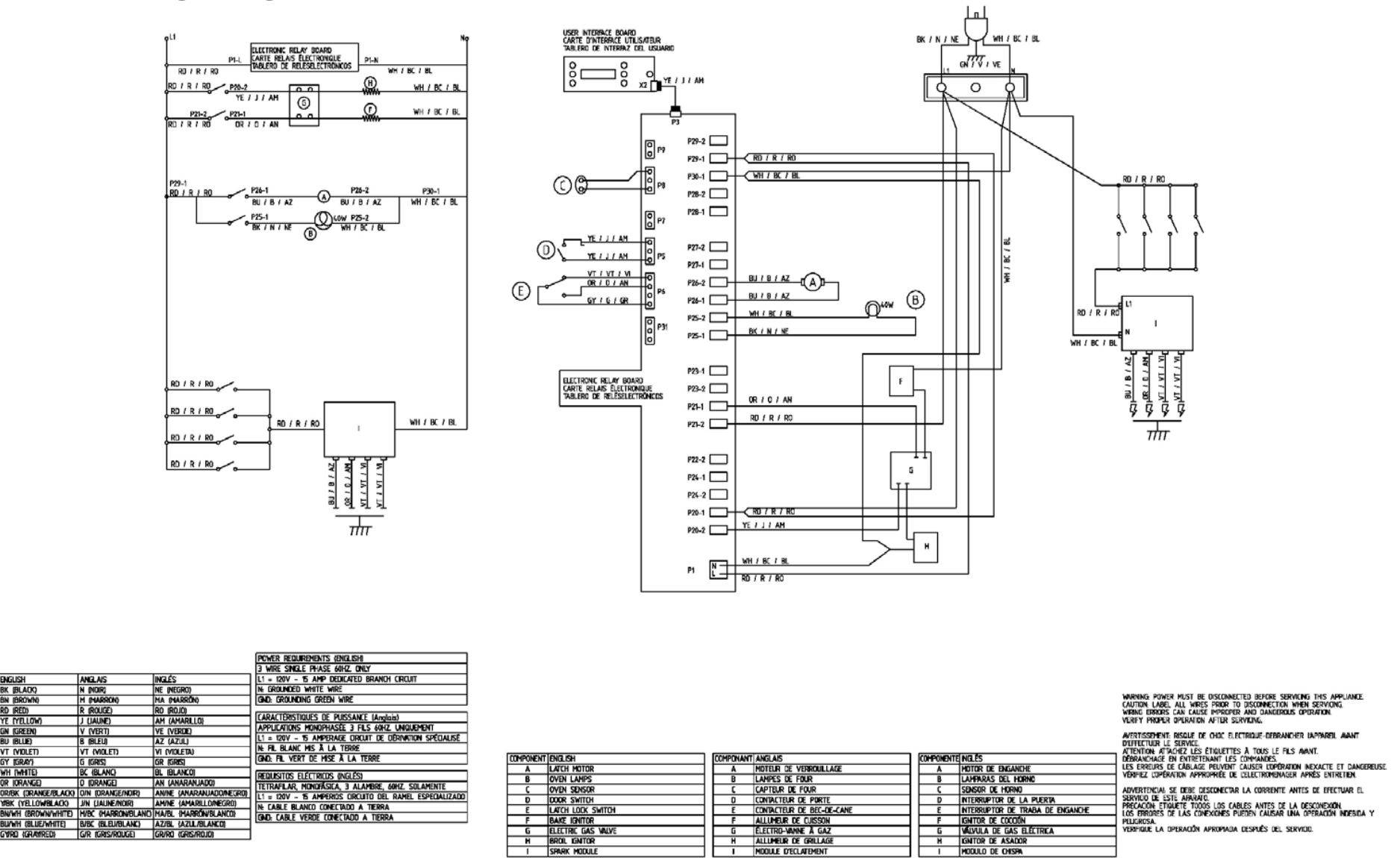
COMPONENTE	INGLÉS
A	400W CAJÓN DE CALENTAMIENTO
B	MOTOR DE CONVECCIÓN
C	MOTOR DE ENGANCHE
D	LAMPARAS DEL HORNO
E	SENSOR DE CAJÓN DE CALENTAMIENTO
F	SENSOR DE HORNO
G	INTERRUPTOR DE LA PUERTA
H	INTERRUPTOR DE TRABAJO DE ENGANCHE
I	IGNITOR DE COCCIÓN
J	VALVULA DE GAS ELÉCTRICA
K	IGNITOR DE ASADOR
L	MÓDULO DE CHISPA
M	400W ELEMENTO DE CONVECCIÓN

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVICING THIS APPLIANCE. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

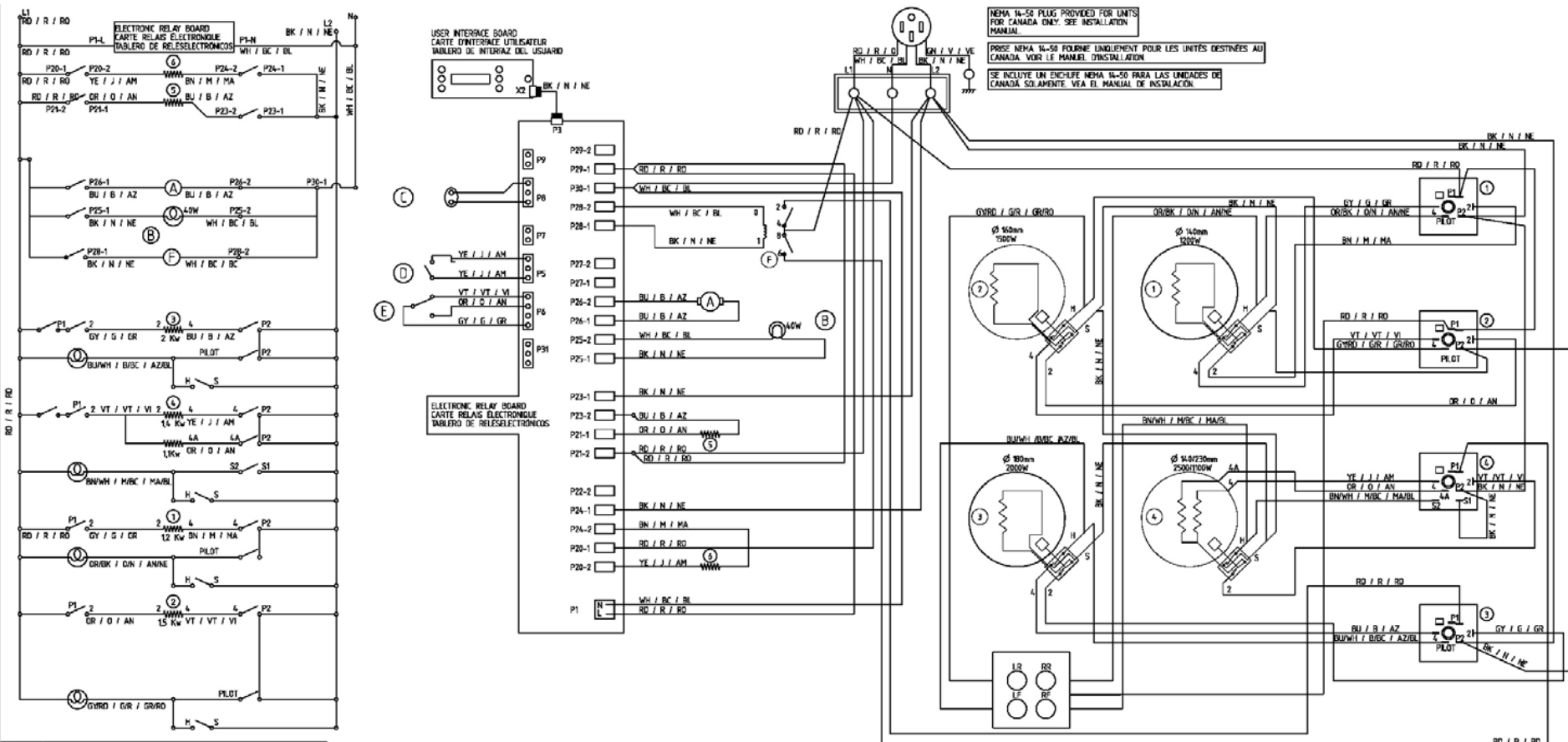
AVERTISSEMENT: RISQUE DE CHOC ÉLECTRIQUE-DEBRANCHER L'APPAREIL AVANT D'EFFECTUER LE SERVICE. ATTENTION: ÉTIQUETER LES ÉTIQUETTES À TOUT LE FILS AVANT DE DÉBRANCHER EN ENTRETIENANT LES COMMANDES. LES ERREURS DE CÂBLAGE PEUVENT CAUSER L'OPÉRATION INEXACTE ET DANGÉREUSE. VÉRIFIER L'OPÉRATION APPROPRIÉE DE L'ÉLECTROMÉNAGER APRÈS ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL SERVICIO DE ESTE APARATO. PRECAUCIÓN: ETIQUETAR TODOS LOS CABLES ANTES DE LA DESCONEXIÓN. LOS ERRORES DE LAS CONEXIONES PUEDEN CAUSAR UNA OPERACIÓN INEXACTA Y PELIGROSA. VERIFIQUE LA OPERACIÓN APROPIADA DESPUÉS DEL SERVICIO.

Wiring Diagram: HGS3052UC



Wiring Diagram: HES3052C



CIRCUIT / CIRCUIT / CIRCUITO		
100 / 240	ENGLISH: REFER TO LOCAL ELECTRICAL CODE FOR 100 OR 240 AMPERES.	ENGLISH: REFER TO LOCAL ELECTRICAL CODE FOR 100 OR 240 AMPERES.
120 / 208	ANGLAIS: VOIR LE CODE ÉLECTRIQUE LOCAL 120 OU 208 AMPÉRAGES.	ANGLAIS: VOIR LE CODE ÉLECTRIQUE LOCAL 120 OU 208 AMPÉRAGES.
	INGLÉS: CONSULTA EL CÓDIGO ELECTRICO LOCAL 120 O 240 AMPERES.	INGLÉS: CONSULTA EL CÓDIGO ELECTRICO LOCAL 120 O 240 AMPERES.
ENGLISH	ANGLAIS	INGLÉS
BK (BLACK)	M (NOIR)	NE (NEGRO)
GN (GREEN)	M (VERD)	MA (VERDOSO)
RD (RED)	R (ROUGE)	RO (ROJO)
YE (YELLOW)	Y (JAUNE)	AM (AMARILLO)
GN (GREEN)	V (VERT)	VE (VERDE)
BU (BLUE)	B (AZUL)	AZ (AZUL)
VT (VIOLET)	V (VIOLET)	VI (VIOLETA)
GY (GRAY)	G (GRIS)	GR (GRIS)
WH (WHITE)	W (BLANC)	BL (BLANCO)
OR (ORANGE)	O (ORANGE)	AN (ANARANJADO)
OR (ORANGE/BLACK)	GN (ORANGE/NOIR)	ANNE (ANARANJADO/NEGRO)
YBK (YELLOW/BLACK)	JN (JAUNE/NOIR)	ANNE (AMARILLO/NEGRO)
BUWH (BLUE/WHITE)	MB (BLEU/BLANC)	MAVL (VERDOSO/BLANCO)
BUWH (BLUE/WHITE)	MB (BLEU/BLANC)	MAVL (VERDOSO/BLANCO)
GY (GRAY/RED)	GR (GRIS/ROUGE)	GRV (GRIS/ROJO)

