# Heartland® Appliances Inc.

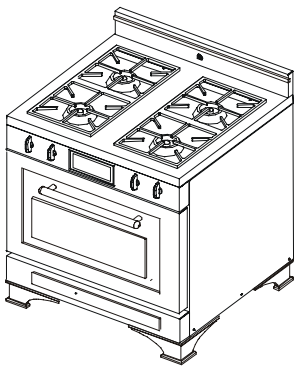
**SERVICE MANUAL**
**for**

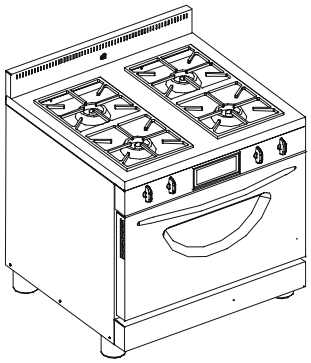
**HEARTLAND APPLIANCES**

**Metro & Legacy Lines**

**Diagnosis Charts**
**Service Procedures**
**Component Data**

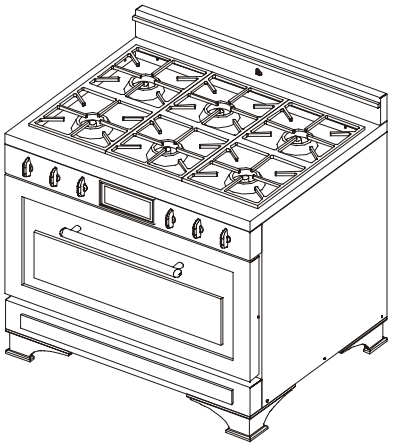
**Model 3520 - 30” Legacy**

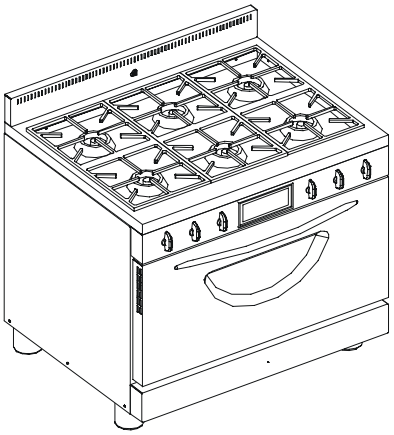




**Model 3525 - 30” Metro**

**Model 3620 - 36” Legacy**





**Model 3625 - 36” Metro**

**Heartland Appliances Inc.**
**Manual No. MLSM010601**
Part# 0910
MLSM2003-01-03

**We have used all possible care to ensure the accuracy of the information contained in this book. However, Heartland assumes no liability for any errors, omissions or any defects whatsoever in the diagrams and/or repair procedures or for any damage or injury resulting from utilization of said diagrams and/or repair procedures.**

**Safety Information: Electric and Gas Ranges are complex electromechanical devices. Any attempt to repair a range may, if improperly performed, result in personal injury or property damage. Heartland Appliances cannot be responsible for the interpretation of this manual, nor can it assume any liability in connection with its use. For additional safety information, see page 5 of this manual.**

Repair Manual for Heartland Appliances Inc
Metro & Legacy Ranges

2001, April 1 Heartland Appliances Inc.
1050 Fountain St. N
Cambridge, Ontario; N3H 4R7



Part# 0910 MLSM2003-01-03

# Contents

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# Safety Information

## Important Safety Notice

Heartland Appliances' Service Manuals are intended for use by individuals possessing electrical, gas and mechanical experience. Therefore, Heartland Appliances cannot be responsible for the interpretation of its Service Manuals by those not having a background of electrical, gas and mechanical experience, nor can it assume any liability in connection with their use.

## Safe Servicing Practices

To preclude the possibility of resultant personal injury and/or property damage, it is imperative that safe servicing practices be observed. The following are examples, but without limitation, of such safe practices:

1. Before servicing, always disconnect the product from its source of electrical power by removing the product's electrical plug from the wall receptacle or tripping the circuit breaker to OFF(or removing the fuse) in the branch circuit servicing the product.

   **Note:** If a specific diagnostic check requires electrical power to be applied such as for voltage or amperage measurements, reconnect electrical power only for time required for specific check, and disconnect power immediately thereafter. During any such check, ensure no other conductive parts, panels or yourself come into contact with any exposed current carrying parts.

3. If a replacement part is required ensure it meets factory specifications.
4. Never by-pass or interfere with the proper operation of any feature, part or device engineered into the product.
5. Prior to reconnecting electrical power service to the product, ensure that:

   a) all electrical connections within the product are correctly and securely connected,
   b) all electrical harness leads are properly dressed and secured away from sharp edges, high temperature components (heaters, etc.) and moving parts,
   c) any un-insulated current-carrying metal parts are secured and spaced adequately from all non-current-carrying metal parts,
   d) all electrical grounds (internal and external to the product) are correctly and securely connected, and
   e) all access panels and covers are properly and securely assembled following the servicing and prior to operating the product.

6. On gas appliances, do not disturb gas-carrying components or connections until gas service to it is shut off, and do not use a flame to test for gas leaks. Following repair work, ensure all gas connections are properly secured by testing for gas leaks with a bubble (soap) solution.
7. Do not attempt a repair if you have any doubts as to your ability to complete it in a safe and satisfactory manner.

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# Parts & Warranty

**How To Obtain Parts:**

- Contact an authorized Heartland dealer or Heartland Appliances direct.
- When ordering replacement parts (warranty or not) always provide the following information:

  **Serial Number**
  **Model Number**
  **Component Description**
  **Part number**

- Commonly replaced parts are listed in Section 7 at the end of this book and at the back of the owner's manual.
- To obtain replacement parts directly from Heartland, contact the following departments:

  Heartland Appliances Inc.
  1050 Fountain St. N.
  Cambridge, Ontario
  N3H 4R7
  **ph: 877-650-5775**
  **fx: 800-327-5609**

**Non Warranty Replacement Parts: Order Desk Ext. 2226 & 2227**

**Warranty Replacement Parts: Service Dept. Ext. 2241, 2264 & 2244**

**Note:** Please contact Heartland Appliances Service Department prior to performing service work in order to assist in the diagnosis of the problem, this should result in having to go to the customer's home only once.

**How To Set Up Warranty Service:**

- Contact one of the manufacturer's service technicians to obtain a CSF reference number. CSF number will serve as authorization to proceed with warranty work and will be referenced for any future warranty work. Contact Heartland Appliances Service Department at:

  Heartland Appliances Inc.
  1050 Fountain St. N.
  Cambridge, Ontario
  N3H 4R7
  **ph: 877-650-5775**
  **fx: 800-327-5609**
  **Service Department:**
  **Extensions 2241, 2264 & 2244**

- CSF number to be referenced in all warranty claims
- Contacting Heartland Appliances prior to performing service work, will assist in the diagnosis of the problem, this should result in having to go to the customer's home only once.

**How To Submit Warranty Claims:**

- For prompt warranty claim processing, submit your standard service form (i.e. Narda style) completely filled out to:

  Heartland Appliances Inc.
  Service Department
  1050 Fountain St. N.
  Cambridge, Ontario
  N3H 4R7
  fx: 800-327-5609

- Warranty Claim forms to include, but not limited to, the following information:

- Customer Name, Address and Phone Number
- Serial Number
- Model Number
- Date of Service
- Work Performed
- **Full Description of Work Performed**
- **CSF Reference number (see "How To Set Up Warranty Service" section above for details).**

**How to Return Merchandise:**

- Contact Heartland Appliances' Service Department to obtain authorization for any merchandise returns at:

  Heartland Appliances Inc.
  1050 Fountain St. N.
  Cambridge, Ontario; N3H 4R7
  **ph: 877-650-5775**
  **fx: 800-327-5609**
  **Service Department:**
  **Extensions 2241, 2264 & 2244**

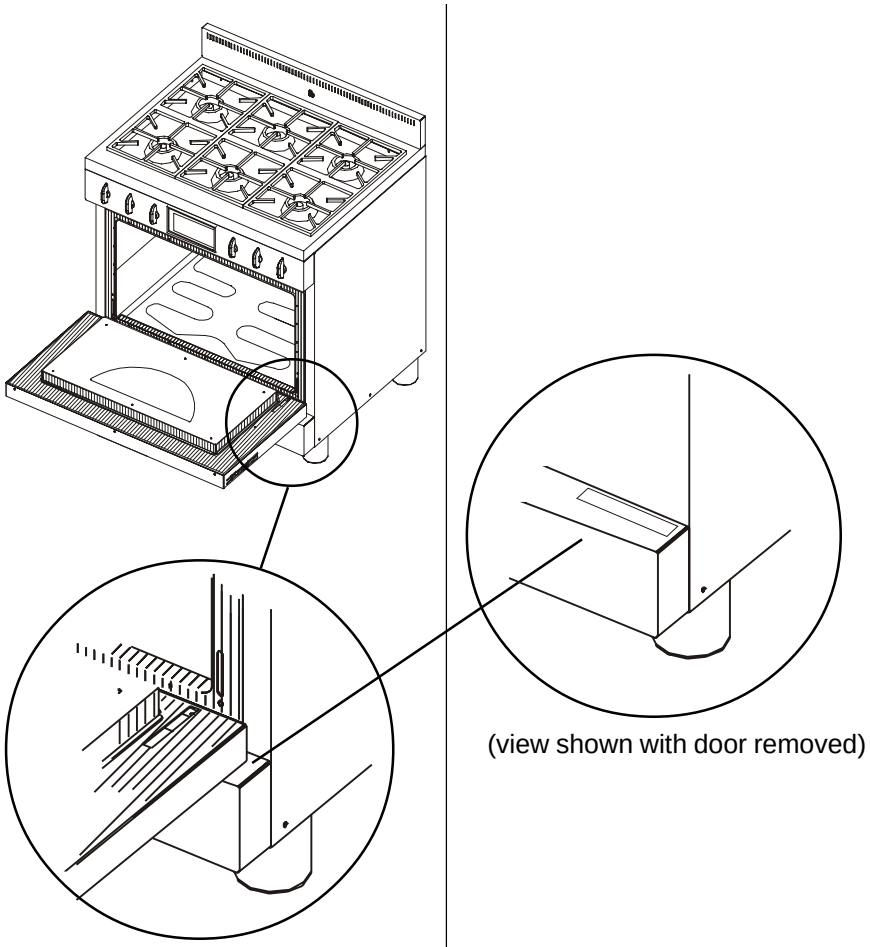
- Depending on the nature of the merchandise to be returned, an RGA number (Return Goods Authorization) may be issued. A comprehensive RGA Kit package will be expedited with instructions and back up paperwork for the prompt and safe return of the goods.

# Parts & Warranty

**Serial Number Location in Ranges:**

- Metro & Legacy ranges have the serial number located at the back of the range and on the kick plate.

  To view serial number plate, open door, and look at kickplate's right top corner.



(view shown with door removed)

# Technical Specifications

**Dual Fuel Ranges (Electric Oven & Gas Top)**

- 30” Models 3520/3525

  240V, 60Hz, 4.1 Kw (3 prong or 4 prong)
  Bake Element: 3400 W
  Broil Ribbon Element: 4000 W
  Conv. ring element: 2400 W
  Natural Gas (6” w.c.)
  Propane (11” w.c.)
  ½” NPT (5/8” flex line)
  Surface Burners (4):15,500 Btu

  Note: Service Amperage to be calculated by a qualified electrician.

- 36” Models 3620/3625

  240V, 60Hz, 5.6 Kw (3 prong or 4 prong)
  Bake Element: 5000 W
  Broil Ribbon Element: 5000 W
  Conv. ring element: 4800 W
  Natural Gas (6” w.c.)
  Propane (11” w.c.)
  ½” NPT (5/8” flex line)
  Surface Burners (6):15,500 Btu

  Note: Service Amperage to be calculated by a qualified electrician.

- 36” Models with Grill 3620B/3625B

  240V, 60Hz, 5.6 Kw (3 prong or 4 prong)
  Bake Element: 5000 W
  Broil Ribbon Element: 5000 W
  Conv. ring element: 4800 W
  Natural Gas (6” w.c.)
  Propane (11” w.c.)
  ½” NPT (5/8” flex line)
  Surface Burners (4):15,500 Btu
  Grill Burners (2): 7,500 Btu

  Note: Service Amperage to be calculated by a qualified electrician.

**Electrical Requirements:**

- Standard 240V; 60 Hz receptacle, properly polarized, on its own dedicated line must be used.
- Ranges are provided with a molded plug cap power cord rated at 120/240 Volts.
- Ranges must be electrically grounded in compliance with local codes. In absence of local codes, the installation must conform with the National Electrical Code.

**Gas Requirements:**

- During any pressure testing of the gas supply piping system at test pressures equal to or less than 2.5 kps, the appliance must be isolated from the gas supply system by closing its individual manual shut off valve.
- The maximum propane/natural gas supply inlet pressure must not exceed 14” of water column
- Gas ranges must be installed in compliance with local gas codes. In absence of local codes, the installation must conform with the National Gas Code.