POWER REQUIREMENTS (ENGLISH)	
L1 - L3: 120/208-240 VOLTS	
N: GROUNDING WHITE WIRE	
GROUNDING GREEN WIRE	
RATING: 208V - 9.8 Kw / 240V - 19Kw	
CARACTÉRISTIQUES DE PUISSANCE (Anglais)	
L1 - L3: 120/208-240 VOLTS	
N: FIL BLANC MIS À LA TERRE	
GROUNDING GREEN WIRE	
NOMINALE: 208V - 9.8 Kw / 240V - 19Kw	
REQUISITOS ELÉCTRICOS (INGLÉS)	
TETRAFILAR, MONOFASICA, 60HZ, SOLAMENTE	
L1 - L3: 120/208-240 VOLTS	
N: CABLE BLANCO CONECTADO A TIERRA	
GROUNDING GREEN WIRE	
CLASIFICACION: 208V - 9.8 Kw / 240V - 19Kw	

ELEMENT (ENGLISH)	
1	RIGHT REAR ELEMENT / SWITCH
2	LEFT REAR ELEMENT / SWITCH
3	LEFT FRONT ELEMENT / SWITCH
4	RIGHT FRONT ELEMENT / SWITCH
5	2.0KW BAKE
6	3000W BROIL
COMPONENT (ENGLISH)	
A	LATCH MOTOR
B	OVEN LAMPS
C	OVEN SENSOR
D	DOOR SWITCH
E	LATCH LOCK SWITCH
F	RELAY

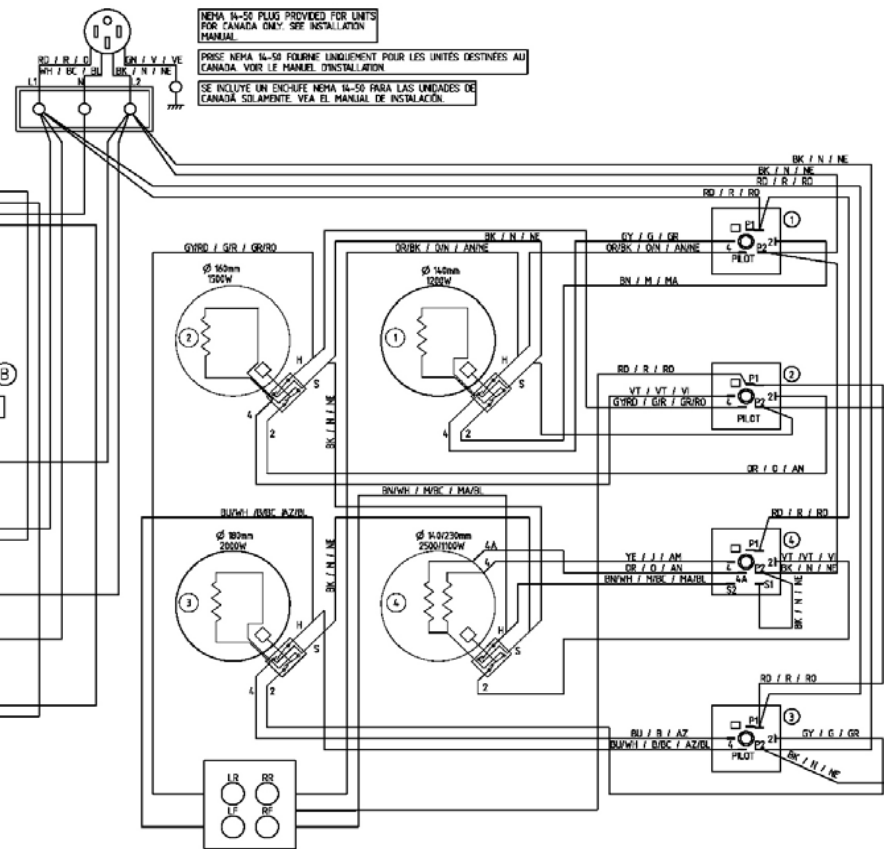
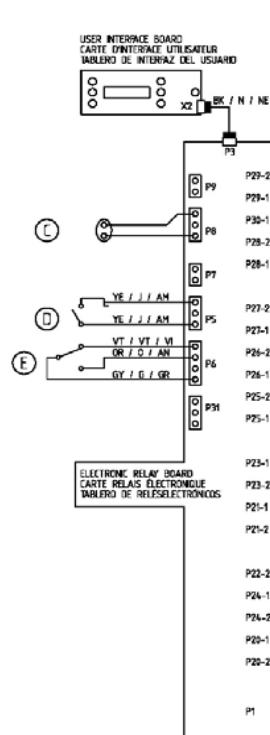
ELEMENT (ANGLAIS)	
1	ELEMENT ARRIERE DROIT / CONTRACTEUR
2	ELEMENT ARRIERE GAUCHE / CONTRACTEUR
3	ELEMENT AVANT GAUCHE / CONTRACTEUR
4	ELEMENT AVANT DROIT / CONTRACTEUR
5	2.0KW DE CUISSON
6	3000W DE GRILLAGE
COMPONENT (ANGLAIS)	
A	MOTEUR DE VERROUILLAGE
B	LAMPES DE FOUR
C	SENSEUR DE FOUR
D	CONTACTEUR DE PORTE
E	CONTACTEUR DE BEC-DE-CANE
F	RELAYS

ELEMENTO (INGLÉS)	
1	ELEMENTO TRASERO DERECHO / INTERRUPTOR
2	ELEMENTO TRASERO IZQUIERDO / INTERRUPTOR
3	ELEMENTO DELANTERO IZQUIERDO / INTERRUPTOR
4	ELEMENTO DELANTERO DERECHO / INTERRUPTOR
5	2.0KW DE COCCION
6	3000W DE ASADOR
COMPONENTE (INGLÉS)	
A	MOTOR DE ENGANCHE
B	LAMPARAS DEL HORNO
C	SENSOR DE HORNO
D	INTERRUPTOR DE LA PUERTA
E	INTERRUPTOR DE TRABAJO DE ENGANCHE
F	RELÉS

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVING THIS APPLIANCE. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

AVERTISSEMENT: RISQUE DE CHOC ELECTRIQUE-DEBRANCHER L'APPAREIL AVANT D'EFFECTUER LE SERVICE. ATTENTION: ETIQUETEZ LES ETIQUETTES A TOUT LE FILS AVANT DEBRANCHER EN ENTRETIENANT LES COMMANDES. LES ERREURS DE CABLEAGE PEUVENT CAUSER L'OPERATION INEXACTE ET DANGEREUSE. VÉRIFIER L'OPERATION APPROPRIÉE DE L'APPAREIL APRÈS ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL SERVICIO DE ESTE APARATO. PRECAUCION: ETIQUETE TODOS LOS CABLES ANTES DE LA DESCONECION. LOS ERRORES DE CABLEADO PUEDEN CAUSAR UNA OPERACION INDEBIDA Y PELIGROSA. VERIFIQUE LA OPERACION APROPIADA DESPUES DEL SERVICIO.

[illegible]

ENGLISH	ANGAIS	INGLES
BEK (BLACK)	NI (INDI)	NE (NEGRO)
BEH (SHADE)	NI (SHADE)	NA (HARSH)
NO (RED)	NI (SHADE)	NO (RED)
Y (YELLOW)	I (LAME)	Y (YELLOW)
GA (GREEN)	V (VERT)	VE (VERDE)
BU (BLUE)	B (BLU)	AZ (AZUL)
VI (VIOLET)	VY (VIOLE)	V (VIOLE)
GY (GRAY)	G (GRIS)	GR (GRIS)
WH (WHITE)	B (BLANC)	BL (BLANC)
OR (ORANGE)	O (ORANGE)	AN (AMARILLO)
OR (ORANGE/BLACK)	OR (ORANGE/INDI)	ANNE (AMARILLO/INDI)
YK (YELLOW/BLACK)	JYR (LAME/INDI)	APYNE (LAME/INDI)
BNWH (BROWN/WHITE)	BNWH (MARSH/INDI)	APYNE (LAME/INDI)
BWNI (BROWN/WHITE)	BNWH (MARSH/INDI)	MAHNI (MARSH/INDI)
BWNI (BLUE/WHITE)	BNW (BLU/INDI)	AZUL (AZUL/INDI)
	GI (INDI)	

CARACTERÍSTICAS DE POTENCIA (Angels)
 APLICACIONES MONOPHASE & FILS 60Hz UNIDIRECTO
 L1 - L2 120/208-240 VOLTS
 N FIL BLANC MIS A LA TERRE
 GND FIL VERT DE MISE A LA TERRE
 NOMINALE: 200V - 9.8 Kw / 240V - 13Kw

REQUISITOS ELÉCTRICOS (INGLES)
 TETRAFILAR, MONOPHASE, 60Hz SOLAMENTE
 L1 - L2 120/208-240 VOLTS
 N CABLE BLANCO CONECTADO A TIERRA
 GND CABLE VERDE CONECTADO A TIERRA
 CLASIFICACION: 200V - 9.8 Kw / 240V - 13Kw

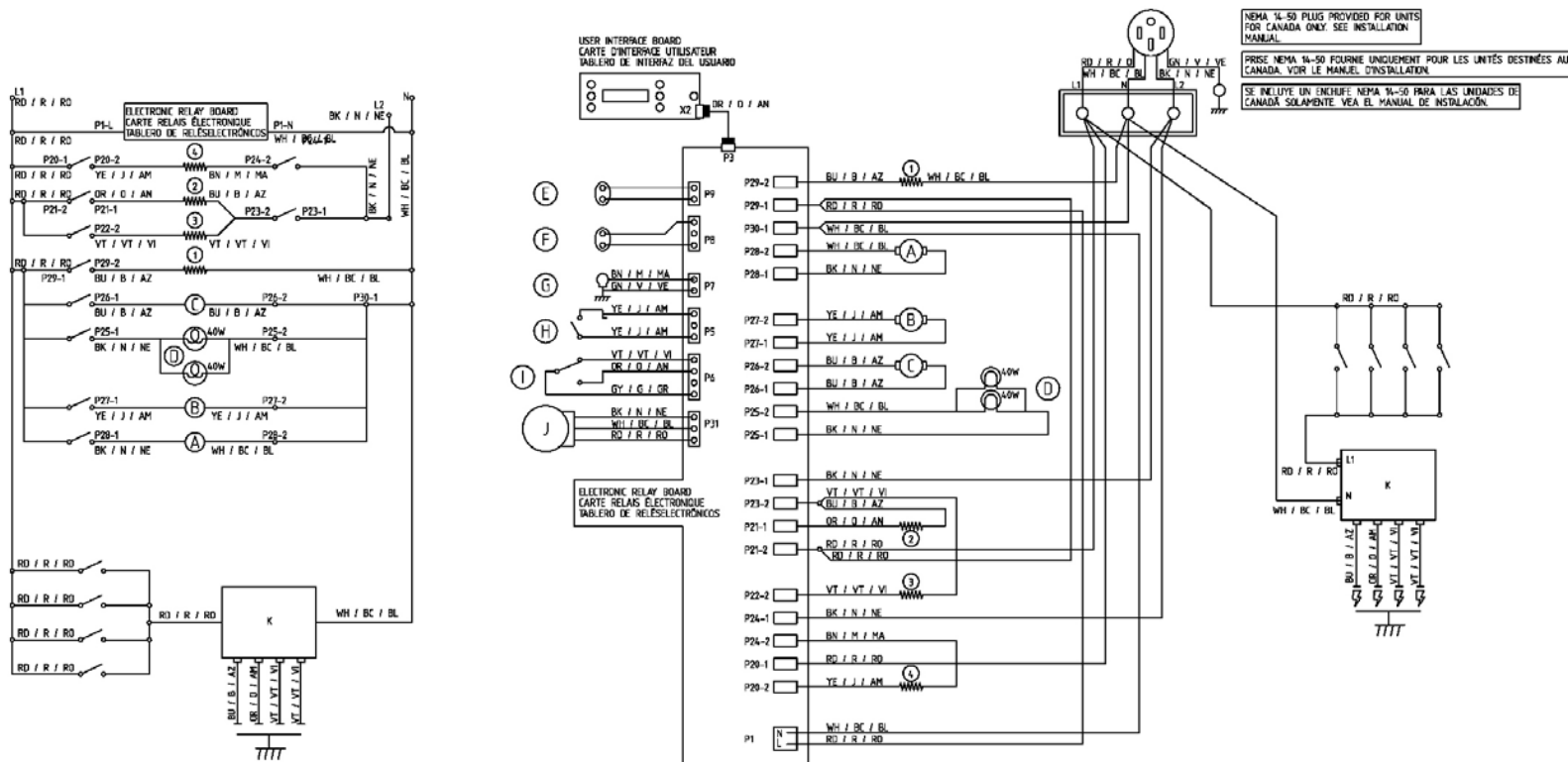
COMPONENT	ENGLISH
A	LATCH MOTOR
B	OVEN LAMPS
C	OVEN SENSOR
D	DOOR SWITCH
E	LATCH LOCK SWITCH