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# Problem Diagnosis Charts



## Models 3520/3525; 3620/3625 & 3620B/3625B

| Problem | Possible Cause | Repair/Test Procedure |
|---|---|---|
| 1. Range does not operate (top and timer do not work) | • No power to range – House breaker tripped or fuse blown | ✓ Check power supply (Procedure 1) |
| | • Open wire at terminal block | ✓ Check terminal block (Procedure 2) |
| | • Terminal block defective | ✓ Check terminal block (Procedure 2) |
| | • Power cord defective | ✓ Check power cord (Procedure 3) |
| 2. Range does not heat (top works, timer does not work) | • Breaker tripped or fuse blown | ✓ Check power supply (Procedure 1) |
| | • Open wire between terminal block and relay board | ✓ Check terminal block (Procedure 2) |
| | • Defective Timer | ✓ Check terminal block (Procedure 2) |
| | • Coaxial power cable to timer defective or inoperative | ✓ Check power cord (Procedure 3) |
| | • Defective relay board | ✓ Check relay board (Procedure 18) |
| | • Open 25 amp relay (36” models only) | ✓ Check 25 amp relay (Procedure 21) |
| 3. Oven does not heat (top burners operate) | • Breaker tripped or fuse blown | ✓ Check power supply (Procedure 1) |
| | • Timer blank – no power to timer | ✓ Check timer (Procedure 4) |
| | • Timer not set to time of day | ✓ Check timer program (Procedure 5) |
| | • Timer cannot be programmed | ✓ Check timer program (Procedure 5) |
| | • Timer programmed to “delayed time bake” | ✓ Check timer program (Procedure 5) |
| | • Open wire or poor connection at oven thermostat probe (F1 displayed in timer) | ✓ Check oven thermostat probe (Procedure 6)<br>✓ check timer (Procedure 5) |
| | • Open bake/broil limit relay | ✓ Check bake/broil limit (Procedure 7) |
| | • Timer programmed to “self clean” (timer displays SC) | ✓ Check timer program (Procedure 5) |
| | • Tripped or open safety limit (red button popped) | ✓ Check safety limit (Procedure 8) |
| 4. Timer displays F1 | • Wiring from Probe to Timer disconnected or damaged | ✓ Check timer wiring (Procedure 4) |
| | • Oven thermostat probe faulty or disconnected | ✓ Check oven probe (Procedure 6)<br>✓ Check wiring and connections (Procedure 6) |
| | • Timer faulty | ✓ Replace timer (Procedure 4) |

# Problem Diagnosis Charts

## Models 3520/3525; 3620/3625 & 3620B/3625B

| Problem | Possible Cause | Repair/Test Procedure |
|---|---|---|
| 5. Bake or convection bake element does not heat (broil operates) | • Open bake or convection bake elements | ✓ Check bake elements (Procedure 9 and 10) |
| | • Open wire between bake element and relay board | ✓ Check bake element (Procedure 9 and 10)<br>✓ Check wiring and connections at relay board (Procedure 18) |
| | • Faulty timer or timer coaxial power supply cable | ✓ Check timer (Procedure 4)<br>✓ Check coaxial cable (Procedure 19) |
| | • Open bake/broil limit | ✓ Check bake/broil limit (Procedure 7) |
| 6. Broil Element does not heat (bake element operates) | • Open broil element | ✓ Check broil element (Procedure 11) |
| | • Open wire between broil element and relay board | ✓ Check broil element (Procedure 11)<br>✓ Check relay board (Procedure 18) |
| | • Faulty timer or timer coaxial power supply cable | ✓ Check timer(Procedure 4)<br>✓ Check coaxial cable (Procedure 18) |
| | • Open bake/broil limit | ✓ Check bake/broil limit (Procedure 7) |
| 7. Oven temperature incorrect (oven not baking properly) | • Open thermostat probe | ✓ Check thermostat probe (Procedure 6) |
| | • Faulty bake/broil limit (cycling on/off at lower temperatures) | ✓ Check bake/broil limit (Procedure 7) |
| | • Faulty Timer | ✓ Check timer (Procedure 4) |
| | • Open timer coaxial power supply cable | ✓ Check coaxial cable (Procedure 19) |
| | • Oven door gasket damaged | ✓ Check door gasket (Procedure 12) |
| | • Oven door hinge/spring broken | ✓ Check oven door hinge (Procedure 13) |
| | • Oven vent blocked | ✓ Check oven vents (Procedure 14) |
| 8. Oven will not shut off | • Open oven thermostat probe | ✓ Check thermostat probe (Procedure 6) |
| | • Stuck relay on relay board | ✓ Check relay board (Procedure 18) |
| | • Damaged timer coaxial power supply | ✓ Check coaxial cable (Procedure 19) |
| | • Faulty timer | ✓ Check timer (Procedure 4) |

# Problem Diagnosis Charts

## Models 3520/3525; 3620/3625 & 3620B/3625B

| Problem | Possible Cause | Repair/Test Procedure |
|---|---|---|
| 8. Oven will not work on timed cooking or delayed time cooking functions | • Timer not properly programmed | ✓ Timer programming steps (Procedure 5) |
| | • Timer defective | ✓ Replace timer (Procedure 4) |
| 10. Oven light not working | • Burned out oven bulb | ✓ Check oven bulb (Procedure 15) |
| | • Timer defective | ✓ Check timer (Procedure 4) |
| | • Coaxial power supply cable defective | ✓ Check coaxial cable (Procedure 19) |
| | • Open oven light housing or wiring connections | ✓ Check oven bulb (Procedure 15)<br>✓ Check wiring to oven light (Procedure 15) |
| | • Open light's transformer | ✓ Check transformer (Procedure 15) |
| 11. Oven light trips house breaker when light switched "on" | • Electrical ground | ✓ Check wiring to oven light housing (Procedure 15)<br>✓ Check wiring to light transformer (Procedure 15) |
| 12. Convection fan not working | • Timer defective | ✓ Check timer (Procedure 4) |
| | • Timer coaxial power cable defective | ✓ Check coaxial cable (Procedure 19) |
| | • Open wire to fan motor | ✓ Check wiring to fan motor (Procedure 16) |
| | • Defective relay on relay board | ✓ Check relay board (Procedure 18) |
| | • Baffle interference with convection fan wheel | ✓ Check baffle plate (Procedure 16) |
| | • Motor defective | ✓ Replace fan motor (Procedure 16) |
| 13. Convection fan noisy | • Back of stove panel vibrating | ✓ Check stove's back panel (Procedure 32) |
| | • Convection fan wheel loose or warped | ✓ Check fan wheel (Procedure 16) |
| | • Baffle interference with convection fan wheel | ✓ Check baffle plate (Procedure 16) |
| 14. Oven door does not open after completion of self clean cycle | • Door latch mechanism inoperative | ✓ Check door latch mechanism (Procedure 17) |
| | • Oven not cool | ✓ Check self clean timer programming (Procedure 5) |
| 15. Timer making buzzing noises, incorrect display, etc. | • Timer defective | ✓ Check timer (Procedure 4) |
| | • Timer coaxial power supply cable defective | ✓ Check coaxial cable (Procedure 19) |
| | • Timer relay board defective | ✓ Check relay board (Procedure 18) |

# Problem Diagnosis Charts

## Models 3520/3525; 3620/3625 & 3620B/3625B

| Problem | Possible Cause | Repair/Test Procedure |
|---|---|---|
| 16. Bake & broil elements do not heat after self clean cycle | • Safety limit tripped or defective or wiring damaged | ✓ Check safety limit (Procedure 8)<br>✓ Check wiring and connections (Procedure 8) |
| | • Door latch mechanism inoperative or wiring | ✓ Check door latch mechanism (Procedure 17) |
| | • Timer programmed for a delayed cooking function | ✓ Check timer programming (Procedure 5) |
| | • Bake/broil limit defective or wiring damaged | ✓ Check bake/broil limit (Procedure 7) |
| | • Relay board defective or wiring damaged | ✓ Check relay board (Procedure 18) |
| | • Timer coaxial power supply cable defective | ✓ Check coaxial cable (Procedure 19) |
| 17. Incomplete cleaning | • Controls not properly set or self clean programmed too short | ✓ Check self clean timer programming (Procedure 5) |
| | • Bake element not heating | ✓ Check bake element (Procedure 9) |
| | • Door latch mechanism inoperative or stuck | ✓ Check self clean mechanism (Procedure17) |
| | • Bake/broil limit not bypassed or defective | ✓ Check bake/broil limit (Procedure 7) |
| | • Oven door not sealing | ✓ Check oven door gasket (Procedure 12) |
| | • Timer defective | ✓ Replace timer (Procedure 4) |
| | • Safety limit not calibrated properly or defective | ✓ Check safety limit (Procedure 8) |
| | • No signal from self clean mechanism to timer | ✓ Check wiring at timer (Procedure 4)<br>✓ Check wiring to self clean mechanism (Procedure 17) |
| 18. Timer does not operate or cannot be set | • House breaker tripped or fuse blown | ✓ Check power supply (Procedure 1) |
| | • Timer blank – no power | ✓ Check timer (Procedure 4)<br>✓ Check wiring and connections at relay board (Procedure 18) |
| | • Timer defective | ✓ Check timer (Procedure 4) |
| | • Timer coaxial power supply cable defective | ✓ Check coaxial cable (Procedure 19) |
| | • Timer locked out (3 horizontal red lines present in temperature display | ✓ Check timer programming (Procedure 5) |
| | | |

# Problem Diagnosis Charts

## Models 3520/3525; 3620/3625 & 3620B/3625B

| Problem | Possible Cause | Repair/Test Procedure |
|---|---|---|
| 19. Timer blank or flashing during cooking or after completion of cooking cycle | • House breaker tripped or fuse blown | ✓ Check Power supply (Procedure 1) |
| | • No power to timer - defective coaxial power supply cable | ✓ Check coaxial cable (Procedure19) |
| | • Defective timer | ✓ Check timer (Procedure 4) |
| | • Cooling fan inoperative or blocked - timer's temperature safety limit tripped | ✓ Check cooling fan limit (Procedure 20) |
| | • Defective relay board | ✓ Check relay board (Procedure 18) |
| | • 36" models only. Defective 25 amp relay or wiring between relay to terminal block or relay board. | ✓ Check 25 amp relay (Procedure 21) |
| 20. Cooling Fan not working | • No power to cooling fan | ✓ Check cooling fan (Procedure 20) |
| | • Cooling fan stuck with foreign material | ✓ Check cooling fan (Procedure 20) |
| 21. Cooling Fan stays in on position for several hours | • Faulty fan limit | ✓ Check cooling fan (Proc 20) |
| | • Self Clean Latch not fully retracted | ✓ Check door latch mechanism (Procedure 17) |
| 22. Top burner does not ignite | • No gas to burner | ✓ Check gas supply (Procedure 24)<br>✓ Check burner valve (Procedure 29) |
| | • Faulty ignition switch | ✓ Check ignition switch (Procedure 23) |
| | • Open wire to ignition switch | ✓ Check wiring and connections (Procedure 23) |
| | • Burner valve stem cannot be turned | ✓ Check burner valve (Procedure 29) |
| | • Open wire from ignition switch to spark module | ✓ Check ignition switch (Procedure 23)<br>✓ Check spark module (Procedure 22)<br>✓ Check wiring and connections (Procedure 22) |
| | • Spark module defective | ✓ Check spark module (Procedure 22) |
| | • Electrode dirty or defective | ✓ Check burner electrode (Procedure 28) |
| 23. Top burner on high at any setting | • Burner valve defective | ✓ Replace burner valve (Procedure 29) |
| | • Too much gas pressure | ✓ Check gas supply (Procedure 24) |
| | • Regulator defective | ✓ Check regulator (Procedure 25) |

| Problem | Possible Cause | Repair/Test Procedure |
|---|---|---|
| 24. Burner electrode continues to spark after burner has lit | • Burner components incorrectly positioned | ✓ Check burner caps (Procedure 27) |
| | • Cooking utensils too large or contents spilled over | ✓ Check cookware |
| | • Spark module faulty | ✓ Check spark module (Procedure 22) |
| | • Burner electrode dirty or defective | ✓ Check burner electrode (Procedure 28) |
| 25. Electrodes spark when ignition switches are in “off” position | • Ignition switch faulty | ✓ Check ignition switches (Procedure 23) |
| | • Ignition switch wet | ✓ Check ignition switches (Procedure 23) |
| | • Spark module faulty | ✓ Check spark module (Procedure 22) |
| | • Loose ground in range or defective power cord | ✓ Check power cord and wiring (Procedure 3) |
| | • Valve stem not level - keeping switch from turning “off” | ✓ Check burner valve (Procedure 29) |
| | • Loose ground in house wiring or receptacle | ✓ Check power supply (Procedure 1)<br>✓ Check wiring and connections (Procedure 1) |
| | • Air shutter adjustment needed (too much air) | ✓ Check air shutters (Procedure 26) |
| 26. Grill electrodes continue to spark after burner has lit | • Air shutter adjustment needed (too much air) | ✓ Check air shutters (Procedure 26) |
| | • Cooking utensils too large or contents spilled over | ✓ Check cookware |
| | • Spark module faulty | ✓ Check spark module (Procedure 22) |
| | • Burner electrode dirty or defective | ✓ Check burner electrode (Procedure 28) |

# Procedure 1 - Breakers & Fuses

***Step 1:*** Be sure all range controls are turned off.

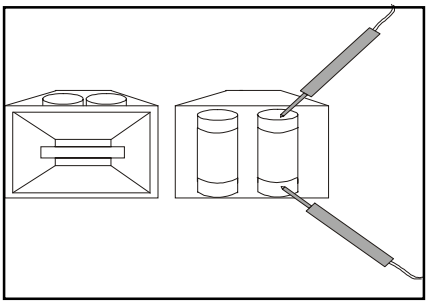
***Step 2:*** To restore power, turn the breaker switch to “OFF” position, then back to “ON” (when a breaker trips, the switch moves to an intermediate position between the “ON” and “OFF” positions)

***Step 3:*** If breaker trips again, the circuit is still overloaded.

***Step 4:*** Fuse blocks utilize a double pole fuse block with two cartridge type fuses joined together at the handle.

***Step 5:*** Pull block out of panel

***Step 6:*** Fuses can be checked with ohnmmeter set at the lowest resistance scale. Touch probes to brass caps at each end. If no continuity then replace with fuse that meets local electrical codes and is not larger than specified for the range.



***Step 7:*** Clip fuses firmly back on panel (“ON” notation should appear at the top of the block). Loose connections can cause the fuse to overheat.

***Step 8:*** Proper power readings on receptacle can be tested with a multimeter set to AC volts.

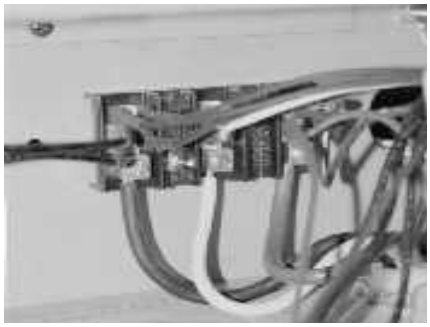
***Step 9:*** With range unplugged, place test probes as per diagrams.

# Procedure 2 - Terminal Block

***Step 1:*** Disconnect power supply to range. Pull range away from wall.

***Step 2:*** Remove back panel. Refer to Procedure 32 for details.

***Step 3:*** Inspect terminal block for burnt terminal connections. If damaged, replace.



***Step 4:*** To replace terminal block, remove power cord by unscrewing the three screws that retain the ends of the cord to the terminal block.

***Step 5:*** Mark and disconnect all wires attached to the terminal block (including wire to ground stud for 4 prong power cords)

***Step 6:*** Terminal block can be removed from range by removing the two center screws.

***Step 7:*** Install new terminal block, attach all red, white and black wires as originally marked

***Step 8:*** Attach power cord back on terminal block. Be sure all wires are secure. 3 prong power cords have jumper cable from center (neutral) side of terminal block to stud. 4 prong power cords have copper wire from cord directly attached to ground stud.

# *Procedure 3 - Power Cord*

***Step 1:*** Disconnect power supply to range.

***Step 2:*** Pull range away from wall.

***Step 3:*** Pull plug from receptacle with a quick firm tug (do not pull by the cord). Power cord configurations are as follows:

3 prong 240V; 60 Hz (electric)

4 prong 240V; 60 Hz (electric)

***Step 4:*** Inspect plug for damaged, corroded or burnt terminals. Look around molded portion for signs of over heating. If damaged replace cord.

***Step 5:*** Remove back panel (Refer to Procedure 32 for details.

***Step 6:*** Inspect power cord connection at terminal block. Inspect wires and strain relief clamp for signs of damage. If damaged, replace. See Procedure 2 for details.

***Step 7:*** If no visible damage detected, check individual wires in the power cord with a multimeter.

***Step 8:*** Place one test probe on the wire end and the other test probe on the plug end. If no continuity, replace power cord.