COMPONENT	ANGLAIS
A	MOTEUR DE VERROUILLAGE
B	LAMPES DE FOUR
C	CAPTEUR DE FOUR
D	CONTACTEUR DE PORTE
E	CONTACTEUR DE REC-DE-CANE

COMPONENTE	INGLÉS
A	MOTOR DE ENGANCHE
B	LAMPARAS DEL HORNO
C	SENSOR DE HORNO
D	INTERRUPTOR DE LA PUERTA
E	INTERRUPTOR DE TRABAJO DE ENGANCHE

9000120957	E1	WIRING DIAGRAM
9000120959	E1	WIRING LABEL

Wiring Diagram: HDI7032C/U HDI7052C/U HDI7132C/U HDI7152C/U HDI7282C/U



CIRCUIT / CIRCUIT / CIRCUITO		
ENGLISH	ENGLISH	ENGLISH
FR / 240	ENGLISH: REFER TO LOCAL ELECTRICAL CODE 30 AMPERES	
FR / 200	ANGLAIS: VOIR LE CODE D'ELECTRICITE LOCAL 30 AMPERAGE	
	INGLES: CONSULTA EL CODIGO ELECTRO LOCAL 30 AMPEROS	
ENGLISH	ANGLAIS	INGLES
BR (BLACK)	N (NEUTRAL)	NE (NEUTRO)
BN (BROWN)	M (MARRON)	MA (MARRON)
RD (RED)	R (ROUGE)	RO (ROUGE)
YE (YELLOW)	J (JAUNE)	JM (JAUNE)
GN (GREEN)	V (VERT)	VE (VERT)
BL (BLUE)	B (BLEU)	AZ (AZUL)
VT (VIOLET)	VI (VIOLET)	VI (VIOLETA)
GY (GRAY)	G (GRIS)	GR (GRIS)
WH (WHITE)	BC (BLANC)	BL (BLANCO)
OR (ORANGE)	O (ORANGE)	AN (ANARANJADO)
OR/BK (ORANGE/BLACK)	OR/N (ORANGE/NEUTRAL)	AN/NE (ANARANJADO/NEUTRO)
YB/K (YELLOW/BLACK)	JN (JAUNE/NEUTRAL)	AN/NE (JAUNE/NEUTRO)
BN/WH (BROWN/WHITE)	MB (MARRON/BLANC)	MA/BL (MARRON/BLANCO)
BL/WH (BLUE/WHITE)	B/BC (BLEU/BLANC)	AZ/BL (AZUL/BLANCO)
GY/RO (GRAY/RED)	G/R (GRIS/ROUGE)	GR/RO (GRIS/ROJO)

POWER REQUIREMENTS (ENGLISH)	
L1 WIRE: SINGLE PHASE 400V, 50HZ	
L1 - L2: 120/208-240 VOLTS	
N: GROUNDING WHITE WIRE	
OND: GROUNDING GREEN WIRE	
RATING: 208V - 4.8kW / 240V - 6.2kW	
CARACTERISTIQUES DE PUISSANCE (Anglais)	
APPLICATIONS MONOPHASE 1 FILS 60HZ UNIQUEMENT	
RATING: 208V - 4.8kW / 240V - 6.2kW	
N: FIL BLANC MIS A LA TERRE	
OND: FIL VERT DE MISE A LA TERRE	
NOMINALE: 208V - 4.8kW / 240V - 6.2kW	
REQUISITOS ELECTRICOS (INGLES)	
TETRAFILAR, MONOFASICA, 60-HZ, SOLAMENTE	
L1 - L2: 120/208-240 VOLTS	
N: CABLE BLANCO CONECTADO A TIERRA	
OND: CABLE VERDE CONECTADO A TIERRA	
CLASSIFICATION: 208V - 4.8kW / 240V - 6.2kW	

ELEMENT (ENGLISH)	
1	400W WARNING DRAWER
2	2.0KW BAKE
3	1.1KW CONV.
4	3600W BROS.
COMPONENT (ENGLISH)	
A	COOLING MOTOR
B	CONVECTION MOTOR
C	LATCH MOTOR
D	OVEN LAMPS
E	WARNING DRAWER SENSOR
F	OVEN SENSOR
G	MILAI PROBE SOCKET
H	DOOR SWITCH
I	LATCH LOCK SWITCH
J	HALL EFFECT
K	SPARK MODULE

ELEMENT (ANGLAIS)	
1	400W TIROR CHAUFFE-PLAT
2	2.0KW DE CUISSON
3	1.1KW DE CONVECTION
4	3600W DE GRILLAGE
COMPONENT (ANGLAIS)	
A	MOTEUR DE REFRIGERISSEMENT
B	MOTEUR DE CONVECTION
C	MOTEUR DE VERROUILLAGE
D	LAMPES DE FOUR
E	CAPTEUR DE TIROR CHAUFFE-PLAT
F	CAPTEUR DE FOUR
G	DOUILLE DE SOND. THERMIQUE
H	CONTACTEUR DE PORTE
I	CONTACTEUR DE REC-DE-CANE
J	EFFET HALL
K	MODULE D'ALLUMEMENT

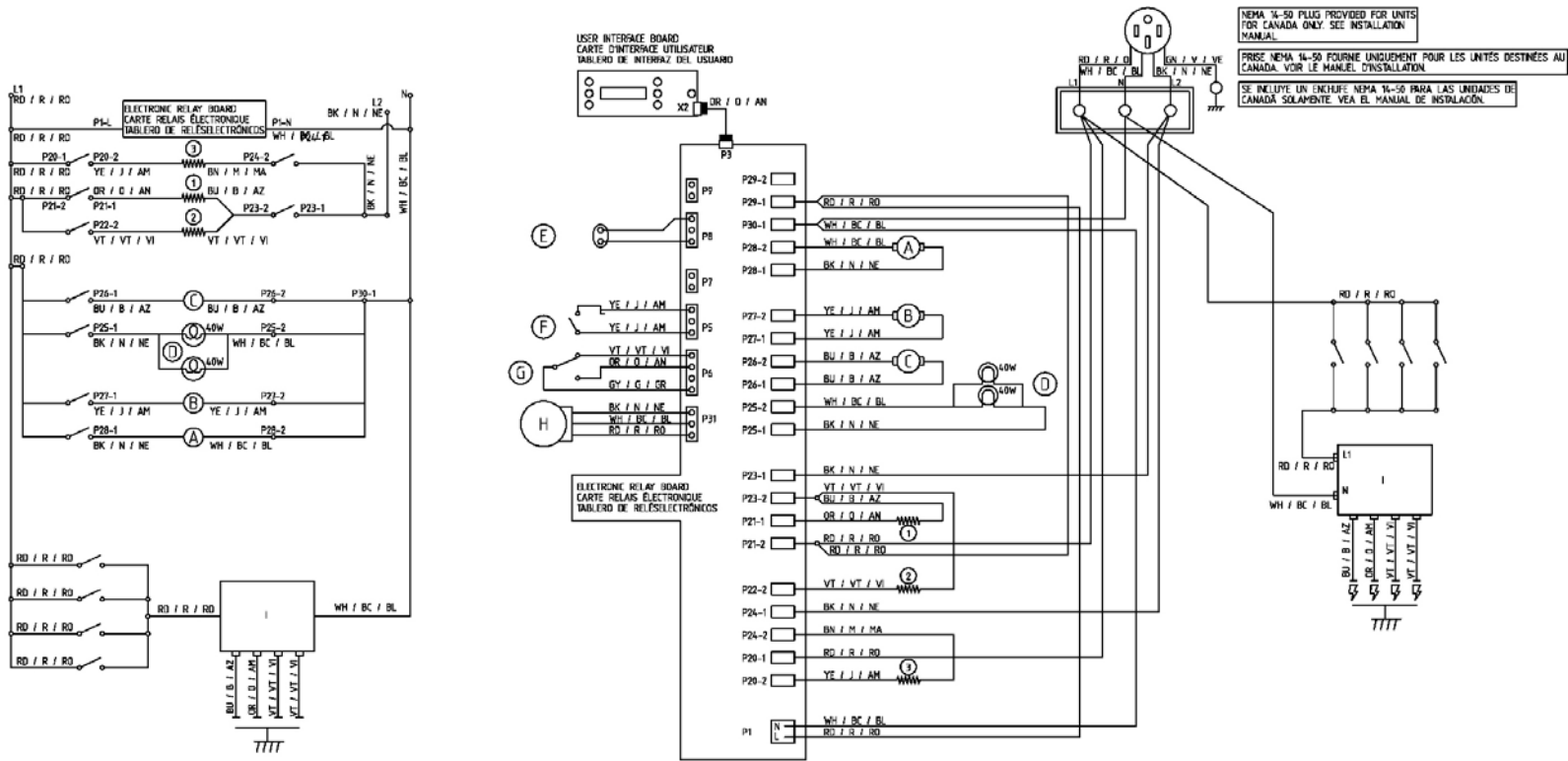
ELEMENT (INGLES)	
1	400W CAJON DE CALENTAMIENTO
2	2.0KW DE COCCION
3	1.1KW DE CONVECCION
4	3600W DE ASADOR
COMPONENTE (INGLES)	
A	MOTOR DE ENFRIAMIENTO
B	MOTOR DE CONVECCION
C	MOTOR DE ENGANCHE
D	LAMPARAS DEL HORNO
E	SENSOR DE CAJON DE CALENTAMIENTO
F	SENSOR DE HORNO
G	RELLAPACALLO DE LA SOND. PARA LA CARNE
H	INTERRUPTOR DE LA PUERTA
I	INTERRUPTOR DE TRABA DE ENGANCHE
J	EFFETO HALL
K	MODULO DE CHISPA

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVING THIS APPLIANCE.
CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVING.
WRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
VERIFY PROPER OPERATION AFTER SERVING.