***Step 9:*** For 3 prong cords, outer terminal wire end (black side) should indicate continuity to one (not both) outer terminals of plug. For 4 prong wires, black and red wires at terminal end correspond to specific terminal ends at plug. **Twist cord to ensure no internal break occurs** - replace if needle drops.

***Step 10:*** To remove power cord, unscrew the three screws that retain the ends of the cord to the terminal block.

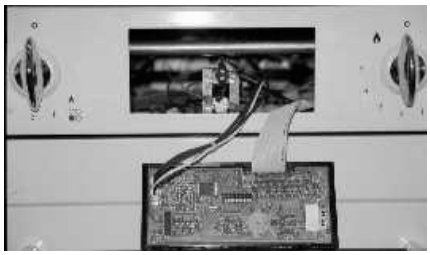
***Step 11:*** Attach new power cord to terminal block securely.

# Procedure 4 - Timer Replacement

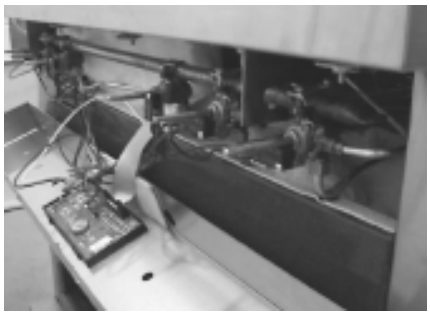
***Step 1:*** For oven to operate, time of day must be set in timer. See Timer Programming (Procedure 5) for details.

***Step 2:*** Disconnect power supply to range.

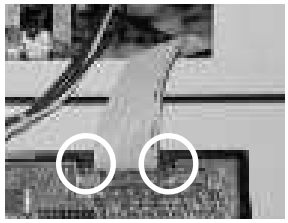
***Step 3:*** **Legacy Models**. With edge of fingers, pry on timer's edges to dislodge from control panel.



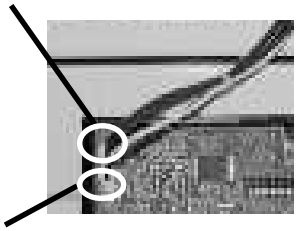
***Step 4:*** **Metro models**. Remove control panel (see Procedure 34).



***Step 5:*** Disconnect coaxial power supply cable by lifting both locking tabs.



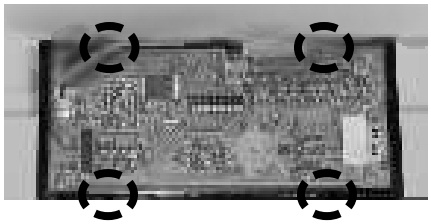
***Step 6:*** Disconnect two molex plugs from clock. Double black wire molex plug is positioned on the connector closest to the bottom of the timer.



Molex plug with white/black wires is positioned on the connector closest to the top of the clock.

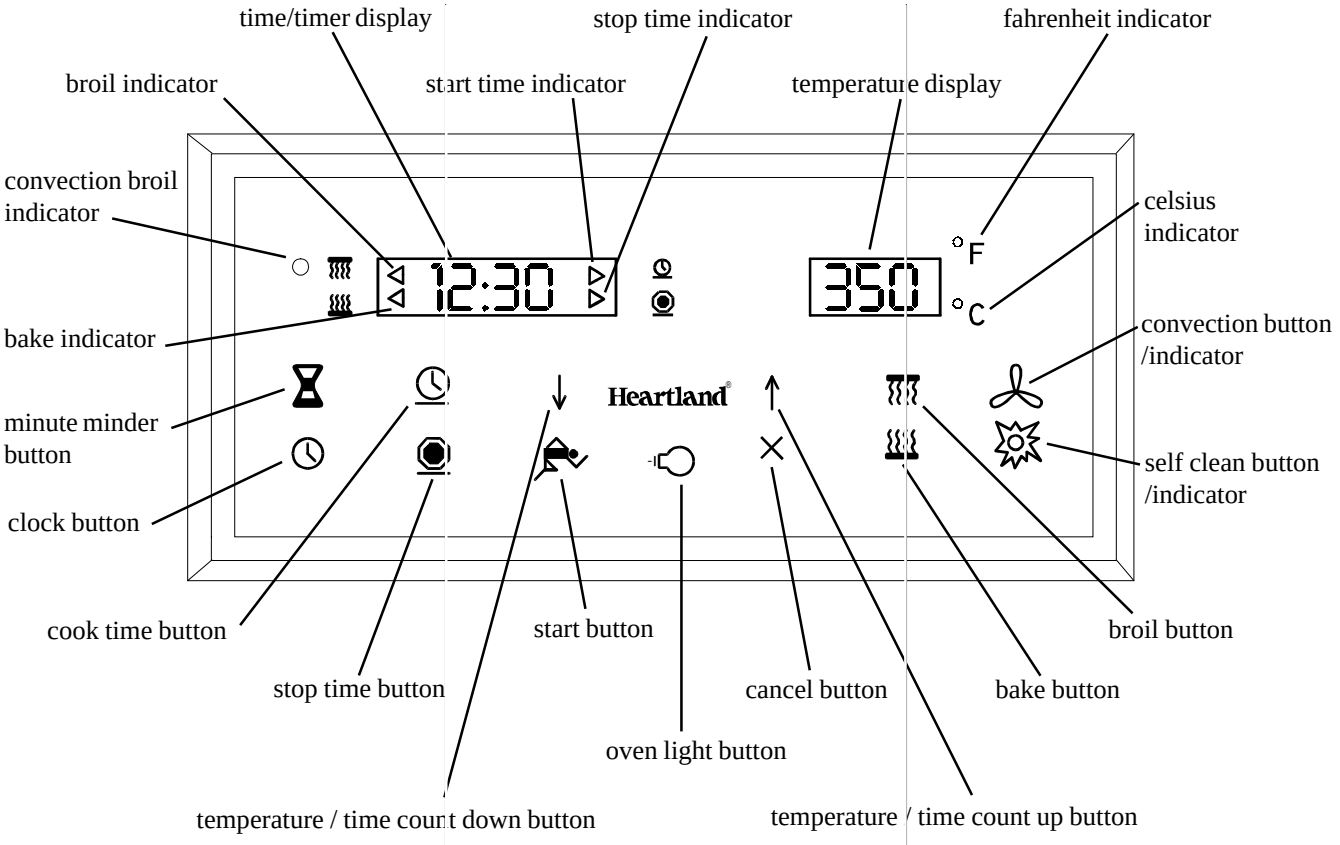
**Note:** Black/white wire molex plug is the oven thermostat probe wiring. Double black molex plug is the self clean microswitch wiring.

***Step 7:*** To replace timer, push on four tabs (two per side) and push timer through front of control panel.



***Step 8:*** Transfer all wires to the new timer in the exact same location (mark wires prior to removing from old timer to ensure proper transfer).

# Procedure 5 - Timer Programming




***Step 1:*** For oven to operate, time of day must be set in timer.

***Step 2:*** Press ***clock*** symbol

***Step 3:*** Press ***increase*** or ***decrease*** symbols to select time

***Step 4:*** Press ***start*** symbol to set

Note: Pressing twice the clock symbol toggles time of day between 0-12 hrs and 0-24 hrs

***Step 5:*** To set cooking, press desired function (bake , convection bake or broil ).

***Note:*** automatically sets to 325F for bake and convection bake and to 550F for broil.

***Step 6:*** Press ***increase*** or ***decrease*** symbols to select time

***Step 7:*** Press ***start*** symbol to start.

Note: To toggle between Fahrenheit (F) and Celcius (C), press cooking symbol twice in a row.

**Self Clean Programming:** all cookware, racks, and rack supports to be removed from oven during self clean cycle to prevent them from becoming dull and blue-gray.

***Step 8:*** Press ***self clean*** symbol (automatically set for 3 hrs)

***Step 9:*** Press ***decrease*** cleaning time.

***Step 10:*** Press ***start*** symbol to begin *self clean.*

**Note:** A thermostatically controlled cooling fan will start shortly after the self clean cycle is programmed (once the door is locked). The fan will automatically shut off when the self clean cycle is finished **and** the unit is sufficiently cool

# Procedure 6 - Thermostat Oven Probe

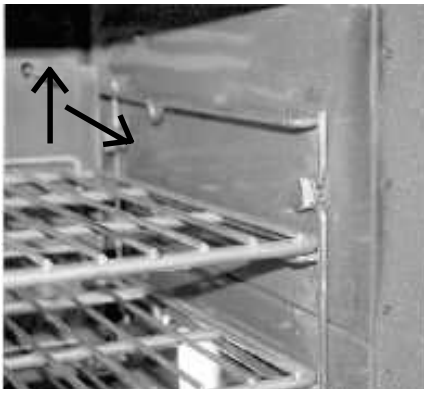
***Step 1:*** Disconnect power supply to range.

***Step 2:*** Pull range away from wall.

***Step 3:*** Remove range's back panel (see procedure 32)

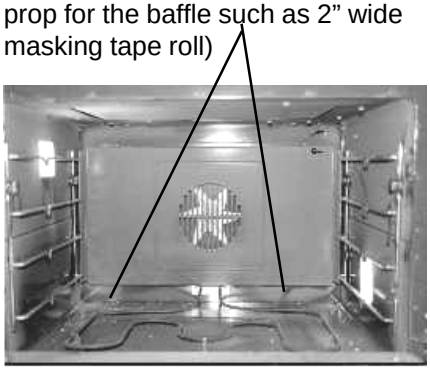
***Step 4:*** Remove oven door (see procedure 33)

***Step 5:*** Remove convection fan baffle. remove all racks (push as far back as they will go, lift back end of rack and pull out).



***Step 6:*** Remove right and left rack supports by removing locking nuts (please note that there is a left and right rack support, with the "v" always facing downward).

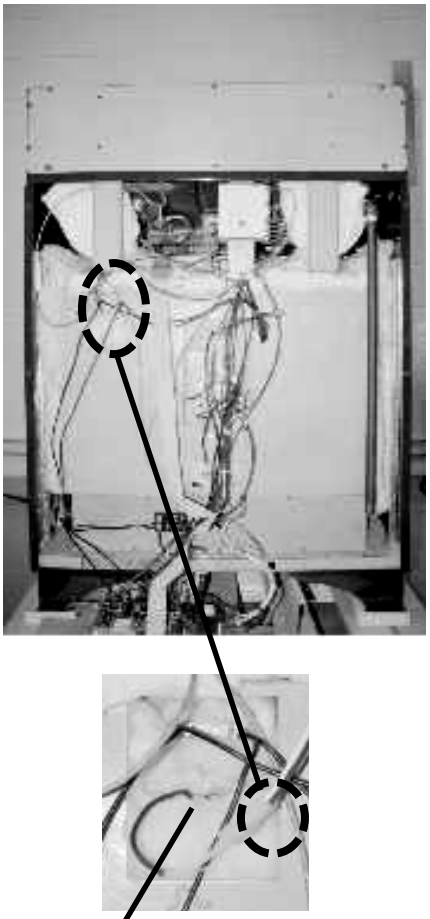
***Step 7:*** Remove baffle's two bottom screws first (you may use a prop for the baffle such as 2" wide masking tape roll)



***Step 8:*** Remove top two screws and gently pull baffle plate out clearing oven probe's opening.

***Step 9:*** Place tape overtop probe's screw heads inside oven.

***Step 10:*** Disconnect molex plug from oven thermostat probe (grey sheath cable & grounding screw)





***Step 11:*** Remove nut holding thermostat probe to shell and replace with new probe.

Test oven Probe should read around 1109 K ohms

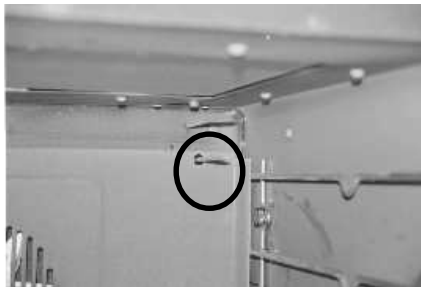
# Procedure 7 - Bake/Broil Limit

***Step 1:*** Disconnect power supply to range.

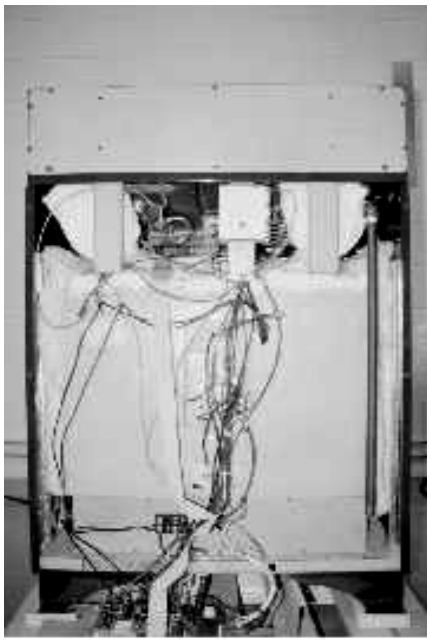
***Step 2:*** Pull range away from wall.

***Step 3:*** Remove range's back panel & convection fan baffle. See Procedures 32 and 6 (steps 5-8) respectively,

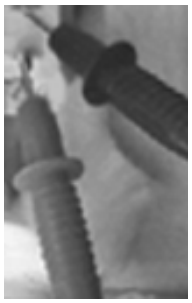
***Step 4:*** Bake/Broil limit is located near the upper right corner inside the oven cavity, next to the oven thermostat probe.



***Step 5:*** From back of the stove, check for visible damage to the limit's body and wire connections.



***Step 6:*** Test bake/broil limit for continuity across terminals.



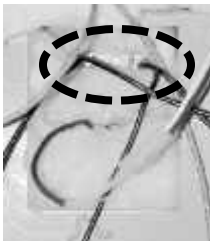
***Step 7:*** Pull both sets of wires, place probes on terminals. If no continuity, replace limit.

***Step 8:*** If limit tests in good order. Test wiring from elements to limit and from relay board to limit for signs of damage and continuity. Also check wires to safety limit (Procedure 8) and to self clean microswitch selector (Procedure 17).

***Step 9:*** To replace bake/broil limit, open oven door and remove for easier access (See Procedure 33)

***Step 10:*** Place masking tape over nut head protruding inside the oven to hold in place.

***Step 11:*** From back of range, remove nut(s) holding bake/broil limit and transfer wires to new limit in the exact same locations.



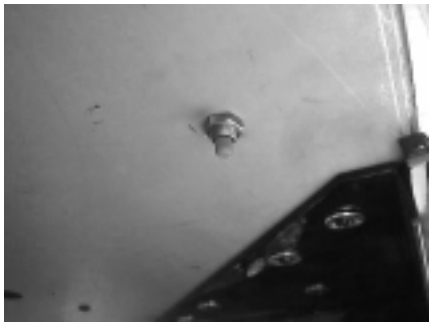
**Caution:** Use extreme care when handling self clean oven thermostat probe and wire. Do not bend excessively or repeatedly. Contents of probe (sodium and potassium hydroxide) produce lye in the presence of moisture. If contents contact skin, remove with dry towel or cloth (NEVER USE WATER). Then wash area thoroughly with water and soap. If assembly ruptures, crimp broken ends with pliers.

# Procedure 8 - Safety High Limit

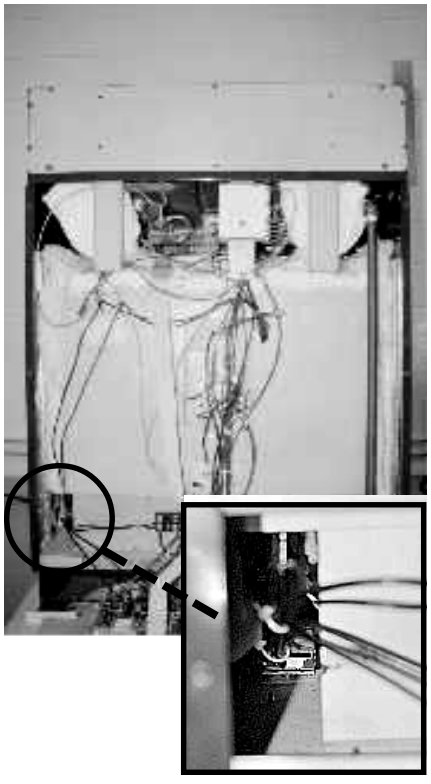
***Step 1:*** Disconnect power supply to range.

***Step 2:*** Pull range away from wall.

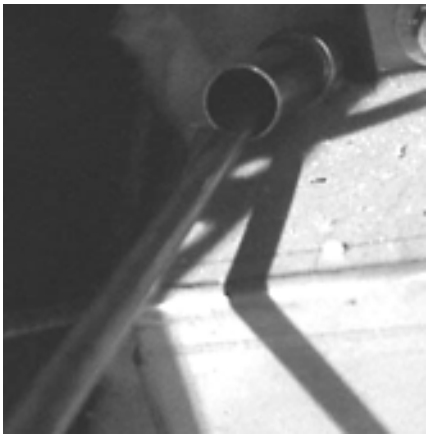
***Step 3:*** Remove range's back panel (see Procedure 32). Safety high limit reset button is located underneath stove, between front right and rear right legs. However all wiring connections need to be accessed from the back of the stove.

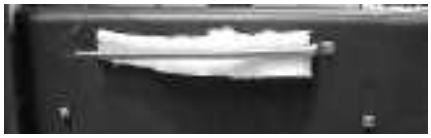


***Step 4:*** To access wiring from safety limit to elements or bake/ broil limit, back of stove will need to removed (See Procedure 32)

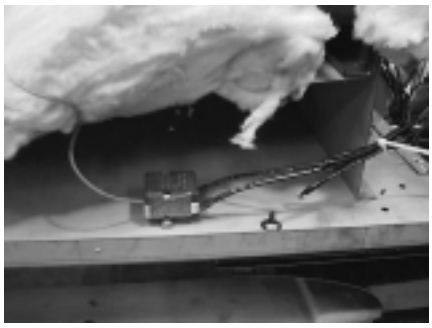


***Step 5:*** Check position of safety probe. it must be inside protective casing for proper operation.





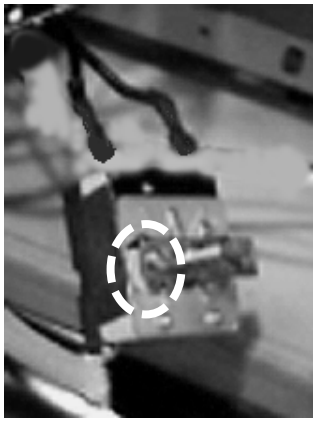
***Step 6:*** Disconnect wires to safety limit and test for continuity across terminals. If defective replace.



***Step 7:*** If safety checks in good condition and safety red button had tripped - safety may be out of calibration. Calibrate or replace.

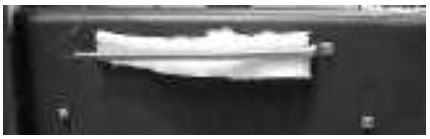
***Step 8:*** To access safety limit, remove nut holding safety limit from underneath bottom using 7/16" nut driver

***Step 9:*** Remove one out of two screws from top clip and slide out of way. With thin blade screwdriver adjust calibration. Turn 45 deg CCW to increase temperature limit 125F or CW to decrease by 125F



***Step 10:*** If replacing safety limit, ensure new safety probe is nestled entirely inside protective casing and that protective sleeve is in place.

Also ensure insulation is between casing and oven side.



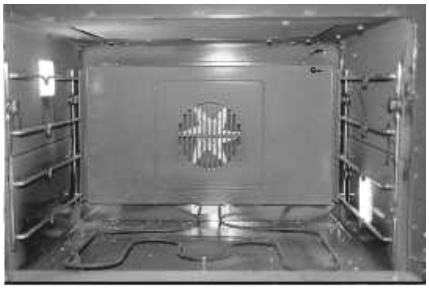
**Caution:** Use extreme care when handling self clean oven thermostat probe and wire. Do not bend excessively or repeatedly. Contents of probe (sodium and potassium hydroxide) produce lye in the presence of moisture. If contents contact skin, remove with dry towel or cloth (NEVER USE WATER). Then wass area thoroughly with water and soap. If assembly ruptures, crimp broken ends with pliers.

# Procedure 9 - Bake Element

***Step 1:*** Disconnect power supply to range.

***Step 2:*** Remove oven door and oven racks (See Procedures 33 & 6 respectively)

***Step 3:*** Gently lift bake element and remove 2 screws holding rear support to the back of oven cavity.



***Step 4:*** Pull bake element 2” to 3” away from back wall. Inspect wiring connections carefully. Check for signs of burnt wiring (terminals should be shiny and bright).

***Step 5:*** Mark and remove wiring ends from bake element by pulling ends up and away from element terminals.

***Step 6:*** With bake element removed, test for continuity. Place test probes on each terminal. Needle should read approximately 25 ohms for 3500W elements and 16 ohms for 5,000W elements. If no reading or significantly different, replace.

***Step 7:*** Test bake element for grounding as well by setting multimeter to Rx1 resistance. Place one test probe on one terminal and other on metal sheath. If reading changes the element is grounded and needs replacing.

***Step 8:*** Replace new bake element and attach wiring in same position as originally. Fasten support bracket securely to ensure proper grounding of element.

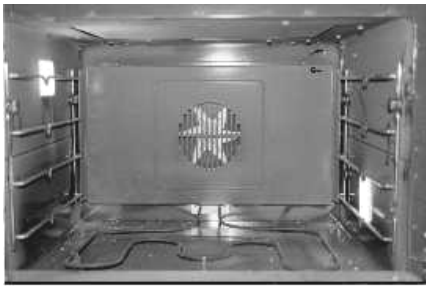
***Step 9:*** If bake element tests in good condition, test continuity in wiring to relay board (Proc 18), bake/limit broil limit (Proc 7), safety limit (Proc 8) and terminal block (Proc 2).

# Procedure 10 - Convection Bake Element

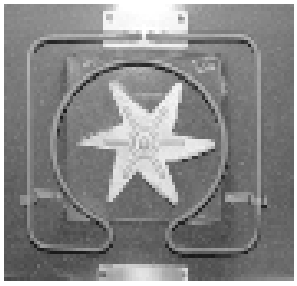
***Step 1:*** Disconnect power supply to range.

***Step 2:*** Remove oven door and oven racks (See Procedures 32 & 6 respectively)

***Step 3:*** Remove baffle (see Procedure 6).



***Step 4:*** Remove 2 or 4 screws holding convection ring element to back of stove.



***Step 5:*** Pull convection bake element 2" to 3" away from back wall. Inspect wiring connections carefully. Check for signs of burnt wiring (terminals should be shiny and bright).

***Step 6:*** Mark and remove wiring ends from convection bake element by pulling ends up and away from element terminals.

***Step 7:*** With bake element removed, test for continuity. Place test probes on each terminal. Needle should readapproximately 24 ohms for 2400W elements. For 36" models, test two inner leads and two outer leads for continuity. If no reading or significantly different from range, replace.

***Step 8:*** Test bake element for grounding as well by setting multimeter to Rx1 resistance. Place one test probe on one terminal and other on metal sheath. If reading changes the element is grounded and needs replacing.

***Step 9:*** Replace new convection bake element and attach wiring in same position as originally. Fasten support bracket securely to ensure proper grounding of element.

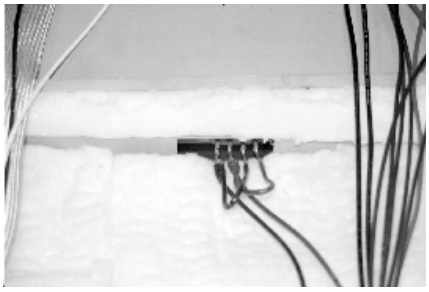
***Step 10:*** If convection bake element tests in good condition, test continuity in wiring to relay board, bake/limit broil limit and terminal block.

# Procedure 11 - Broil Element

***Step 1:*** Disconnect power supply and gas supply to range.

***Step 2:*** Remove range's back panel (see Procedure 32)

***Step 3:*** Mark and remove wiring ends from broil element by pulling ends up and away from element terminals - please note sequence of black and red wires to ensure they are placed on new element in the same sequence.



***Step 4:*** Test for continuity. Place test probes on each terminal. Needle should read approximately 24 ohms for 3500W elements. 36" models use two 2500W broil plates and each plate has four leads. Test the two outer and the two inner leads for approximately 45 ohms.. If no reading or significantly different from range, replace.

***Step 5:*** If element faulty - Replace. Remove stove top (Procedure 26) and burner overflow trays.

***Step 6:*** Remove sheet metal cover and insulation over top broil element

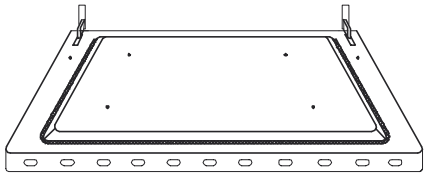
***Step 7:*** Remove screws holding broil element to oven and replace. Ensure, wiring in same position as originally.

***Step 8:*** If broil element tests in good condition, test continuity in wiring to relay board, bake/limit broil limit and terminal block.

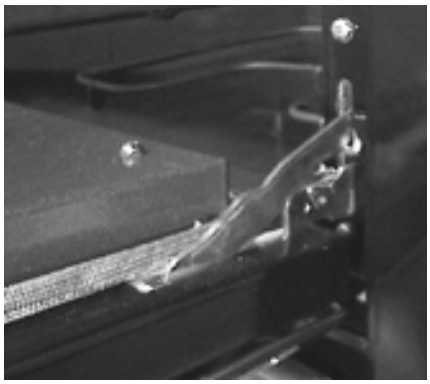
# Procedure 12 - Oven Door Gasket

***Step 1:*** Remove oven door (Procedure 33)**.** Place door face down on soft surface to prevent scratching porcelain.

***Step 2:*** Loosen four corner screws from inner door panel and remove damaged gasket (note" gasket has an inner and outer loop)



***Step 3:*** Insert new gasket starting from one bottom corner and loosely tighten first screw.



***Step 4:*** Work your way around the perimeter tightening the corner screws as the gasket is being fed.

***Step 5:*** Ensure gasket is even throughout and tighten all screws.

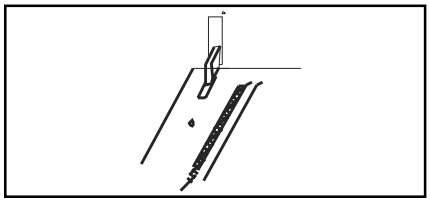
**Note:** When placing door back onto stove, insert hinges into receivers and open door fully. Disengage brass catches prior to closing door. Failure to do so will damage the hinges. See Procedure 33 for full details.

# Procedure 13 - Oven Door Hinge

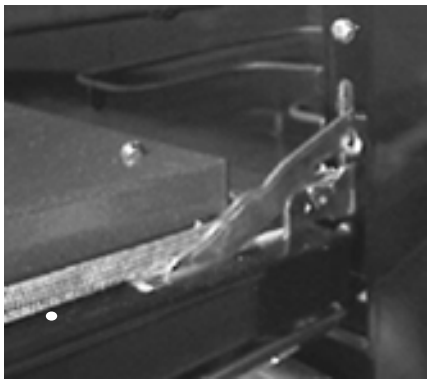
***Step 1:*** Remove oven door (Procedure 33)

***Step 2:*** Place door face down on soft surface to prevent scratching porcelain.

***Step 3:*** Drill out 9/64” diameter rivets and pull defective hinge away from door frame.



***Step 4:*** Insert new hinge assembly and using hand held rivet, rivet new hingein place



***Step 5:*** Place door back in stove. Insert hinges into receivers and open door fully. Disengage brass catches prior to closing door. Failure to do so will damage the hinges. See Procedure 33 for full details.

# Procedure 14 - Oven Vents

***Step 1:*** Remove oven door (Procedure 33)

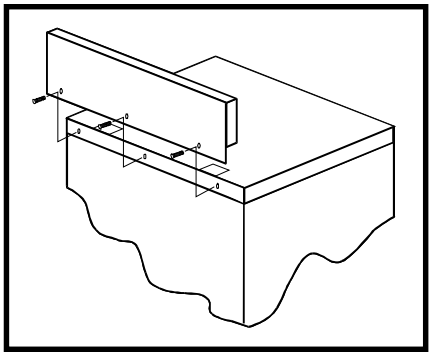
***Step 2:*** Oven vents are located in the top of the oven.

**Note:** Vents have a grid called a smoke eliminator positioned at the bottom of the oven vent. Do not remove this component.

***Step 3:*** Inspect opening to vent for signs of excessive foreign substances

***Step 4:*** Pull unit away from the wall

***Step 5:*** Remove top cresting splashback and inspect the vent - ensure vents have appropriate clearance. If blocked or not level, replace.



***Step 6:*** To replace oven vent, remove screws holding oven vent to oven cavity from inside oven

***Step 7:*** Remove stove's back panel (Procedure 32).

***Step 8:*** Transfer insulation around vent tube to new oven vent.

# Procedure 15 - Oven Bulb

***Step 1:*** Press “light” symbol on control panel - a clicking noise should be heard from the back of range. If clicking noise audible yet lights do not turn on, replace light bulbs.

***Step 2:*** Disconnect power supply to range.

***Step 3:*** To replace bulb, remove oven racks and rack supports (see Procedure15)

***Step 4:*** With fingers, pry on edge of glass covering

***Step 5:*** Remove light bulb by pulling straight out.

***Step 6:*** Without touching lens of new bulb (use cloth), insert into socket (if lens has been touched, clean with rubbing alcohol first)

***Step 7:*** If bulb tests in good order however oven light does not operate, check light housing.

***Step 8:*** Pull unit away from wall and remove range’s back panel (see Procedure 32).

***Step 9:*** Inspect for signs of damage at light transformer. Test transformer for continuity across terminals. If faulty, replace.