AVERTISSEMENT: RISQUE DE CHOC ELECTRIQUE-DEBRANCHER D'APRES LE SERVICE.
ATTENTION: ATTACHEZ LES ETIQUETTES A TOUS LES FILS AVANT.
DEBRANCHAGE EN ENTRETIENANT LES COMMANDES.
LES ERREURS DE CABLAGE PEUVENT CAUSER L'OPERATION INEFFECTIVE ET DANGEREUSE.
VERIFIEZ L'OPERATION APPROPRIEE DE L'ELECTROMENAGER APRES ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL
SERVICIO DE ESTE APARATO.
PRECAUCION: ETIQUETE TODOS LOS CABLES ANTES DE LA DESCONEXION.
LOS ERRORES DE LAS CONEXIONES PUEDEN CAUSAR UNA OPERACION INDEBIDA Y
PELIGROSA.
VERIFIQUE LA OPERACION APROPIADA DESPUES DEL SERVICIO.

Wiring Diagram: HDI7032C/U HDI7052C/U HDI7132C/U HDI7152C/U HDI7282C/U



CIRCUIT / CIRCUIT / CIRCUIT		
ENGLISH	ENGLISH	ENGLISH
BLACK (BLACK)	N (NEUTRAL)	NE (NEUTRO)
BROWN (BROWN)	M (MARRON)	MA (MARRON)
RED (RED)	R (ROUGE)	RO (ROUGE)
YELLOW (YELLOW)	Y (JAUNE)	AM (AMARILLO)
GREEN (GREEN)	V (VERT)	VE (VERDE)
BLUE (BLUE)	B (BLEU)	AZ (AZUL)
VIOLET (VIOLET)	VT (VIOLET)	VI (VIOLETA)
GRAY (GRAY)	G (GRIS)	GR (GRIS)
WHITE (WHITE)	W (BLANC)	BL (BLANCO)
ORANGE (ORANGE)	O (ORANGE)	AN (ANARANJADO)
DRINK (DRINK/BLACK)	DN (DRANGE/NOIR)	ANNE (AMARANJADO/NEGRO)
YBK (YELLOW/BLACK)	JN (JAUNE/NOIR)	ANNE (AMARILLO/NEGRO)
BNWH (BROWN/WHITE)	MBK (MARRON/BLANC)	MA/BL (MARRON/BLANCO)
BLWH (BLUE/WHITE)	MBK (BLEU/BLANC)	AZ/BL (AZUL/BLANCO)
GRND (GREEN/RED)	GR (GRS/ROUGE)	GRRO (GRS/ROJO)

POWER REQUIREMENTS (ENGLISH)	
4 WIRE SINGLE PHASE 60HZ ONLY	
L1 - L2: 120/208-240 VOLTS	
N: GROUND WHITE WIRE	
GROUND: GREEN WIRE	
RATING: 208V - 4.8kW / 240V - 6.2kW	
CARACTERISTIQUES DE PUISSANCE (Anglais)	
APPLICATIONS MONOPHASE 4 FLS 60HZ UNIPOLAR	
RATING 208V - 4.8kW / 240V - 6.2kW	
N: FIL BLANC VS A LA TERRE	
OND: FIL VERT DE MISE A LA TERRE	
NOMINALE: 208V - 4.8kW / 240V - 6.2kW	
REQUISITOS ELECTRICOS (INGLES)	
TETRAFILAR, MONOFASE, 60HZ, SOLAMENTE	
L1 - L2: 120/208-240 VOLTS	
N: CABLE BLANCO CONECTADO A TIERRA	
OND: CABLE VERDE CONECTADO A TIERRA	
CLASIFICACION: 208V - 4.8kW / 240V - 6.2kW	

ELEMENT (ENGLISH)	
1	208V BASE
2	19KW CONVECTION
3	3600W BROIL

COMPONENT (ENGLISH)	
A	COOLING MOTOR
B	CONVECTION MOTOR
C	LATCH MOTOR
D	OVEN LAMPS
E	OVEN SENSOR
F	DOOR SWITCH
G	LATCH LOCK SWITCH
H	HALL EFFECT
I	SPARK MODULE

ELEMENT (ANGLAIS)	
1	208V DE CUISSON
2	19KW DE CONVECTION
3	3600W DE GRILLAGE

COMPONENT (ANGLAIS)	
A	MOTEUR DE ENFROIDISSEMENT
B	MOTEUR DE CONVECTION
C	MOTEUR DE VERROUILLAGE
D	LAMPES DE FOUR
E	CAPTEUR DE FOUR
F	CONTACTEUR DE PORTE
G	CONTACTEUR DE BUC-DE-CANE
H	EFFECT HALL
I	MODULE DE CLAPPEMENT

ELEMENTO (INGLES)	
1	208V DE COCCION
2	19KW DE CONVECCION
3	3600W DE ASADOR

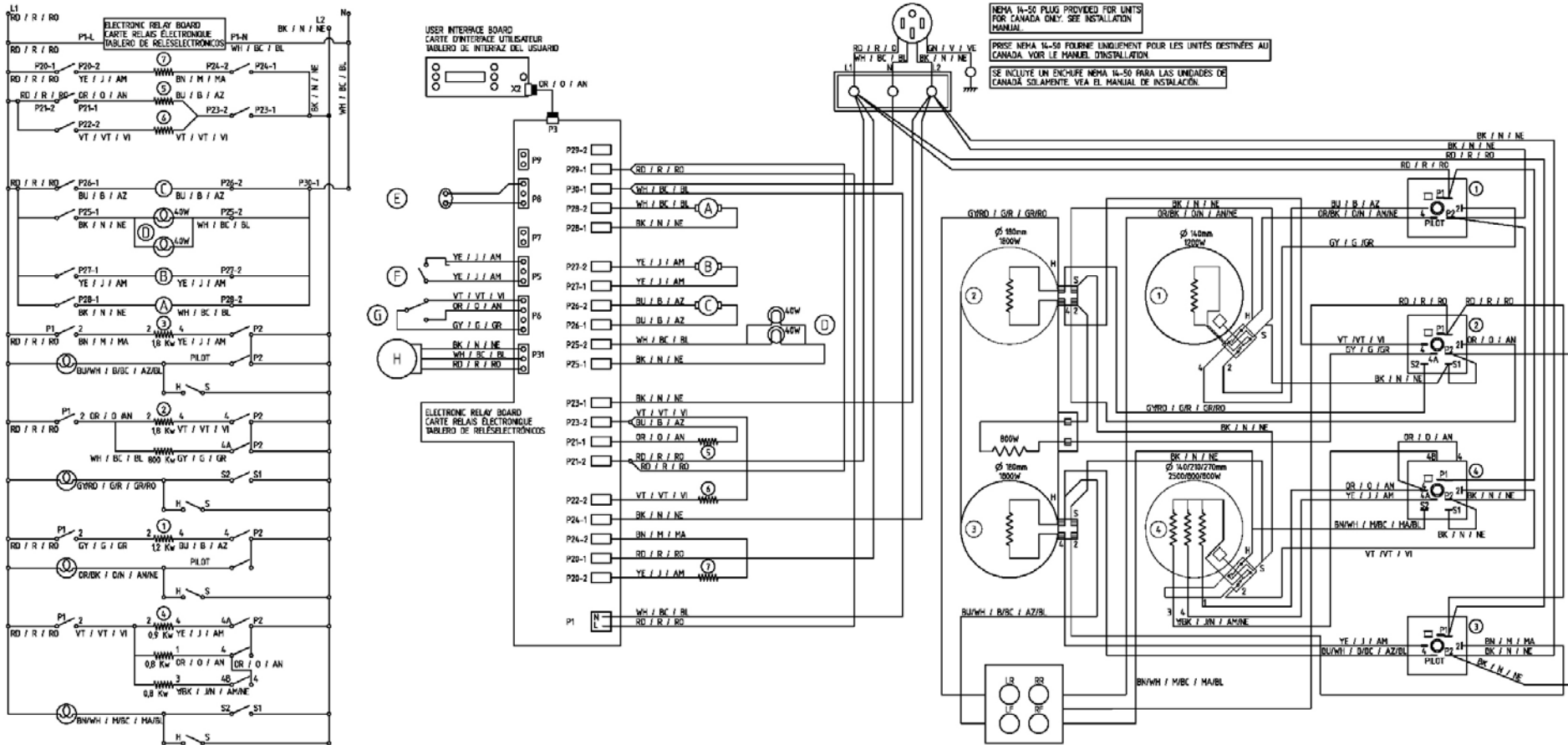
COMPONENTE (INGLES)	
A	MOTOR DE ENFRIAMIENTO
B	MOTOR DE CONVECCION
C	MOTOR DE ENGANCHE
D	LAMPARAS DEL HORNO
E	SENSOR DE HORNO
F	INTERRUPTOR DE LA PUERTA
G	INTERRUPTOR DE TRABA DE ENGANCHE
H	EFFECTO HALL
I	MODULO DE CHSPA

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVING THIS APPLIANCE. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVING. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

AVERTISSEMENT: RISQUE DE CHOC ELECTRIQUE-DEBRANCHER L'APPAREIL AVANT D'EFFECTUER LE SERVICE. ATTENTION: ATTACHEZ LES ETIQUETTES A TOUS LE FILS AVANT DEBRANCHAGE EN ENTRETIEN. LES ERREURS DE CABLEAGE PEUVENT CAUSER L'OPERATION INEXACTE ET DANGEREUSE. VERIFIEZ L'OPERATION APPROPRIEE DE L'ELECTROAPPAREIL APRES ENTRETIEN.

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Wiring Diagram: HEI7032C/U HEI7052C/U



VOLTS VOLTS VOLTS			CIRCUIT / CIRCUIT / CIRCUITO		
ENGLISH REFER TO LOCAL ELECTRICAL CODE 48 OR 50 AMPERES			ENGLISH REFER TO LOCAL ELECTRICAL CODE 48 OR 50 AMPERES		
ANGLAIS VOIR LE CODE ELECTRIQUE LOCAL 48 OU 50 AMPERES			ANGLAIS VOIR LE CODE ELECTRIQUE LOCAL 48 OU 50 AMPERES		
INGLES CONSULTE EL CODIGO ELECTICO LOCAL 48 O 50 AMPERES			INGLES CONSULTE EL CODIGO ELECTICO LOCAL 48 O 50 AMPERES		
ENGLISH	ANGLAIS	INGLES	ENGLISH	ANGLAIS	INGLES
BK (BLACK)	N (NOIR)	NE (NEGRO)	BN (BROWN)	MA (MARRON)	MA (MARRON)
BR (BROWN)	N (NOIR)	MA (MARRON)	BR (BROWN)	MA (MARRON)	MA (MARRON)
GR (GREEN)	J (JAUNE)	AM (AMARILLO)	GR (GREEN)	V (VERT)	VE (VERDE)
GY (GRAY)	Y (VIOLET)	AZ (AZUL)	GY (GRAY)	Y (VIOLET)	AZ (AZUL)
WH (WHITE)	BU (BLANC)	BL (BLANCO)	WH (WHITE)	BU (BLANC)	BL (BLANCO)
OR (ORANGE)	OR (ORANGE)	AN (ANARANJADO)	OR (ORANGE)	OR (ORANGE)	AN (ANARANJADO)
GRK (ORANGE/BLACK)	GRK (ORANGE/BLACK)	ANNE (ANARANJADO/NEGRO)	GRK (ORANGE/BLACK)	GRK (ORANGE/BLACK)	ANNE (ANARANJADO/NEGRO)
YBK (YELLOW/BLACK)	JN (JAUNE/NOIR)	ANNE (ANARANJADO/NEGRO)	YBK (YELLOW/BLACK)	JN (JAUNE/NOIR)	ANNE (ANARANJADO/NEGRO)
BNWH (BROWN/WHITE)	MBK (MARRON/BLANC)	MAVL (MARRON/BLANCO)	BNWH (BROWN/WHITE)	MBK (MARRON/BLANC)	MAVL (MARRON/BLANCO)
BLWH (BLUE/WHITE)	BLK (BLEU/BLANC)	AZBL (AZUL/BLANCO)	BLWH (BLUE/WHITE)	BLK (BLEU/BLANC)	AZBL (AZUL/BLANCO)
GYRD (GRAY/RED)	GR (GRIS/ROUGE)	GRRO (GRIS/ROJO)	GYRD (GRAY/RED)	GR (GRIS/ROUGE)	GRRO (GRIS/ROJO)

POWER REQUIREMENTS (ENGLISH)	
4 WIRE SINGLE PHASE 60HZ ONLY	
L1 - L2 100/208-240 VOLTS	
N GROUNDING WHITE WIRE	
GND GROUNDING GREEN WIRE	
RATING: 208V - 10.6kW / 240V - 13.8kW	
CARACTERISTIQUES DE PUISSANCE (Anglais)	
APPLICATIONS MONOPHASE 4 FILS 60HZ UNIQUEMENT	
L1 - L2 100/208-240 VOLTS	
N FIL BLANC MIS A LA TERRE	
GND FIL VERT DE MISE A LA TERRE	
NOMINALE 208V - 10.6kW / 240V - 13.8kW	
REQUISITOS ELECTRICOS (INGLES)	
TETRAFILAR, MONOFASICA, 60HZ SOLAMENTE	
L1 - L2 100/208-240 VOLTS	
N CABLE BLANCO CONECTADO A TIERRA	
GND CABLE VERDE CONECTADO A TIERRA	
CLASIFICACION 208V - 10.6kW / 240V - 13.8kW	

ELEMENT (ENGLISH)	
1	RIGHT REAR ELEMENT / SWITCH
2	LEFT REAR ELEMENT / SWITCH
3	LEFT FRONT ELEMENT / SWITCH
4	RIGHT FRONT ELEMENT / SWITCH
5	2.0KW BAKE
6	1.9KW CONV
7	3600W BROIL
COMPONENT (ENGLISH)	
A	COOLING MOTOR
B	CONVECTION MOTOR
C	LOCK MOTOR
D	OVEN LAMPS
E	OVEN SENSOR
F	DOOR SWITCH
G	LATCH LOCK SWITCH
H	HALL EFFECT

ELEMENT (ANGAIS)	
1	ELEMENT ARRIERE DROIT / CONTRACTEUR
2	ELEMENT ARRIERE GAUCHE / CONTRACTEUR
3	ELEMENT AVANT GAUCHE / CONTRACTEUR
4	ELEMENT AVANT DROIT / CONTRACTEUR
5	2.0KW DE CUISSON
6	1.9KW DE CONVECTION
7	3600W DE GRILLAGE
COMPONENT (ANGAIS)	
A	MOTEUR DE REFRIGERESSENT
B	MOTEUR DE CONVECTION
C	MOTEUR DE VERROUILLAGE
D	LAMPES DE FOUR
E	SENSEUR DE FOUR
F	CONTACTEUR DE PORTE
G	CONTACTEUR DE DE-CL-CAINE
H	EFFET HALL

ELEMENT (INGLES)	
1	ELEMENTO TRASERO DERECHO / INTERRUPTOR
2	ELEMENTO TRASERO IZQUIERDO / INTERRUPTOR
3	ELEMENTO DELANTERO IZQUIERDO / INTERRUPTOR
4	ELEMENTO DELANTERO DERECHO / INTERRUPTOR
5	2.0KW DE COCCION
6	1.9KW DE CONVECCION
7	3600W DE ASADOR
COMPONENT (INGLES)	
A	MOTOR DE ENFRIAMIENTO
B	MOTOR DE CONVECCION
C	MOTOR DE ENGANCHE
D	LAMPARAS DEL HORNO
E	SENSOR DE HORNO
F	INTERRUPTOR DE LA PUERTA
G	INTERRUPTOR DE TRABAJO DE ENGANCHE
H	EFFECTO HALL

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVICING THIS APPLIANCE.
CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING.
WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
VERIFY PROPER OPERATION AFTER SERVICING.

AVERTISSEMENT: RISQUE DE CHOC ELECTRIQUE-DEBRANCHER L'APPAREIL AVANT D'EFFECTUER LE SERVICE.
ATTENTION: ETIQUETER TOUTES LES CABLES AVANT DE LA DISCONNECTION.
LES ERREURS DE CABLEAGE PEUVENT CAUSER L'OPERATION INEXACTE ET DANGEREUSE.
VERIFIER L'OPERATION APPROPRIEE DE L'APPAREIL APRES ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL SERVICIO DE ESTE APARATO.
PRELACION ETIQUETE TODOS LOS CABLES ANTES DE LA DISCONEXION.
LOS ERRORES DE LAS CONEXIONES PUEDEN CAUSAR UNA OPERACION INDEBIDA Y PELIGROSA.
VERIFIQUE LA OPERACION APROPIADA DESPUES DEL SERVICIO.

WARNING: POWER MUST BE DISCONNECTED BEFORE SERVICING THIS APPLIANCE.
CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING.
WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
VERIFY PROPER WIRING AFTER SERVICING.

AVERTISSEMENT: RISQUE DE CHOC ELECTRIQUE-DERANCHER L'APPAREIL AVANT
D'ETRECTION LE SERVICE.

ATTENTION: MARQUER LES ETIQUETTES A TOUS LE FILS AVANT
DERANCHER LE DISPOSITIF.

LES ERREURS DE CÂBLE PEUVENT CAUSER L'OPERATION INEXACTE ET DANGEREUSE.
VERIFIER L'OPERATION APPROPRIEE D'COLLECTE/EMPIREMENT APRES ENTRETIEN.

ADVERTENCIA: SE DEBE DESCONECTAR LA CORRIENTE ANTES DE EFECTUAR EL
SERVICIO DE ESTE APAREJO.

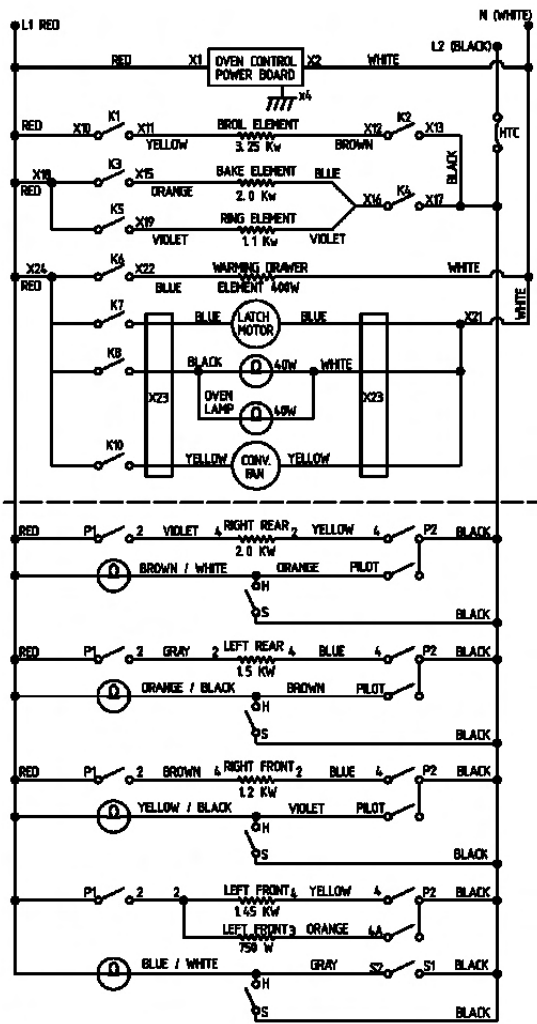
PRECAUCION: ETIQUETAR TODOS LOS CABLES ANTES DE LA DESCONEXION.
LOS ERRORES DE LAS CONEXIONES PUEDEN CAUSAR UNA OPERACION INDEBIDA Y
PERIGROSA.

VERIFICAR LA OPERACION APROPIADA DESPUES DEL SERVICIO.

[illegible]

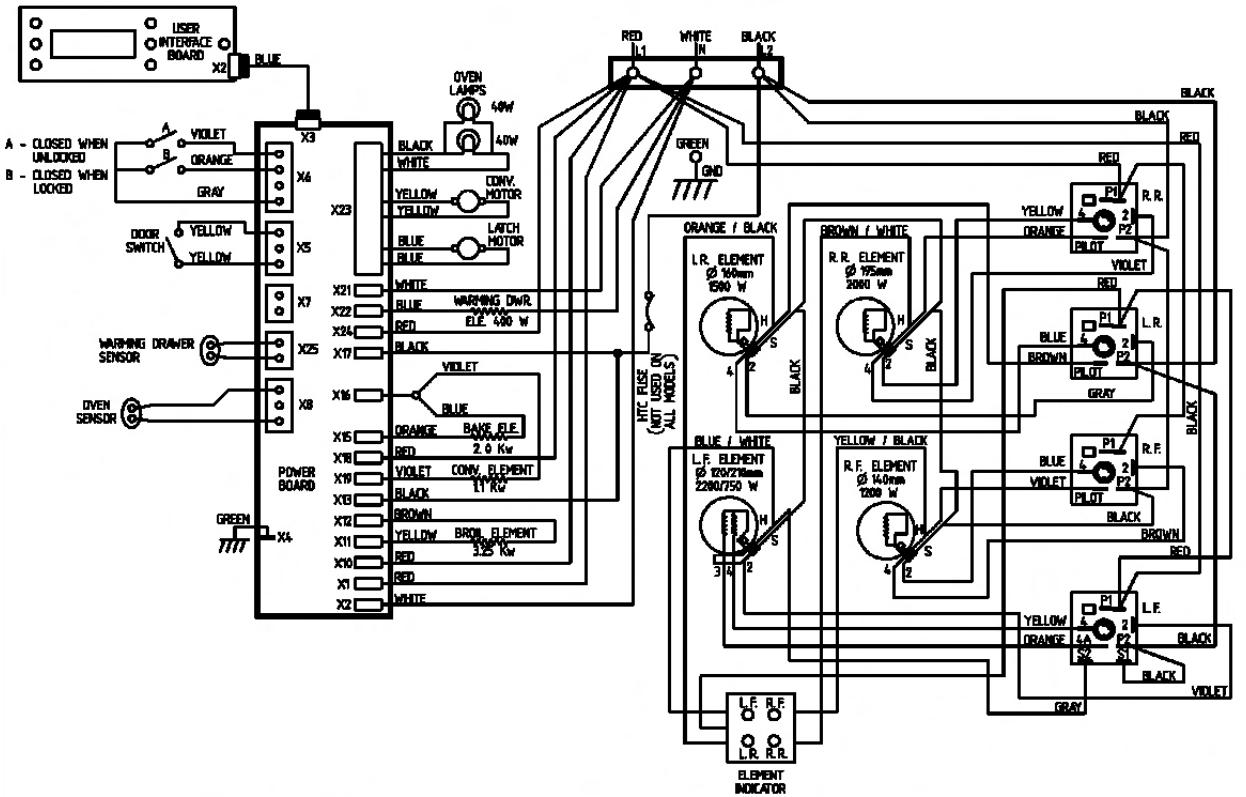
COMPONENTE	INGLÉS
(A)	MOTOR DE CONVECCIÓN
(B)	MOTOR DE ENGANCHE
(C)	LAMPARAS DEL HORNO
(D)	SENSOR DE CAJÓN DE CALENTAMIENTO
(E)	SENSOR DE HORNO
(F)	RECEPTÁCULO DE LA Sonda PARA LA CARNE
(G)	INTERRUPTOR DE LA PUERTA
(H)	NA
(I)	MÓDULO DE CHISPA