***Step 10:*** Disconnect wires from old transformer and place in new one.

***Step 11:*** If Transformer is in good order, check wiring to light housing to ensure molex plug is not loose or damaged.

***Step 12:*** With insulation moved aside, test wiring continuity with multimeter probes. If faulty, replace.

***Step 13:*** Test housing to ensure in good condition with a multimeter (with wires disconnected from housing, place each test probe on the two leads and test for continuity).

# Procedure 16 - Convection Fan Motor

***Step 1:*** If motor not operating, disconnect power to range and pull away from wall.

***Step 2:*** Remove range's back panel (see Procedure 32)

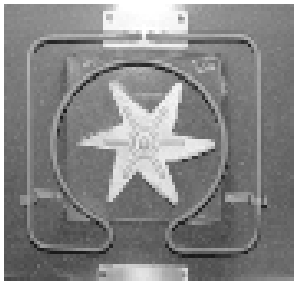
***Step 3:*** Test motor to ensure it is working order. Place multimeter on terminals and (with wires removed) to test for continuity. If faulty, replace.

***Step 4:*** Test wiring and connections at fan motor for damage or broken wires.

***Step 5:*** To replace motor, remove oven door (see Procedure 33).

***Step 6:*** Remove racks, rack supports (see Procedure 6) and fan baffle from inside oven (see Procedure 6 steps 5-8)

***Step 7:*** Remove convection fan wheel by turning center locking nut CW (not CCW). It is easier to hold nut firmly and turn fan wheel clockwise). Ensure retainer clip is transferred to new fan.



***Step 8:*** From back of stove, remove three mounting screws and transfer wires to new motor.

***Step 9:*** Sometimes convection fan wheel may become loose or warped and rattle against the baffle. Remove baffle as per (Procedure 6, steps 5-8*)* and tighten fan wheel or straighten blades.

***Step 10:*** If baffle is interfering with the operation of the convection fan wheel, remove baffle (Procedure 6, steps 5-8*)* and inspect fan wheel and baffle. Baffle may have warped, replace or add stainless steel washers to increase distance to wheel.

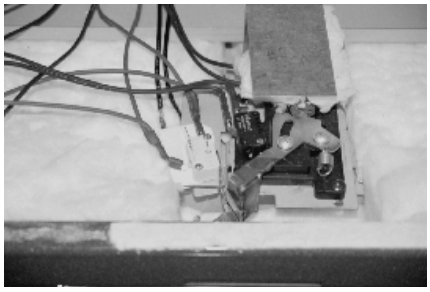
# Procedure 17 - Self Clean Latch Mechanism

***Step 1:*** Disconnect power supply to range.

***Step 2:*** Remove control panel (see Procedure 34 for details)

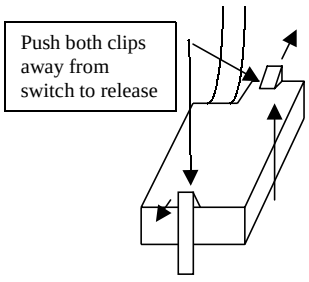
***Step 3:*** Prop top of stove (see Procedure 35 for details)

***Step 4:*** If self clean results are poor, check all switches, wiring and connections to self clean microswitch.



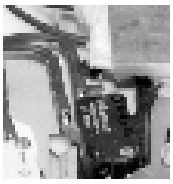
**Note:** Black microswitch allows signal from latch to confirm timer that oven door is locked - this allows self clean cycle to begin. If latch is stuck or switch is disconnected or faulty, self clean will not commence.

***Step 5:*** Test switch with multimeter for continuity - switch is normally open, close switch and test.

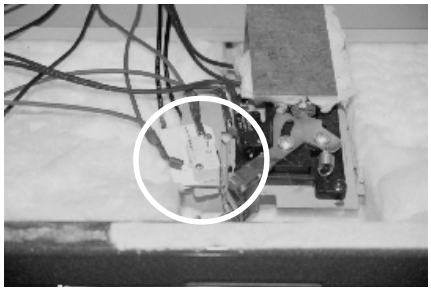



*Step 6:* To replace switch, with a slot screwdriver push on the two clips and pull the switch upwards

Replace black wires on new switch in same two left positions, right position is empty.



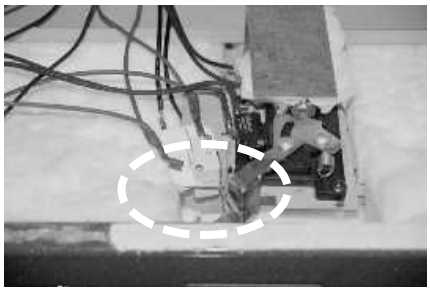
***Step 7:*** Check microswitch to cooling fan - top white switch. Chech to ensure wiring is making good contact to the two outer positions (center position remains empty). If incorrectly wired, unit will not self clean properly since cooling fan will not engage during self clean and safety temperature limit in timer will shut down operation.



***Step 8:*** Test microswitch for continuity when button is depressed across terminals 1 and 2 by placing test probes on terminals. If no continuity in the on position, replace switch.

***Step 9:*** To replacem unscrew microswitch from support place and transfer red wires from old switch (please note that bottom switch is held by the same nut and bolt)

***Step 10:*** Check microswitch to bake/broil limit - bottom white switch. Chech to ensure wiring is making good contact to the two outer positions (center position remains empty). If incorrectly wired, unit will not self clean properly since regular bake/broil limit will not be bypassed and temperatures in oven will not be high enough to produce good results.



***Step 11:*** Test microswitch for continuity when button is depressed across terminals 1 and 2 by placing test probes on terminals. If no continuity in the on position, replace switch.

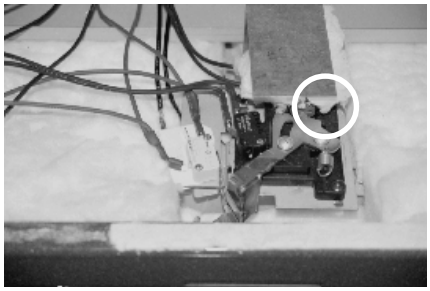
***Step 12:*** To replace bake/broil switch, remove screws holding mouting bracket to self clean metal assembly and transfer black wires to new switch.

# Procedure 17 - Self Clean Latch Mechanism

***Step 13:*** If all switches and wiring to switches test in good order, latch is not operational, Disconnect all wires from micro switches, one at the time and place on new latch assembly.

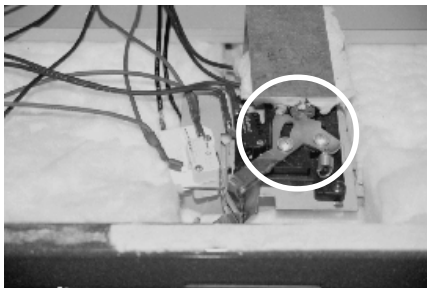
***Step 14:*** Disconnect two black wires to solenoid

***Step 15:*** With short Phillips screwdriver remove four screws holding assembly to top of stove



***Step 16:*** Replace with new assembly

***Step 17:*** Latch only Replacement (latch may be warped or bent): Remove two Phillips screws holding latch in place and replace with new latch



***Step 13:*** Do not over tighten screws as they must allow movement of the latch back and forth.

**Self Clean Operation:**

Clock programmed to self clean, door automatically locks (wax motor is energized and pushes latch to lock) and cooling fan starts. Regular bake/broil limit is bypassed and temperatures cycle off the timer.

When door locks, top “black” microswitch closes and sends signal to timer to confirm door is locked - unit can now begin self clean cycle.

If latch is stuck or door does not lock, self clean program will shut down.

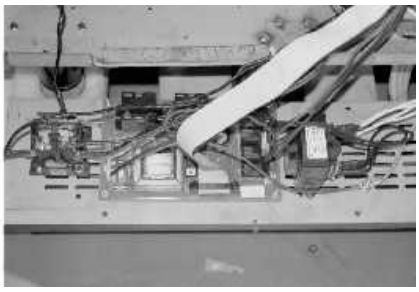
If any of the 3 microswitches on the self clean assembly, unit will not self clean properly.

# Procedure 18 - Timer Relay Board

***Step 1:*** Disconnect power supply to range and pull unit away from wall.

***Step 2:*** Remove relay access panel (see Procedure 32). Panel is held in by a series of self tapping screws.

***Step 3:*** Carefully pull away from range and drop relay cover to access relay board.



***Step 4:*** Remove one wire at a time from faulty relay board unto new board.

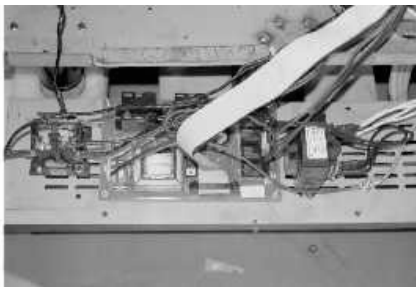
***Step 5:*** Remove four nuts holding relay board to access panel - ensure that non conductive spacers are also transferred to new board.

# Procedure 19 - Timer Coaxial Cable

***Step 1:*** Disconnect power supply to range and pull unit away from wall.

***Step 2:*** Remove relay access panel (see Procedure 18). Panel is held in place by a series of self tapping screws.

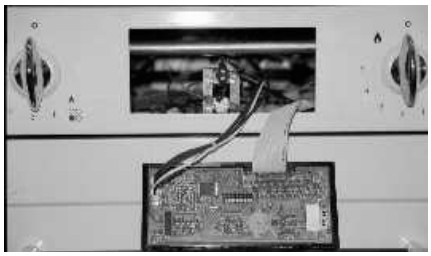
***Step 3:*** Carefully pull out and drop relay cover to access timer coaxial power supply cable.



***Step 4:*** Inspect cable for visible damage and replace as needed. If timer does not operate properly, one of probable components is the coaxial cable (other probable components are the timer and the relay board)

***Step 5:*** Pull locking tabs away and release cable from relay board.

***Step 6:*** Release coaxial cable from timer (see Procedure 4 for timer access).

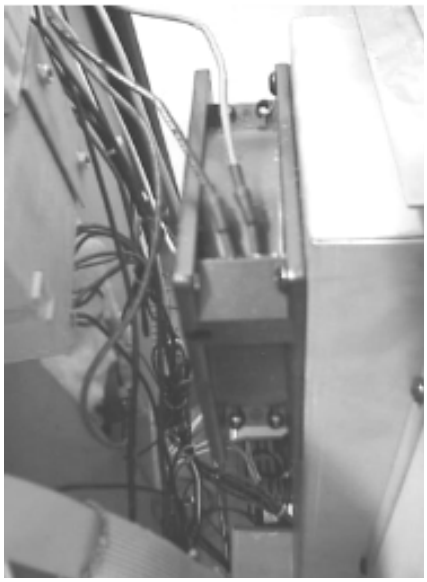


***Step 7:*** Replace cable - please cable is routed exactly as it was and that it does not interfere with any other wiring.

# Procedure 20 - Cooling Fan & Limit

***Step 1:*** Disconnect power supply to range and pull unit away from wall.

***Step 2:*** Remove range's back panel (See procedure 32)

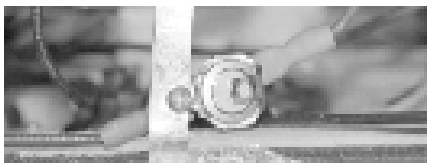


***Step 3:*** Test continuity across cooling fan's terminals (pull black and red wires). If fan test in good condition, test wiring.

***Step 4:*** To test wiring, place multimeter probe on each wire and test for continuity between fan and terminal block and to fan limit.

***Step 5:*** To access fan limit, remove control panel (see Procedure 34)

***Step 6:*** If fan and wiring in good condition, test fan limit for continuity. Remove both red wires and test across, limit should be open and no reading taken across terminals.



***Step 7:*** If limit test in good condition, inspect self clean assembly microswitch (see Procedure 17).

***Step 8:*** If limit is faulty, replace. remove wires to limit and transfer red wires to new temperature limit.

***Step 9:*** Remove one nut/bolt holding limit to mounting bracket.

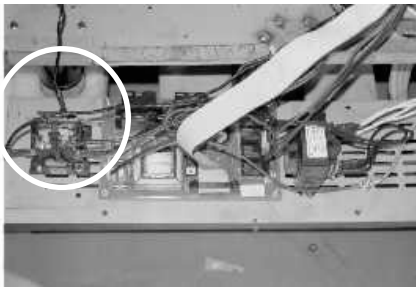
***Note:*** Please ensure that red wires do not run parallel with coaxial timer cable or oven thermostat probe when finished.

# Procedure 21 - 25 amp Relay *(36" Models only)*

***Step 1:*** Disconnect power supply to range and pull unit away from wall.

***Step 2:*** Remove relay access panel (see Procedure 18). Panel is held in by a series of self tapping screws.

***Step 3:*** Carefully pull out and drop relay cover to access 25 amp Relay.



***Step 4:*** If range's oven is not operational, pull wires from relay and test continuity across each side. If relay faulty, replace. Sometimes relays malfunction only under load - carefully plug range ensure no wires are making contact with any metal parts and test for voltage across the relay.

***Step 5:*** If relay is faulty, replace and transfer wires to new relay in the same sequence.

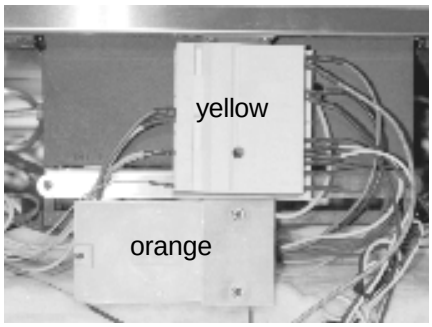
***Step 6:*** Remove screws securing relay to access panel and attach new 25 amp relay.

# Procedure 22 - Spark Module(s)

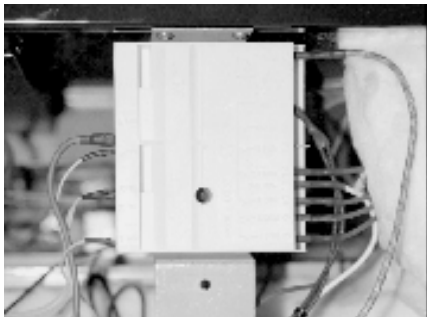
***Step 1:*** Disconnect power supply to range.

***Step 2:*** Remove range's back panel (see Procedure 32)

***Step 3:*** Test wiring and connections to spark module, particularly black, white and green wires to ensure they are tightly connected. Please note that 36" models have two spark modules - an "orange" spark module which gets its power supply from the "yellow" spark module,




30" units have only one "yellow" spark module. Test wiring between these two if problems are related to two left burners (when facing stove from front, yellow module controls 4 burners on right and oven, orange module controls left two burners).



***Step 4:*** There should be no continuity across any of the corresponding terminals from one side of the module to the other. If any show continuity, replace spark module.

***Step 5:*** To replace faulty spark module, remove one wire at a time from old module and transfer to new module in the exact same terminals as the original. Please ensure quick connect leads are properly and fully inserted into the spark module spades (use pliers if needed).