Wiring Diagram: HES342 HES345 HES346



ELECTRICAL SCHEMATIC - MODEL # HES34-U
WARNING
POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE

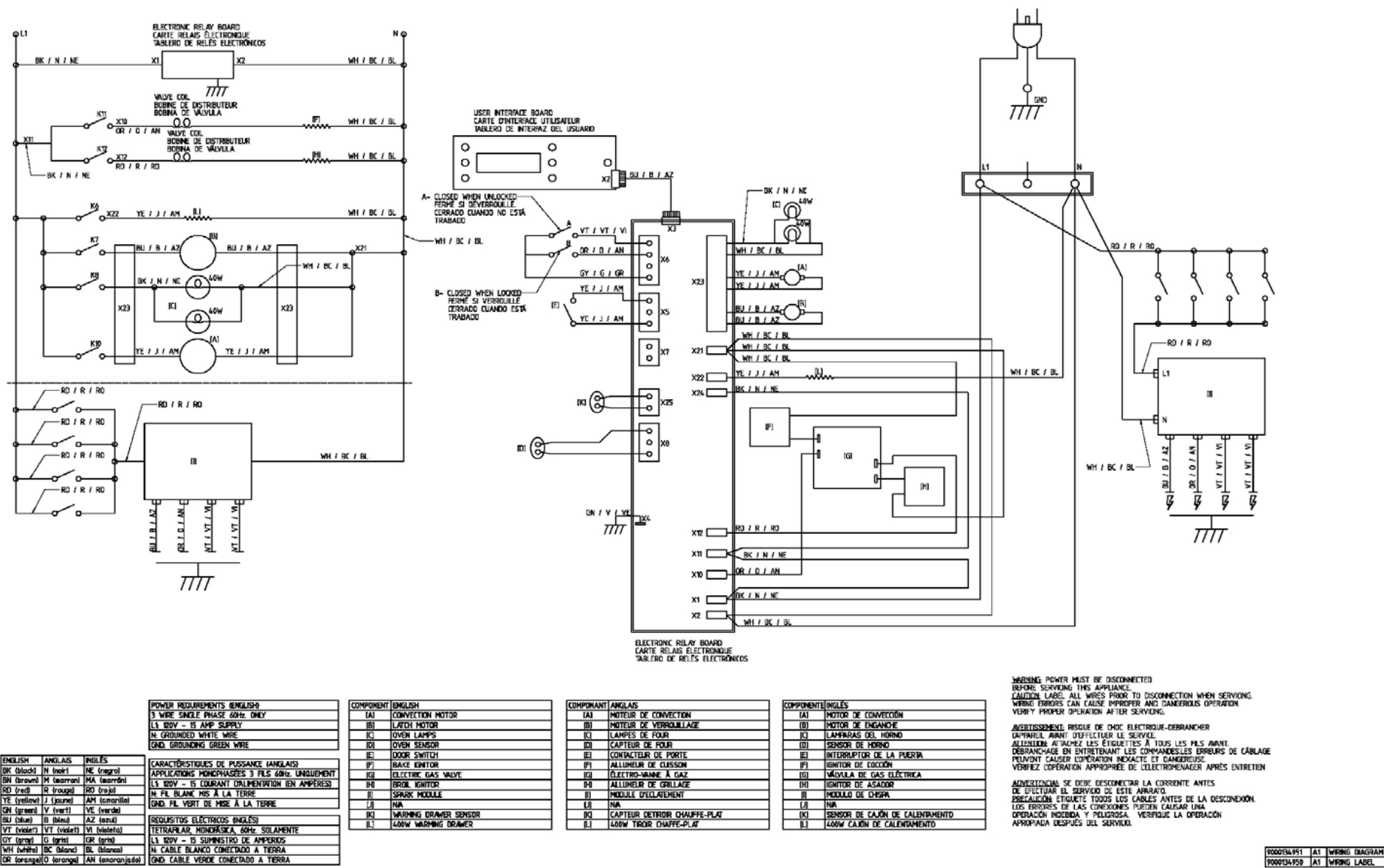
*** USE COPPER OR ALUMINUM CONDUCTORS WHEN ***
*** MAKING CONNECTION FOR FIELD WIRING ***
SEE INSTALLATION MANUAL FOR FURTHER INSTRUCTIONS



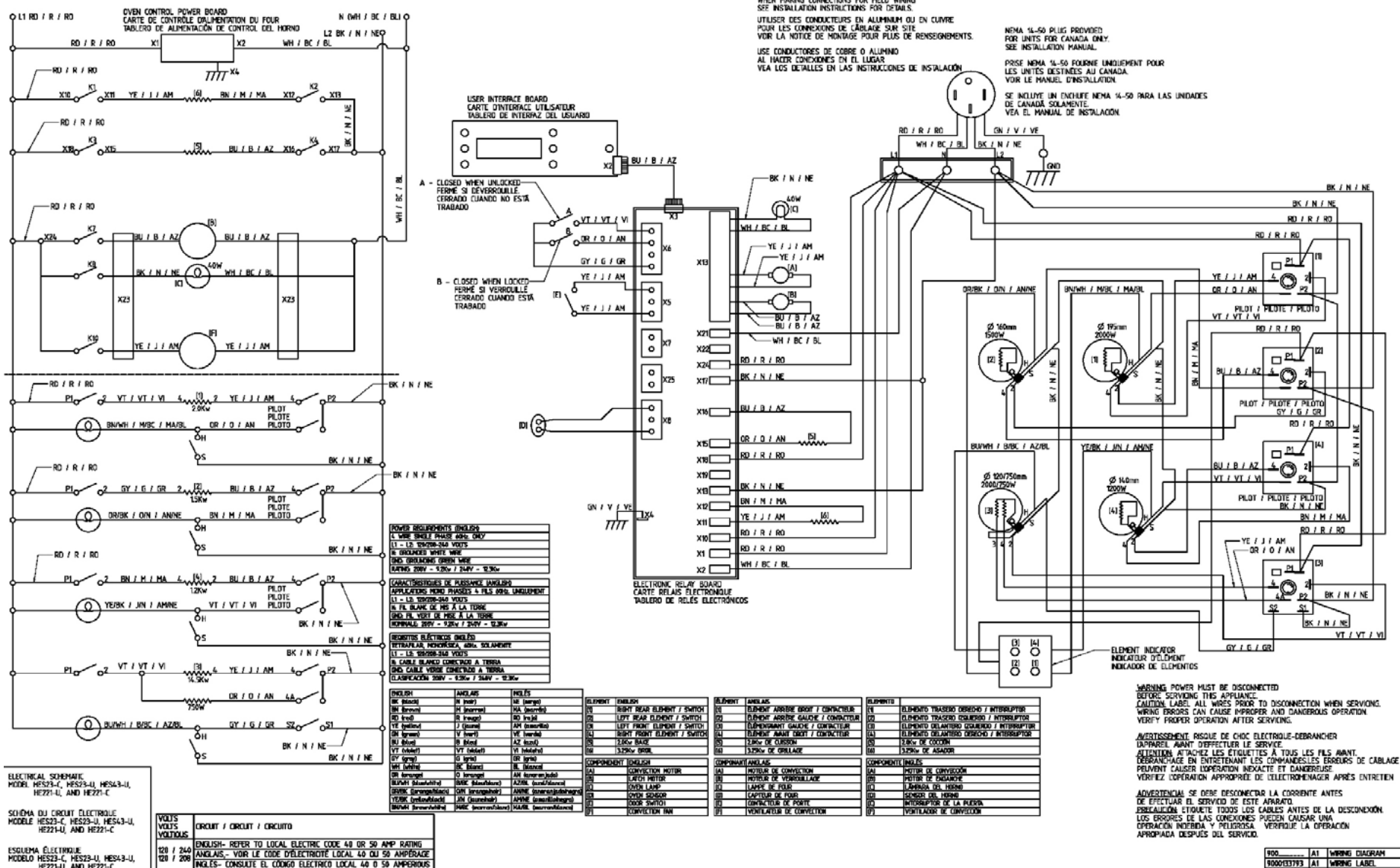
VOLTS	Hz	RATING kW	CIRCUIT
120/240	60	12.3	REFER TO LOCAL ELECTRIC CODE 40 OR 50 AMPS
120/208	60	9.2	

MODEL # HES34-U
POWER REQUIREMENT
4 WIRE, SINGLE PHASE 60 Hz ONLY
L1-L2: 120/208-240 VOLTS
N: GROUND WHITE WIRE
GND: GROUNDING GREEN WIRE

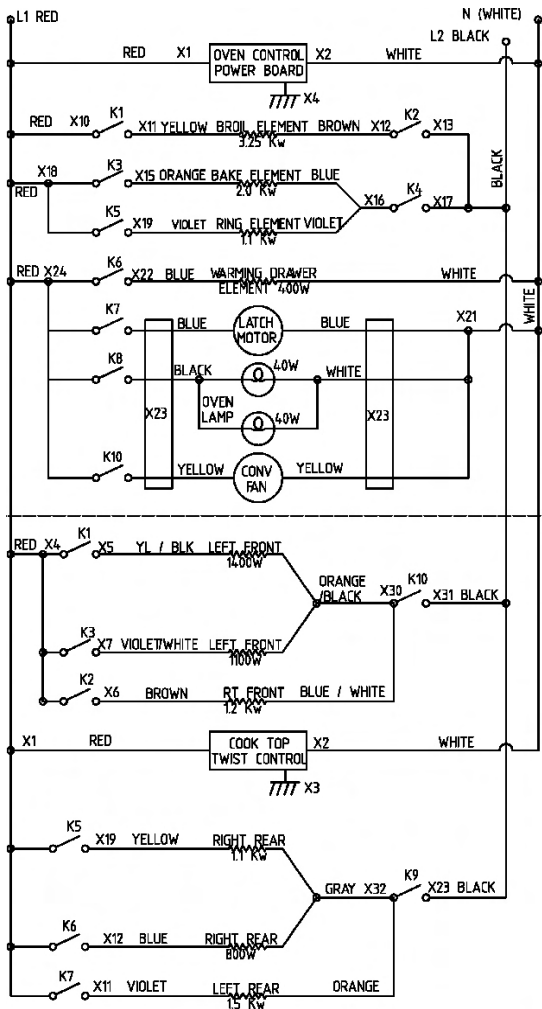
Wiring Diagram: HG2415UC HG2416UC HGS232UC HGS235UC HGS236UC HGS342UC HGS242UC HGS245UC HGS246UC HGS247UC HGS252UC HGS255UC HGS256UC HGS345UC HGS346UC HGS442UC HGS445UC HGS446UC



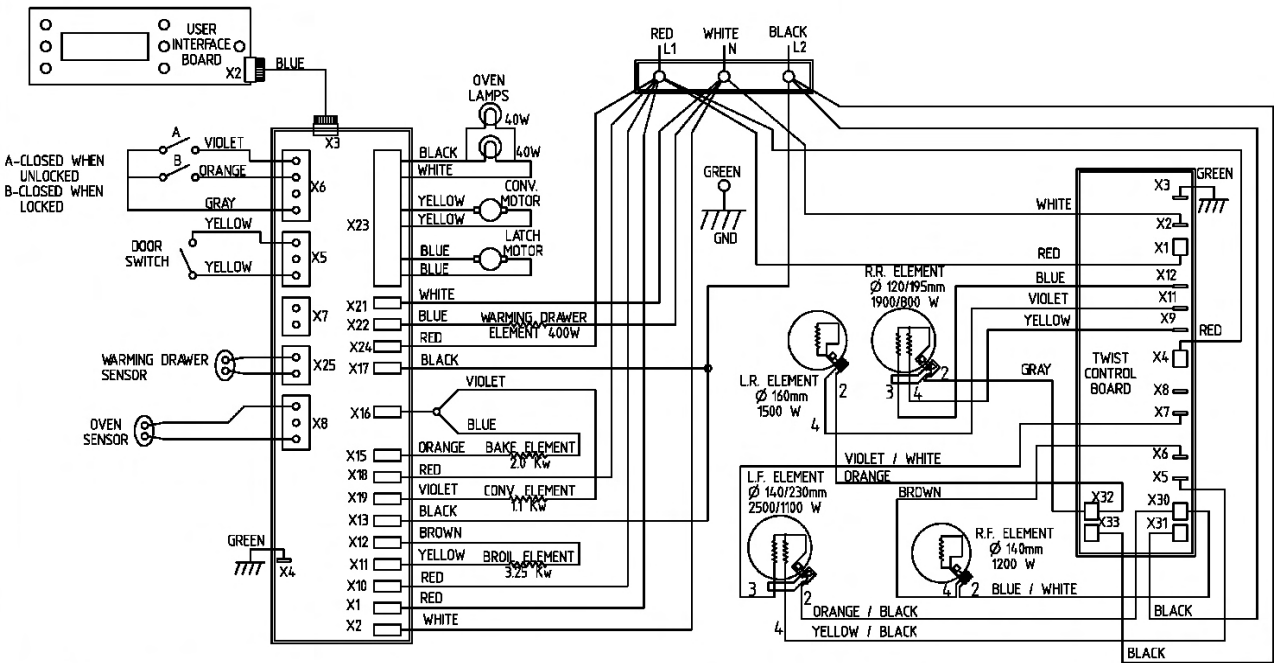
Wiring Diagram: HE2212U HE2215C/U HE2216C/U HES232C/U HES235C/U HES236C/U HES432C/U HES435C/U HES436C/U



Wiring Diagram: HE2415U HE2416U HES242U HES245U HES246U HES442U HES445U HES446U



*** USE COPPER OR ALUMINUM CONDUCTORS WHEN ***
*** MAKING CONNECTION FOR FIELD WIRING ***
SEE INSTALLATION MANUAL FOR FURTHER INSTRUCTIONS



WARNING
POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE

AVERTISSEMENT :
RISQUE DE CHOC ÉLECTRIQUE-DÉBRANCHER
L'APPAREIL AVANT D'EFFECTUER LE SERVICE.

ELECTRICAL SCHEMATIC - MODEL HES24-U
HE241-U
HES44-U

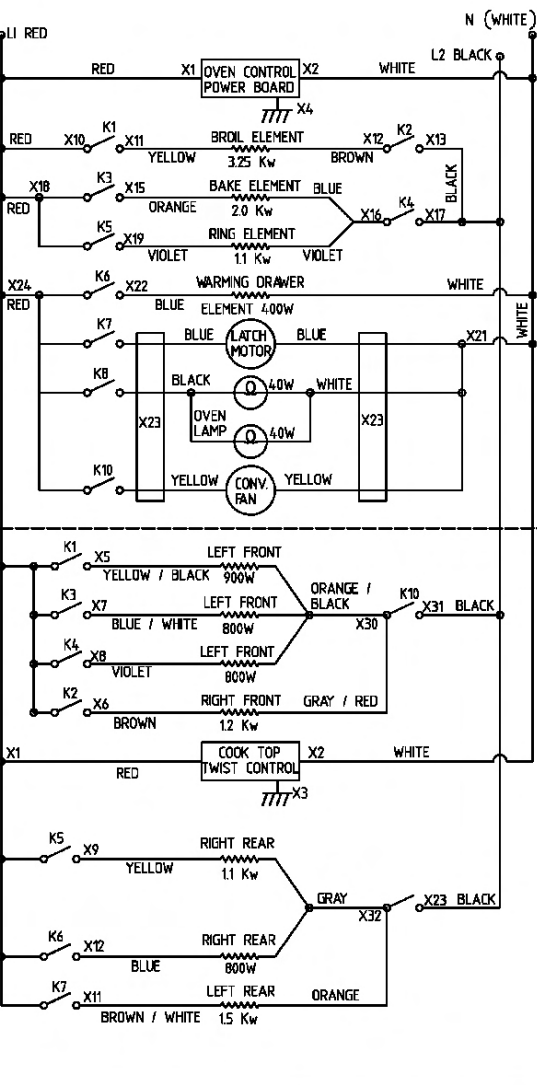
VOLTS	Hz	RATING	kW	CIRCUIT
120 / 240	60	12.6		REFER TO LOCAL ELECTRICAL CODES; 40 or 50 AMPS
120 / 208	60	9.5		REFER TO LOCAL ELECTRICAL CODES; 40 or 50 AMPS

MATERIAL No.	APPLICATION	REV. LEVEL
9000040757	WHITE BOND PAPER	B
9000045703	ADHESIVE BACK LABEL	A

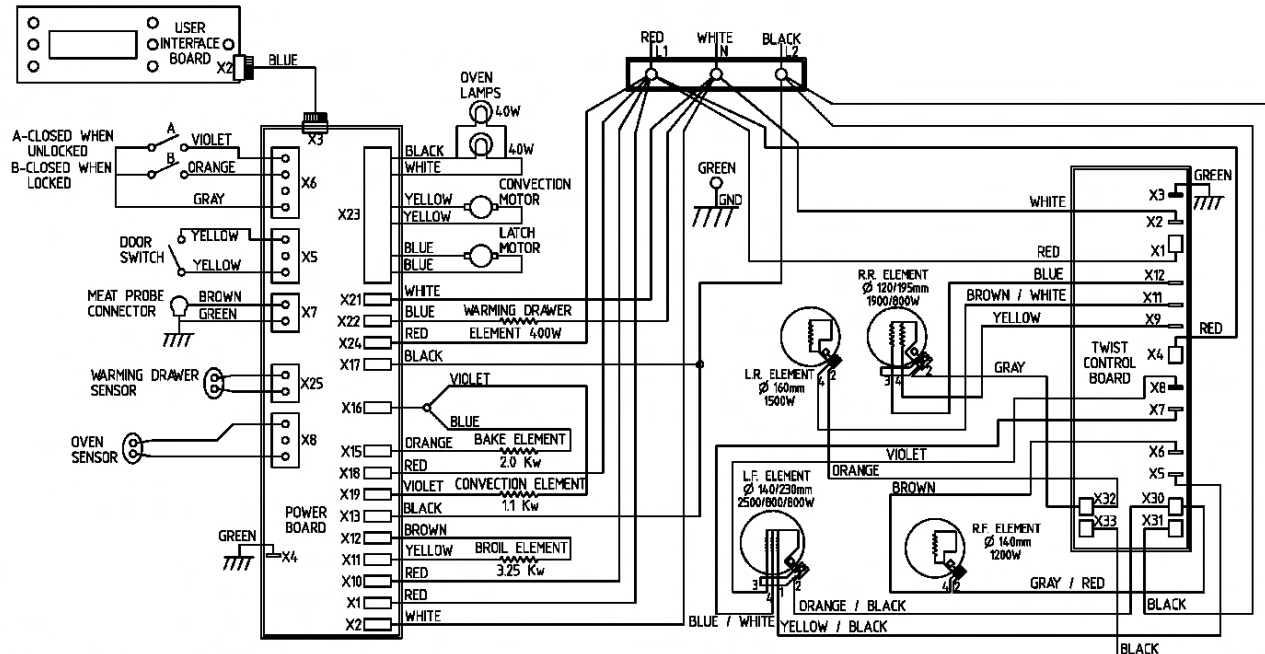
MODEL * HES24-U, HES44-U & HE241-U
POWER REQUIREMENT
4 WIRE, SINGLE PHASE 60 Hz ONLY
L1-L2: 120/208-240 VOLTS
N: GROUNDED WHITE WIRE
GND: GROUNDING GREEN WIRE

Wiring Diagram: HES252U HES255U HES256U

*** USE COPPER OR ALUMINUM CONDUCTORS WHEN ***
*** MAKING CONNECTION FOR FIELD WIRING ***
SEE INSTALLATION MANUAL FOR FURTHER INSTRUCTIONS



ELECTRICAL SCHEMATIC - MODEL # HES25-U
HE251-U



WARNING
POWER MUST BE DISCONNECTED
BEFORE SERVICING THIS APPLIANCE
AVERTISSEMENT :
RISQUE DE CHOC ÉLECTRIQUE-DÉBRANCHER
L'APPAREIL AVANT D'EFFECTUER LE SERVICE.

VOLTS	Hz	RATING kW	CIRCUIT
120 / 240	60	12.6	REFER TO LOCAL ELECTRIC CODE; 40 or 50 AMPS
120 / 208	60	9.5	

MODEL # HES25-U
HE251-U
POWER REQUIREMENT
4 WIRE SINGLE PHASE 60 Hz ONLY
L1-L2: 120/208-240 VOLTS
N: GROUNDED WHITE WIRE
GND: GROUNDING GREEN WIRE

RANGE TROUBLESHOOTING/SERVICE TIPS
Electric Maintop

SYMPTON	PROBLEM	SOLUTION
Panel lock light is on	Magnetic knob has been removed or panel lock key has been pressed	Replace magnetic knob, then press and hold panel lock key until light goes out.
Cooktop won't run at all	Power is off or control board has failed	Check incoming power. If OK (240 VAC), then replace control board.
Element won't heat	Element has failed	Disconnect power and measure resistance at control board or element terminals (see resistance charts). Replace faulty element.
	Wire harness is damaged or shorted	Check wire harness for continuity and to ground (to check for shorts). Replace faulty wire harness.

WARNING! Disconnect cooktop before starting any repairs.