***Step 6:*** Spark modules are held in place by two phyllips head nut/bolts.

Test wiring from spark module to ignition switches for continuity and/ or wires to electrodes. Replace as needed (see Procedure 23 and Procedure 28 for ignition switch testing and electrode wiring testing respectively)

**IMPORTANT: ALL GAS WORK TO BE PERFORMED BY A QUALIFIED GAS TECHNICIAN.**

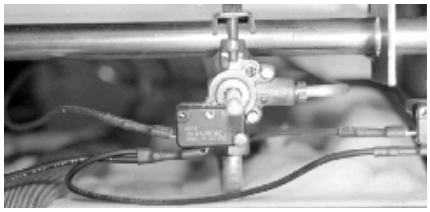
# Procedure 23 - Ignition Switches

***Step 1:*** Disconnect power supply to range.

***Step 2:*** Remove control panel (see Procedure 34)

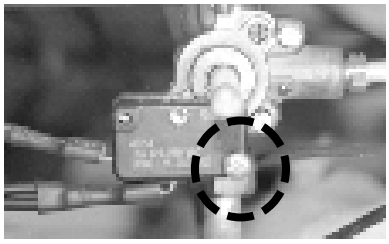
***Step 3:*** Inspect wires and connections to ignition switches for signs of damage or broken wires. If damaged repair or replace. Check wire continuity between ignition switch and spark module for both red and black wires.

***Step 4:*** Check ignition switch for visible damage and replace if necessary. Switch can be tested by testing continuity across terminals in the “on” position. Pull wires and place probes at each terminal and test.



***Step 5:*** To replace switch disconnect wire connections from faulty ignition switch and transfer to new switch.

***Step 6:*** Remove one mounting screw with phillips screwdriver to disconnect switch from burner valve. lift switch off valve stem. When installing new switch do not overtighten or casing may crack.



**IMPORTANT: ALL GAS WORK TO BE PERFORMED BY A QUALIFIED GAS TECHNICIAN.**

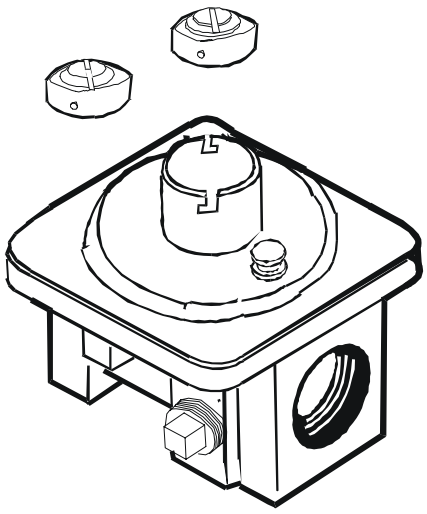
# Procedure 24 - Gas Pressure

***Step 1:*** Too much gas pressure to the regulator or not enough, can affect range performance. Too much pressure, and flames could be too large and leave burner caps or oven burner (leading to nuisance sparking or oven shutting down).

***Step 2:*** Gas pressures to range is 11" w.c. for Propane and 6" w.c. for Nat Gas.

*Note:* a dedicated gas line should be used to feed gas to range. Other appliances on the same line or too small piping (i.e. 3/8") will lead to performance problems, small flames, etc due to low pressure.

***Step 3:*** Pressure to regulator (regulator included with range) can be checked by inserting a tester into access port. It should read 4" w.c. If regulator is defective, then replace (see Procedure 210)



***Step 4:*** Sometimes the stove may have the incorrect gas setting for the gas being supplied (i.e. Nat Gas simmers, orifices and regulator setting, when incoming gas is Propane; or vice versa). See Procedure 26 for gas conversion instructions.

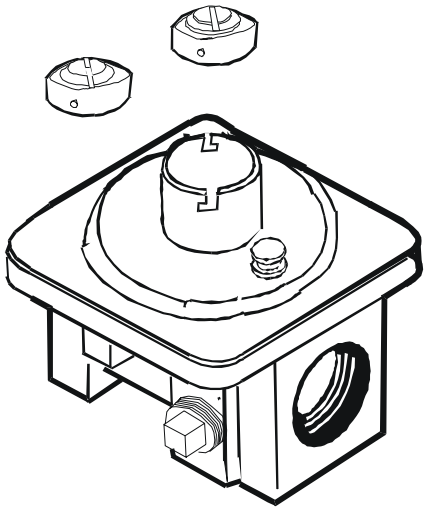
**IMPORTANT: ALL GAS WORK TO BE PERFORMED BY A QUALIFIED GAS TECHNICIAN.**

# Procedure 25 - Regulator Replacement

***Step 1:*** Disconnect power supply to range and disconnect or shut off gas supply.

***Step 2:*** Remove range's back panel (Procedure 32).

***Step 3:*** Before replacing regulator because flames are too high or too low, check regulator cap for proper gas setting.



***Step 4:*** Cap is stamped with either: "NAT" on the convex side or "LP" on the hollow concave side. If stove is set for Nat Gas and it receives Propane, the flames will be large. If stove is set to Propane and it receives Nat Gas, flames will be small. See Procedure 26 for Gas conversion steps.

***Step 5:*** If no gas flows through regulator but there is gas to the regulator, it is either mounted backwards (very unlikely, however there is an arrow stamped on the body of the regulator to ensure proper orientation); or it is faulty.

***Step 6:*** If installed backwards, disconnect regulator from manifold and inlet piping, reverse orientation and re-install. Check all gas connections with soapy water solution to ensure no gas leaks.

***Step 7:*** If regulator is faulty (i.e no gas flow, leak, etc.) then replace regulator.

***Step 8:*** To remove regulator, carefully rotate and unscrew from manifold. Ensure new regulator is oriented with arrow pointing in direction of gas flow and ensure pipe dope is used in all threaded connections.

***Step 9:*** When finished check all gas connections with soapy water solution to ensure no leaks are present.

**IMPORTANT: ALL GAS WORK TO BE PERFORMED BY A QUALIFIED GAS TECHNICIAN.**

# Procedure 26 - Gas Conversion

**Please contact factory for conversion kit appropriate for the range. Serial number of range must be provided to ensure correct kit is ordered.**

Conversion Steps:

***Step 1:*** Disconnect gas supply and electric power supply.

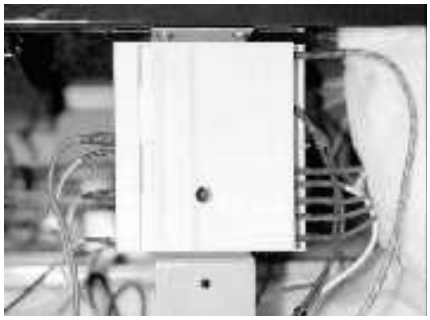
***Step 2:*** Remove range's back panel (see Procedure 32).

***Step 3:*** Remove control panel (see Procedure 34)

***Step 4:*** Disconect wiring to timer (Procedure 4)

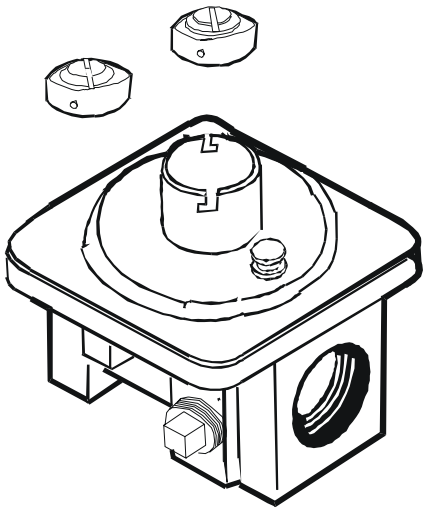
***Step 5:*** Mark and disconnect wiring to fan limit (Procedure 20)

***Step 6:*** Mark and disconnect ground (green), neutral (white) and power (black) wires to spark module.

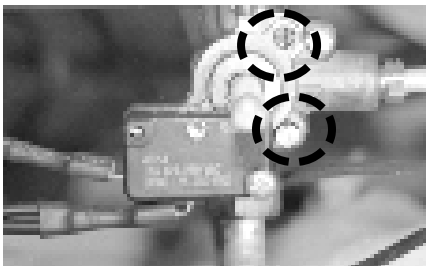


***Step 7:*** Pressure regulator conversion. Regulator has reversible cap for either Natural Gas or Propane. See Procedure 25 for details on regulator access.

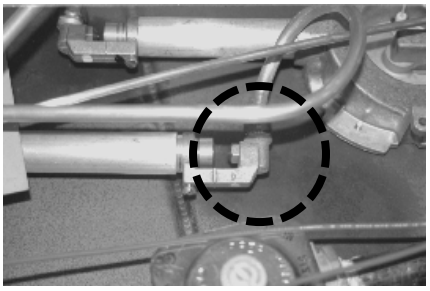
***Step 8:*** To reverse regulator cap, remove with large flat blade screwdriver turning CCW. The gas being converted to must be stamped on the outside of the cap. Position cap back on regulator, press and turn CW to lock in place



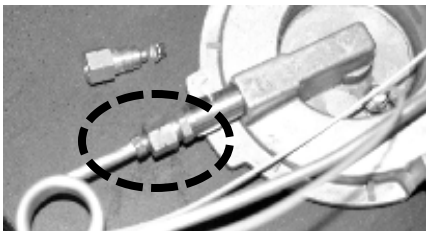
***Step 9:*** Burner valves simmer jet conversion. Use small flat blade screwdriver to remove original simmer jets and replace with appropriately numbered simmer jets (all jets have their number stamped on the head - refer to conversion kit chart for details). Do not overtighten. There are two simmer jets per valve, except for grill burners which have only one per valve.



***Step 10:*** Surface burner orifice conversion - outer flame ring. Remove existing orifices and replace with new ones as indicated in conversion kit chart. Use two wrenches to prevent twisting of gas tubing.

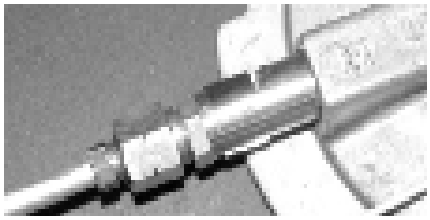


***Step 11:*** Surface burner orifice conversion - inner flame ring. Remove brass nut (using two wrenches) and remove old "cap". Replace and tighten.



# Procedure 26 - Gas Conversion

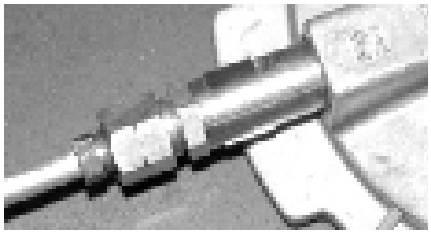
***Step 12a:*** Air shutter adjustment will be needed for small simmer setting. Approximate air hole coverage is 1/4 covered for LP



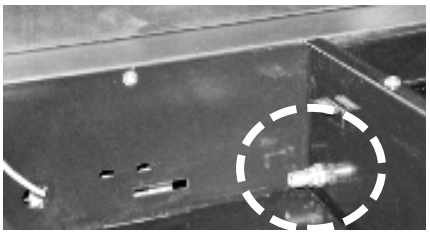
**IMPORTANT: ALL GAS WORK TO BE PERFORMED BY A QUALIFIED GAS TECHNICIAN.**

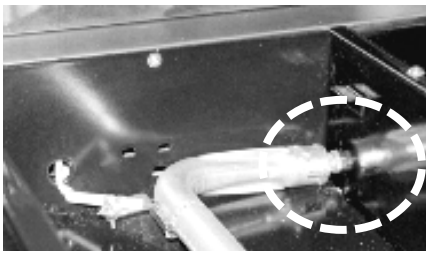
**Air Shutter Adjustments may be needed to adjust flame patterns in the field after conversion or new appliance installation.**

***Step 12b:*** Air shutter adjustment will be needed for small simmer setting. Approximate air hole coverage is 1/2 covered for Nat Gas.



***Step 13:*** Grill models only. There is only valve simmer jet and one burner jet.
Air shutter will need adjusting: LP fully open, Nat Gas open 0.40".





## Conversion/Orifice Charts

**North American Natural Gas**

| *Description* | *Size* | *Part no./Model* | 3520/3525 #38109 | 3620/3625 #38110 | 3620/3625 BBQ #38111 |
|---|---|---|---|---|---|
| main jet simmer | 34 | #3669 | 4 | 6 | 4 |
| main jet | 1.7 | #3860 | 4 | 6 | 4 |
| valve outer | 0.4 | #7640 OR #3856 | 4 | 6 | 4 |
| valve inner | 0.88 | #3857 | 4 | 6 | 4 |
| grill Jet | 1.18* | #3516 | 0 | 0 | 2 |
| grill valve | 0.58 | 7636 | 0 | 0 | 2 |
| venturi | | #3667 | 4 | 6 | 4 |

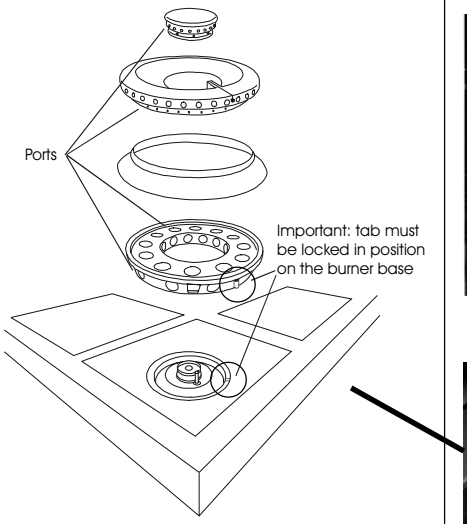
**North American Liquid Propane**

| *Description* | *Size* | *Part no./Model* | 3520/3525 #38112 | 3620/3625 #38113 | 3620/3625 BBQ #38114 |
|---|---|---|---|---|---|
| main jet simmer | 7 | #3670 | 4 | 6 | 4 |
| main jet | 1.1 | #3861 | 4 | 6 | 4 |
| valve outer | 0.25 | #3858 | 4 | 6 | 4 |
| valve inner | 0.54 | #3859 | 4 | 6 | 4 |
| grill Jet | 0.85* | #3517 | 0 | 0 | 2 |
| grill valve | 0.4 | #7640 OR #3856 | 0 | 0 | 2 |
| venturi | | #3667 | 4 | 6 | 4 |

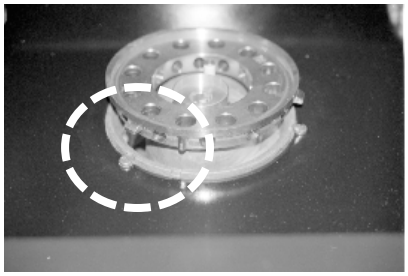
* These orifices use standard size orifice #3519 0.74 drilled out to following size:
#3517 0.85 for North American Liquid Propane (L/P) kits

# Procedure 27 - Burner Caps

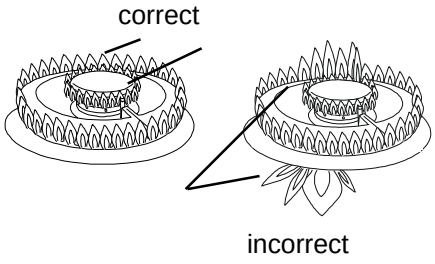
***Step 1:*** Nuisance sparking and erratic flames can be caused by improper positioning of burner caps onto the burner base.