RANGE TROUBLESHOOTING/SERVICE TIPS

GAS COMPONENTS

Tightening Fittings Onto Flex Tubes



- Ferrule compressed over end of tube – may not seal properly
- **DO NOT OVERTIGHTEN.** Excessive torque may fracture compression nut or fitting. Flex tube to **compression** (pictured above) fitting assembly – 1-1/2 turns after finger tight.
- Flex tube to **flare** fitting assembly – 1/4 turn after finger tight.

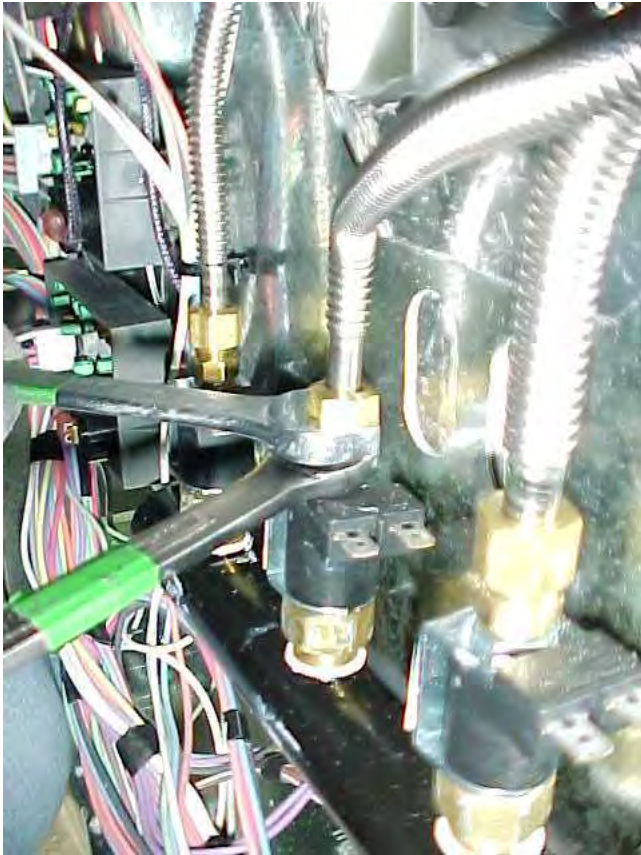
RANGE TROUBLESHOOTING/SERVICE TIPS

QUICK INSPECTION OF GAS-CARRYING COMPONENTS



- Do not use if metal shavings, chips, rust, or other debris is noticed inside or on threads of gas component.
- Do not use if water or any other liquid drops out of gas component.

RANGE TROUBLESHOOTING/SERVICE TIPS



While tightening compression nut onto flex tube, support the brass fitting on outlet of solenoid using a wrench.

RANGE TROUBLESHOOTING/SERVICE TIPS



Avoid sharp bends in flex tubing, which may reduce gas flow to burners.

RANGE TROUBLESHOOTING/SERVICE TIPS

Avoid excessive amounts of thread sealing compound



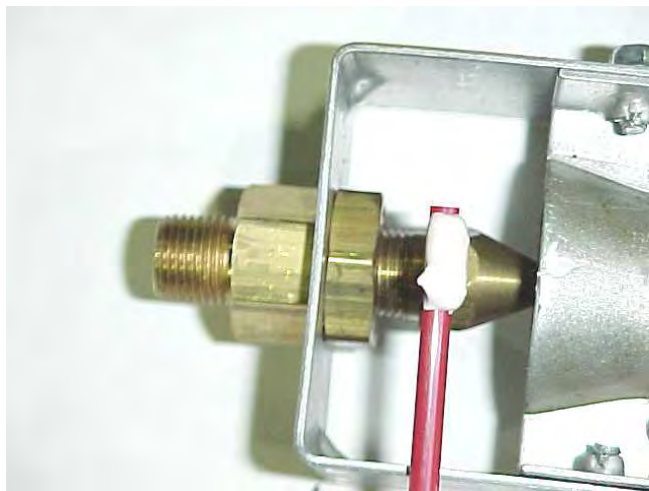
Spreading of thread sealing compound over a large area using a brush is NOT the correct method of application, and may cause problems.



Orifices or other gas channels can become clogged.

RANGE TROUBLESHOOTING/SERVICE TIPS

Correct method of applying thread sealing compound



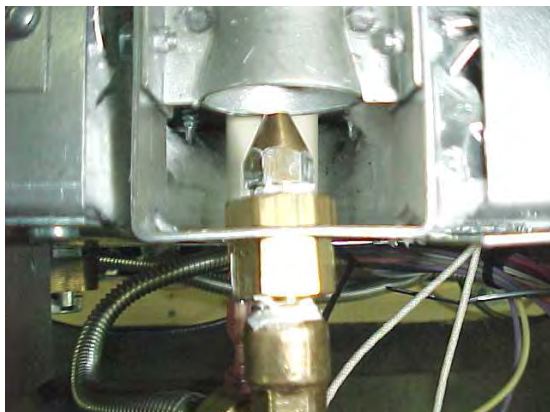
Pre-assemble the two fittings loosely. Apply a small amount of compound in one spot on threads at junction of the two fittings using a small, rigid instrument (piece of coat hanger, welding rod, etc.).



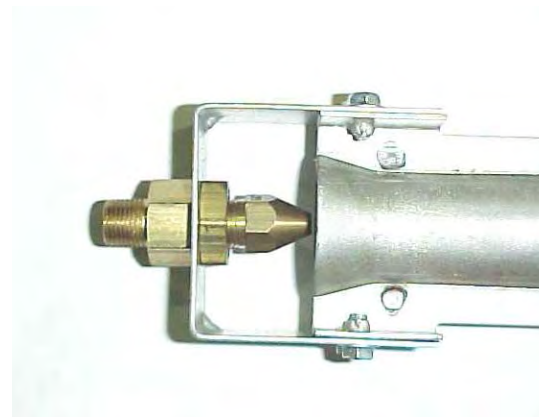
DO NOT SPREAD – The action of tightening the two parts together will spread the compound between the threads, in two to three revolutions.

RANGE TROUBLESHOOTING/SERVICE TIPS

ORIFICE ALIGNMENT



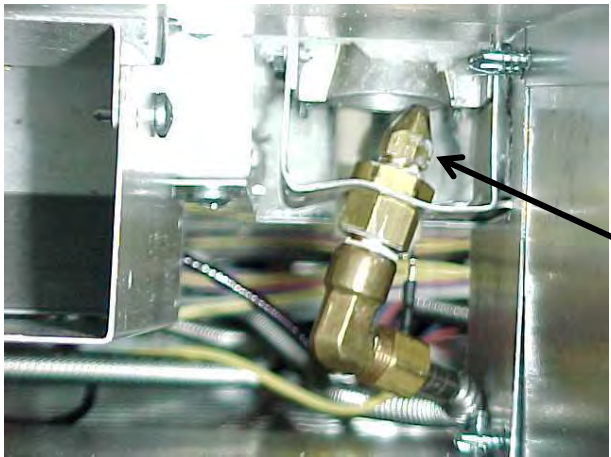
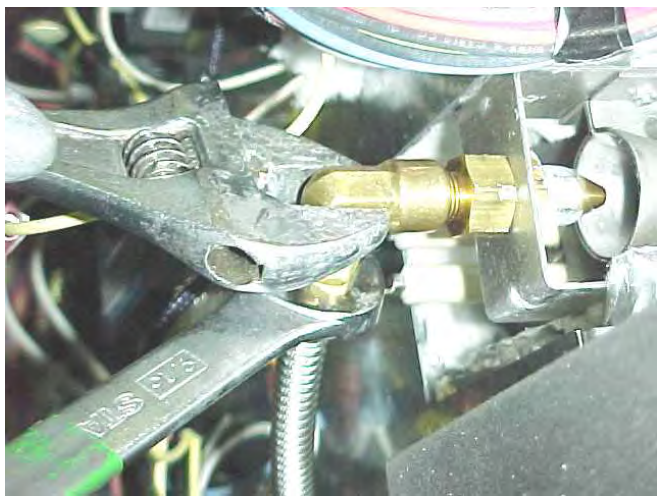
Horizontal or vertical misalignment of orifice can degrade performance, especially on infrared (broil) burners.



Correct orifice alignment – straight into venturi maximizes air input for best burner performance.

RANGE TROUBLESHOOTING/SERVICE TIPS

ORIFICE ALIGNMENT Cont'd



Supporting elbow fitting while tightening compression nut onto flex tube will help prevent this type of misalignment.

RANGE TROUBLESHOOTING/SERVICE TIPS

QUICK INSPECTION OF GAS VALVES



- Do not use if shavings, chips, rust, or other debris is noticed inside valve.
- Do not use if water or any other liquid drops out of valve.
- Do not use if red silicone washer is missing.
- Do not use if valve stem is bent, or will not rotate smoothly.

NOTE: When tightening the saddle clamps DO NOT completely tighten one side of saddle clamp before tightening the other side. Mount saddle clamp to valve using alternated-tightening method to help ensure valve is mounted straight with manifold.

RANGE TROUBLESHOOTING/SERVICE TIPS

IDENTIFYING LP GAS COMPONENTS

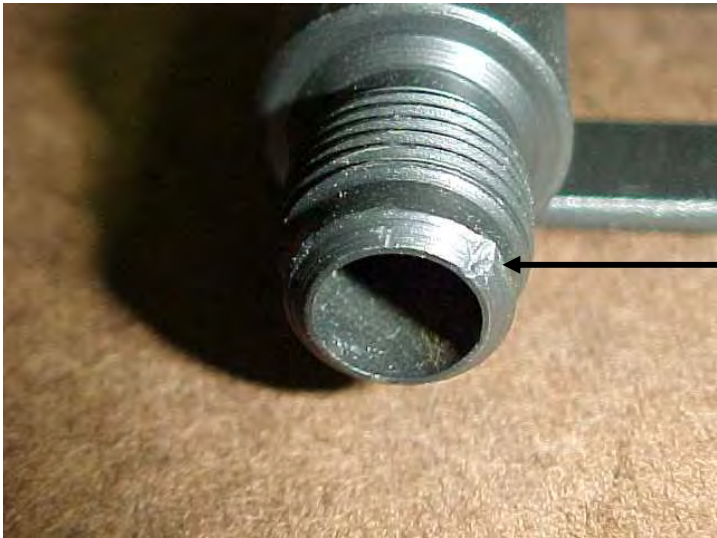


Some components used exclusively for LP Gas have the same appearance as mainstream components used for Natural Gas.

In most cases, similar components for use with LP have unique markings such as a permanent stamping, colored spot, or label.

RANGE TROUBLESHOOTING/SERVICE TIPS

QUICK INSPECTION OF GAS-TIGHT SURFACES



Do not use if rust, nicks, or dents are noticed on surfaces designed to be gas-tight. (Dent on sealing surface of flare connection pictured.)

RANGE TROUBLESHOOTING/SERVICE TIPS



Piling gas components on top of each other can:

- Deform threads.
- Dent or nick gas-tight surfaces.
- Increase risk of debris falling inside of parts.

BOSCH Support Contact

Technical Support:

- **Telephone** **888-522-6724**
- **Email** **quickfinder-us@bshg.com**

Customer Service:

- **Telephone** **800-944-2904**
- **Internet** **www.boschappliances.com**