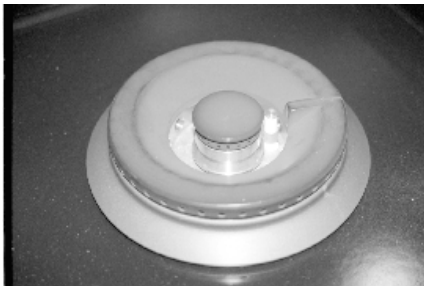

***Step 2:*** Caps must “lock” in place to ensure a flat surface is provided and flames are evenly distributed out of cap ports.



Burner ring not locked results in uneven flames




***Step 3:*** Other causes for erratic sparking are moisture inside caps (specially after washing) or food particles blocking the ports.



# Procedure 28 - Electrodes (Surface & Grill)

***Step 1:*** Before replacing surface electrode, ensure it is clean of food deposits (an emery board can be used to remove solid food substances). Also ensure that caps are correctly positioned (see Procedure 27) before an electrode is replaced.

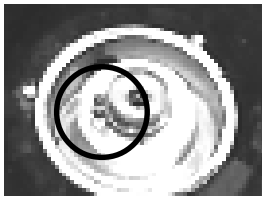
***Step 2:*** Disconnect power supply to range

***Step 3:*** Remove back panel (see Procedure 32)

***Step 4:*** Remove burner rings from suspect electrode

***Step 5:*** Test electrode for continuity by placing tip of probe on head of electrode and other end on the electrode wire to the spark module (pull wire from module)

***Step 6:*** If no continuity at electrode, pull wire from electrode and test wire for continuity. If wire is in order, replace electrode.



***Step 7:*** To replace electrode, turn center brass nut CCW 3 to 4 revolutions.

***Step 8:*** Prop top up (see Procedure 35)

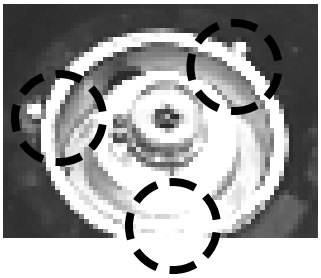
***Step 9:*** remove “C” clip holding electrode to base with needle nose pliers by sliding off horizontally from underneath the top.

***Step 10:*** Pull wire from faulty electrode and transfer to new electrode.

***Step 11:*** Place electrode onn burner base by squeezing “C” clamp between electrode and burner bowl slot.

***Step 12:*** If electrode and wire test in good condition, check wiring and connections at spark module (see Procedure 22) or at ignition switch (see Procedure 23)

***Step 13:*** Burner bases may not be sitting flush or may be damaged. To replace, remove three screws securing base to burner bowl.

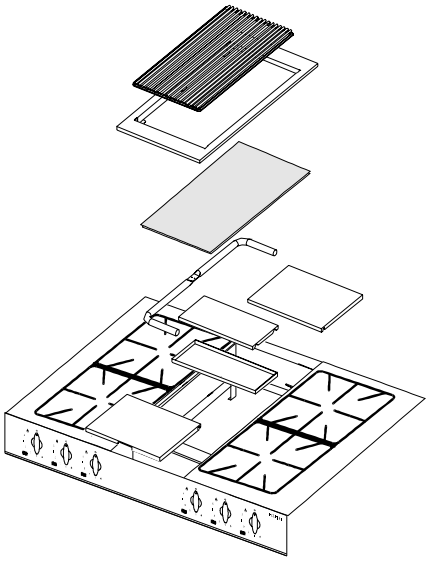


***Step 14:*** Prop top up (see Procedure 35).

***Step 15:*** Disconnect faulty burner base from aluminum tubing (please be careful not to damage or kink tubing).

***Step 16:*** Grill models. To replace damaged or faulty grill electrodes, remove range’s back panel (see Procedure 32).

***Step 17:*** Remove grill components



***Step 18:*** Remove screw holding electrode to burner’s mounting clip.

***Step 19:*** Disconnect electrode wire from spark module and pull through into the grill cavity.

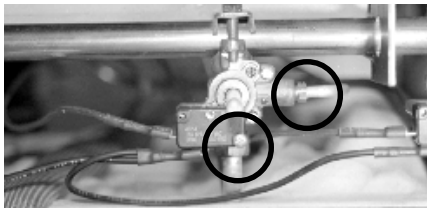
***Step 20:*** Feed new wire through hole at the end of grill cavity and attach to spark module.

# Procedure 29 - Top Burner Valve

***Step 1:*** Disconnect power supply to range and shut off gas supply.

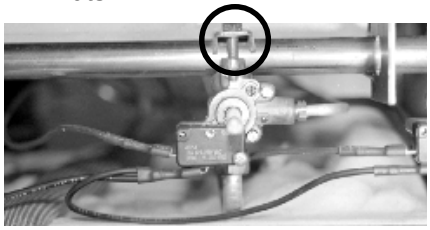
***Step 2:*** Remove control panel (see Procedure 34)

***Step 3:*** Remove aluminum tubing from defective valve with wrench.



***Step 4:*** Remove ignition switch (see Procedure 23). Wires can remain on switch if new valve does not have switch factory installed.

***Step 5:*** Disconnect burner valve from manifold by removing two 8 mm nuts.



***Step 6:*** Install new burner valve to manifold - ensure new valve has the “o” ring gasket to seal against the manifold. If not, transfer seal from old valve.

***Step 7:*** Attach aluminum tube to new valve.

***Step 8:*** Turn gas on and test for gas leaks with soapy water solution.

**IMPORTANT: ALL GAS WORK TO BE PERFORMED BY A QUALIFIED GAS TECHNICIAN.**

# Procedure 30 - Loose Grounds

***Step 1:*** Loose grounds can cause the electrodes to start sparking even when the ignition switches are “off”.

***Step 2:*** Check house wiring first (see Procedure 1). Check wall receptacle, etc. to ensure it is not a consumer issue.

***Step 3:*** Remove panels to access terminal block and spark modules (see Procedure 32). Look for loose or damaged wiring and connections at spark module (Procedure 22) or at terminal block (Procedure 2).

***Step 4:*** Ensure burner valve stems are level. If stem is out of alignment, it could maintain the ignition switch in the “on” position (although no gas flows to the burner). See Procedure 29 for burner valve replacement.

***Step 5:*** A faulty igntion switch can also cause random sparking. See Procedure 28 for testing switches.

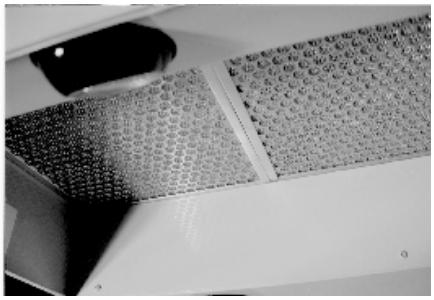
***Step 6:*** If no loose grounds found in wiring, replace spark module as per Procedure 22).

# Procedure 31 - Closet Exhaust Fan

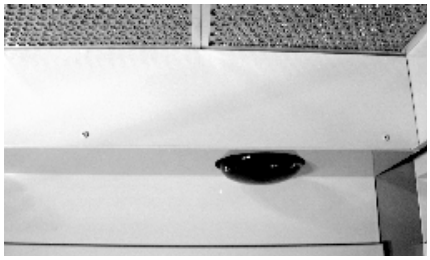
**Hood Access -** disconnect power to hood.

***Step 1:*** Pull stove away from wall

***Step 2:*** Remove filters (using the plastic tabs at the front of the filters, push the filters backwards and at the same time pull down on the tabs).



***Step 3:*** Remove three front colored screws on access panel and three vertical screws on top edge above access panel.

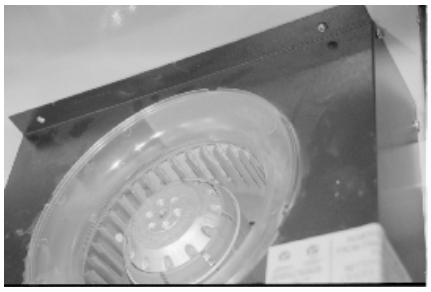


***Step 4:*** Once screws are removed, pull on control panel at an angle to allow panel to clear sides of hood. This will expose all the electrical connections and blowers.

**Blower Removal -** disconnect power to hood.

***Step 5:*** Remove molex pins from hoods to disconnect wires.

***Step 6:*** Blowers are held in place by two screws fastening the blower to the top of the hood and by small tabs.



***Step 7:*** Once screws are removed, pull blower to the left to free tabs and out

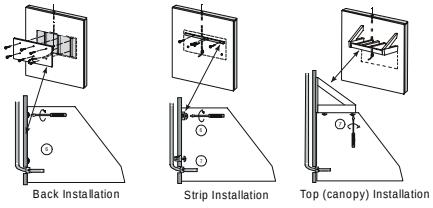
***Step 8:*** Blowers are held in place by two screws fastening the blower to the top of the hood and by small tabs.

***Step 9:*** Once screws are removed, pull blower to the left to free tabs and out

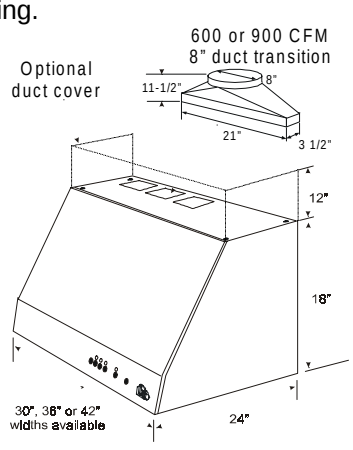
**Hood Removal -** disconnect power to hood.

***Step 10:***Disconnect wires to terminal block (hoods are all hard wired as they are not supplied with a wall plug)

***Step 11:***Hoods are held in place to the wall by two or four screws fastened directly to a support wood strip or a wood plate (depending on installation). Please refer to Hood Installation Manual for additional details.




***Step 12:***Top of Hood should be connected and sealed to rigid galvanized ducting by an adaptor (supplied with the hood). Duct tape may need to be cut to allow the hood to be free from the outside ducting.



# Procedure 31 - Closet Exhaust Fan

**Splashback Kit Replacement:**

***Step 13:***Pull stove away from wall

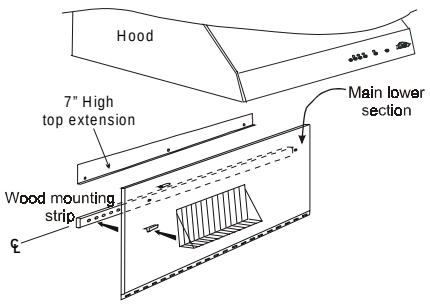
***Step 14:***Remove support racks by simply pressing on bottom metal clips to loosen

***Step 15:***Remove screws holding main splashback to wall near the bottom

***Step 16:***Remove two upper screws holding splashback to wood mounting strip.

***Step 17:***If needed, remove 7" extension panel

***Step 18:***If needed, remove wood mounting strip



# Procedure 32 - Panel Removal/Access

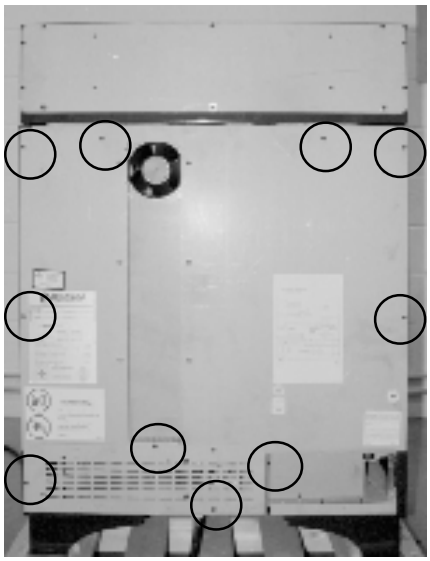
***Back Panel Removal:***

Provides access to all electrical and mechanical components at the back of the stove.

***Step 1:*** Disconnect power supply to range.

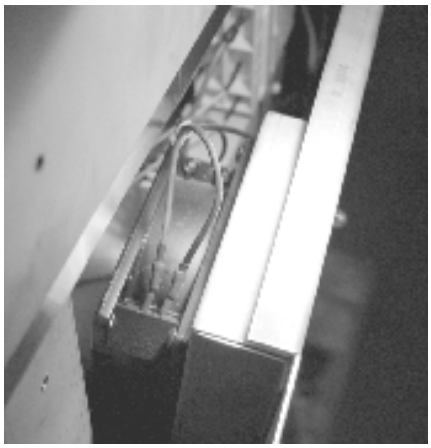
***Step 2:*** Pull unit away from wall (units are equipped with 2" diameter teflon gliders). Please ensure stove is attached to a flex line to allow the unit to be pulled out for service)

***Step 3:*** Remove outer row of screws securing the back panel to range (start with bottom screws and work towards the screws near the top).



***Step 4:*** When removing last screw, hold on to panel to prevent dropping.

***Step 5:*** Gently pull panel back and disconnect red and black wires to cooling fan (do not forget to re-attach these at the end of any service work).



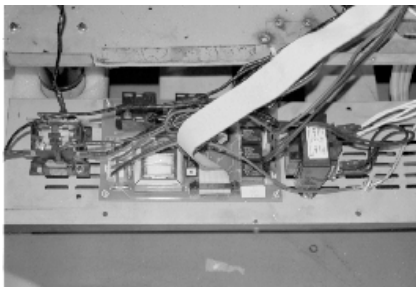
***Relay Board Panel Removal***

***Step 6:*** Relay board can be accessed by removing small access cover at the lower left corner of the range.

***Step 7:*** Disconnect power supply to range.

***Step 8:*** Remove outer row of self tapping screws

***Step 9:*** gently pull out and drop access cover down.



# Procedure 32 - Panel Removal/Access

***Side Panel Removal/Access***

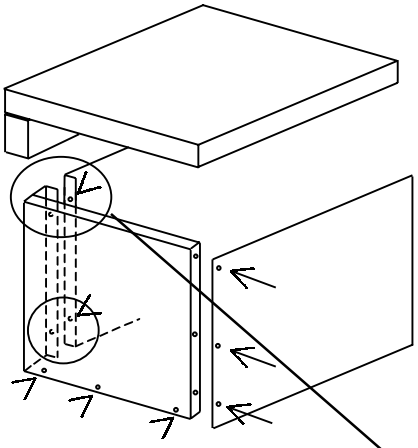
Provides access to electrical or gas controls at the side of the stove.

***Step 10:*** Disconnect power supply to range.

***Step 11:*** Pull unit away from wall.

***Step 12:*** Prop top up (see Procedure 35)

***Step 13:*** Remove three screws from the side panel near the bottom



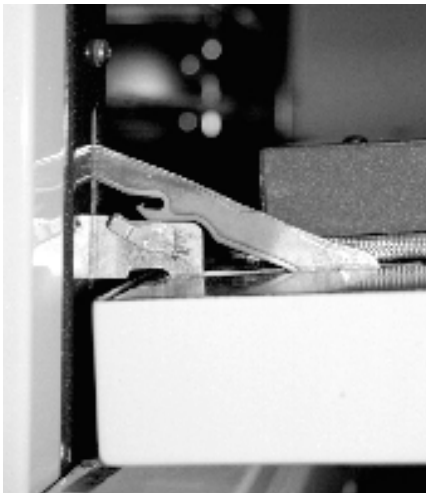
***Step 14:*** To access components, swing side panel outwards.

***Step 15:*** To replace panel, remove one screw holding panel to range front.

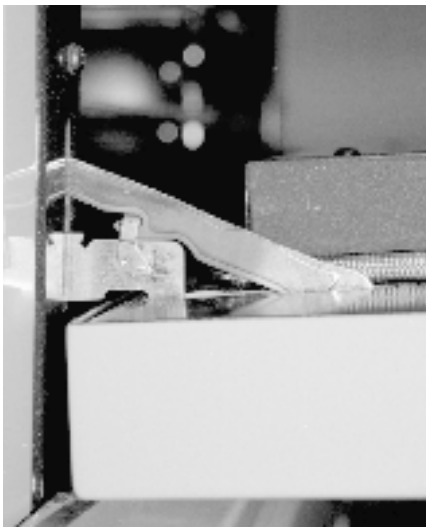
***Step 16:*** Pull side panel up and away from stove. Transfer screw from old panel to new panel and attach to stove front through keyhole slot.

# Procedure 33 - Oven Door Removal

***Step 1:*** Open door fully.

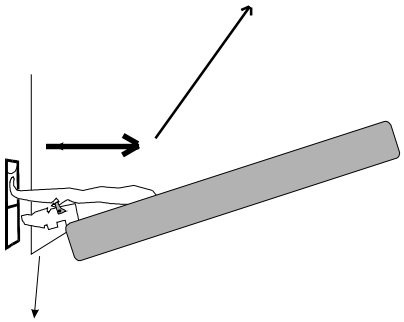


***Step 2:*** Latch the brass catches onto the upper leg of the hinge by pulling forward and catching the small hook.



*Note:* ensure catch is securely in hinge before attempting to remove door or damage will occur to hinge.

***Step 3:*** With one hand on each side of door, lift door up and at a 30 degree angle in one sweeping motion.



*Note:* Door weighs approximately 40 lbs (18 kgs). Exercise caution when removing. Place door with handle facing down on protected surface.

***Step 4:*** Whan placing door back onto range, insert hinges into receivers as far in as possible.

***Step 5:*** open door fully and disengage brass catches completely. With brass catches out of the way, close door slowly (some snapping sound may be heard as springs settle). FAILURE TO FOLLOW THESE PROCEDURES WILL DAMAGE DOOR HINGES - causing door seal leaks.

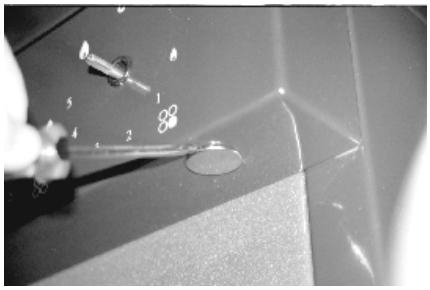
# Procedure 34 - Control Panel Removal

***Step 1:*** Disconnect power supply to the range.

***Step 2:*** Remove oven door (see Procedure 33)

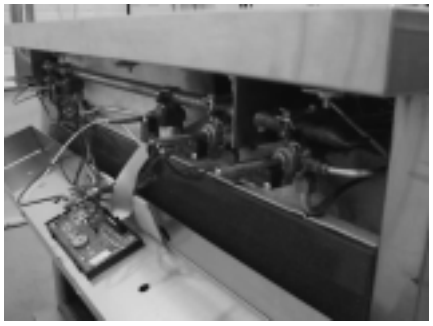
***Step 3:*** Remove control knobs by pulling away from stove

***Step 4:*** Remove metal plugs located on underside of control panel using a thin “slot” screwdriver – please take care not to scratch the surface.



***Step 5:*** Use **3/8” extended socket** nut driver to loosen nuts holding control panel to top. The control panel is fastened with 2 or 4 nuts (for 30” and 36” models respectively) to studs welded to the stove top. Use of a flashlight will help in seeing the nuts first and then it will be easier to “feel” the nuts with the driver.

***Step 6:*** Once nuts are loose, pull control panel away from stove.



***Step 7:*** For easier work, pull top rack out of oven and place protective cloth on it to allow control panel to rest without scratching.

# Procedure 35 - Stove Top Prop Up

***Step 1:*** Disconnect power supply to the range.

***Step 2:*** Loosen top row and two middle screws from the stove's back panel to allow the spark modules to clear the back panel.

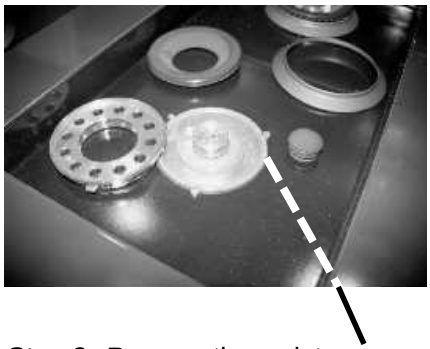
***Step 3:*** Pull stove top upwards by holding the front of the stove top and the back and pulling upwards. A gentle tap may be needed to dislodge the pems holding the top to the stove's side panels.

***Step 4:*** Note that the flexible gas line may get stuck on the stove's back opening and impede the pulling of the stove top – gently feed the gas line through the hole.

***Step 5:*** Use padded spacers or two short 2x4 pieces to prop top while working.

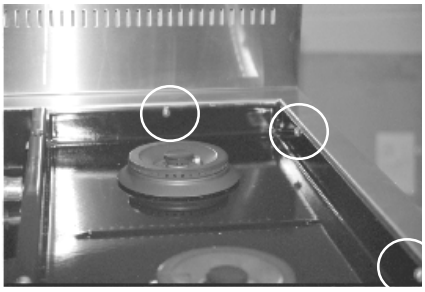
# Procedure 36 - Burner Bowl Replacement

***Step 1:*** Remove all grates and burner components



***Step 2:*** Remove three slot screws per each burner base and allow the burner base to gently drop into the stove's cavity

***Step 3:*** **Metro only.** Remove screws holding burner bowl against sides of stove top



***Step 4:*** Pull on burner bowl upwards as straight as possible to free from stove

***Step 5:*** Replace with new burner bowl- please reinsert as vertical as possible.

***Step 6:*** Reattach burners to new burner bowl by pulling center of burner base upwards and lining up screw holes.

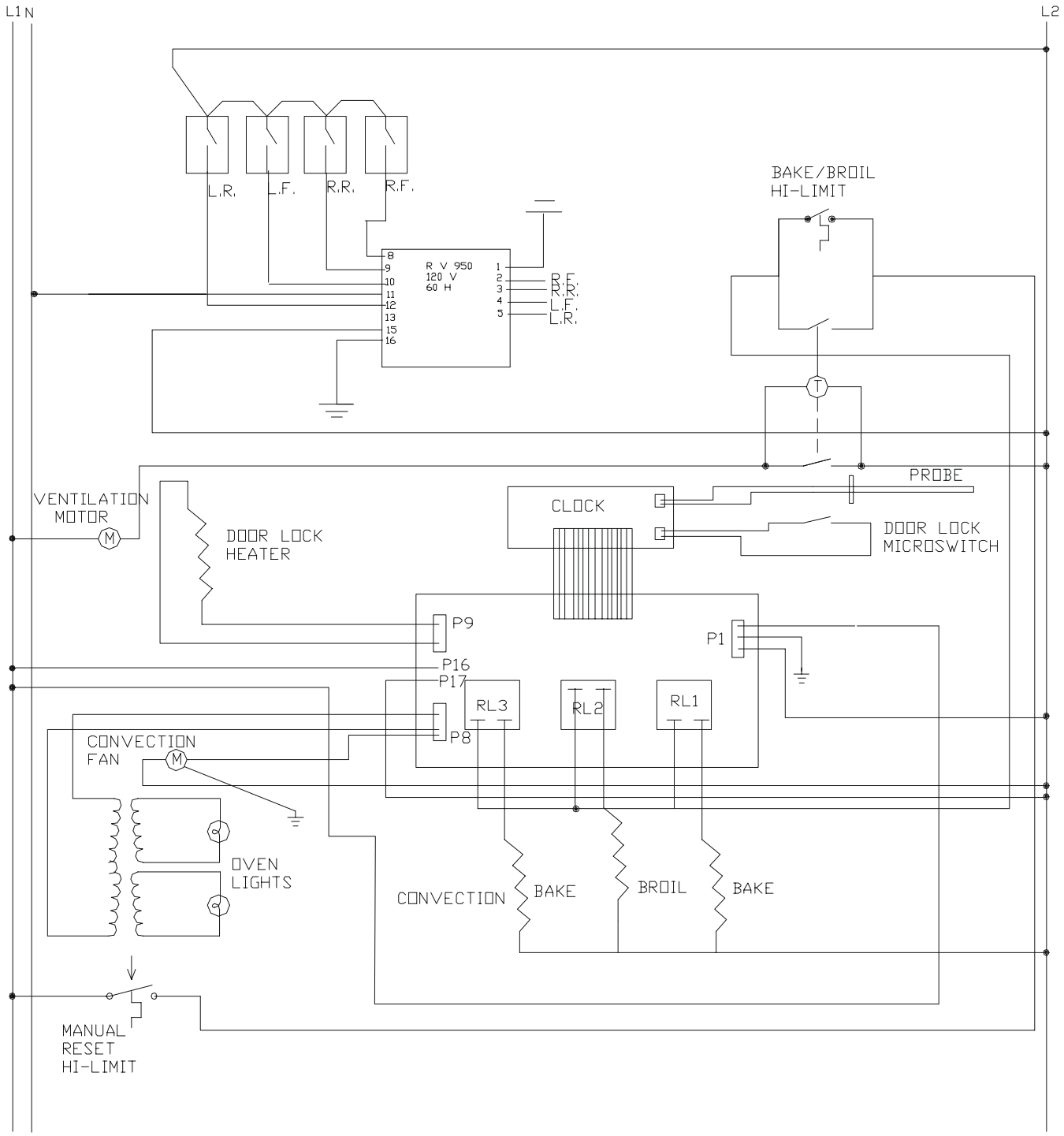
***Step 7:*** **Legacy Models.** Remove three slot screws per each burner base and allow the
burner base to gently drop into the stove's cavity.

***Step 8:*** Prop stove top (Procedure 35) and remove nuts holding burner bowls to studs underneath stove top.

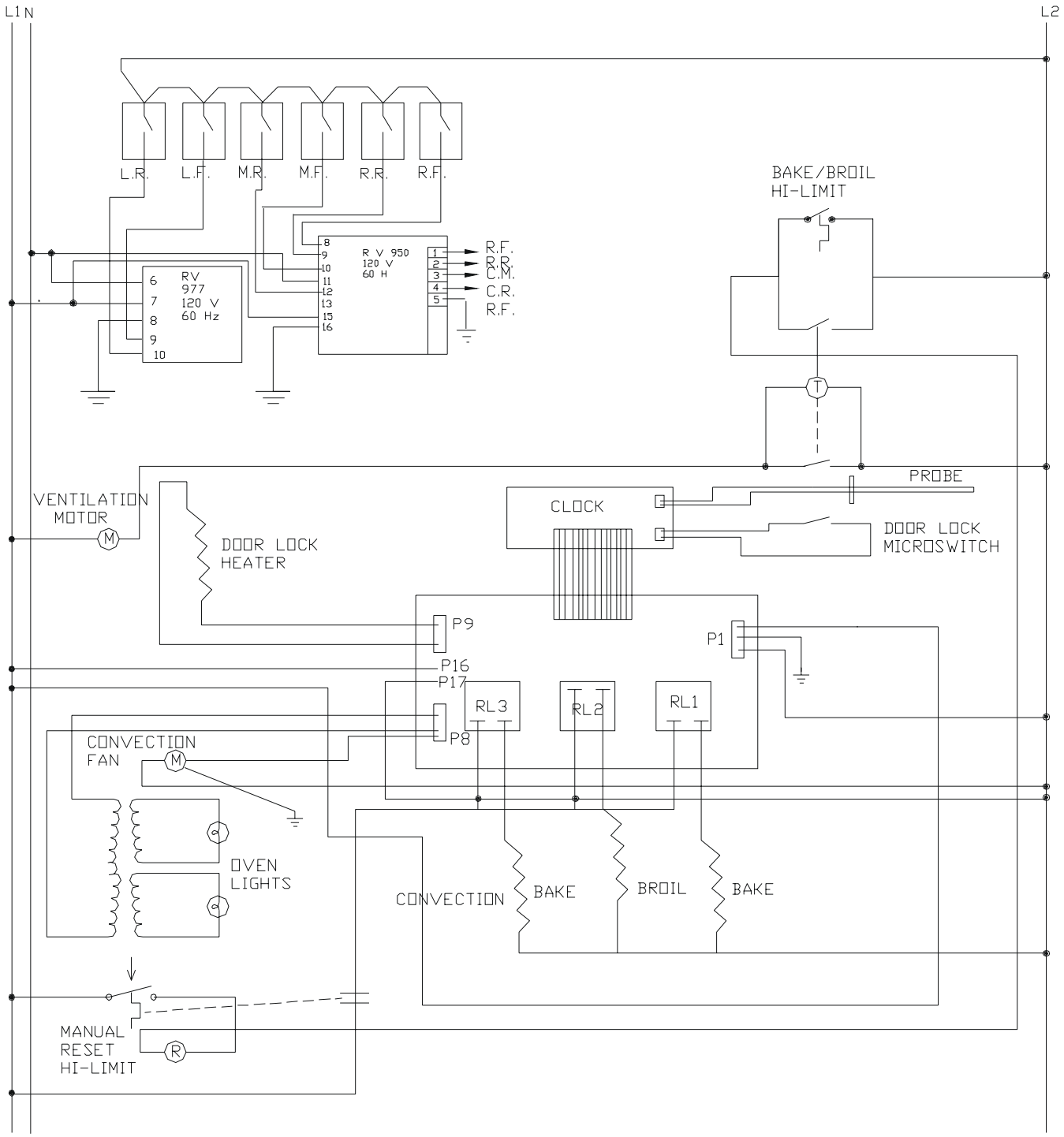
***Step 9:*** Replace with new burner bowl

***Step 10:*** Reattach burners to new burner bowl

# Wiring Diagrams - Models 3520/3525



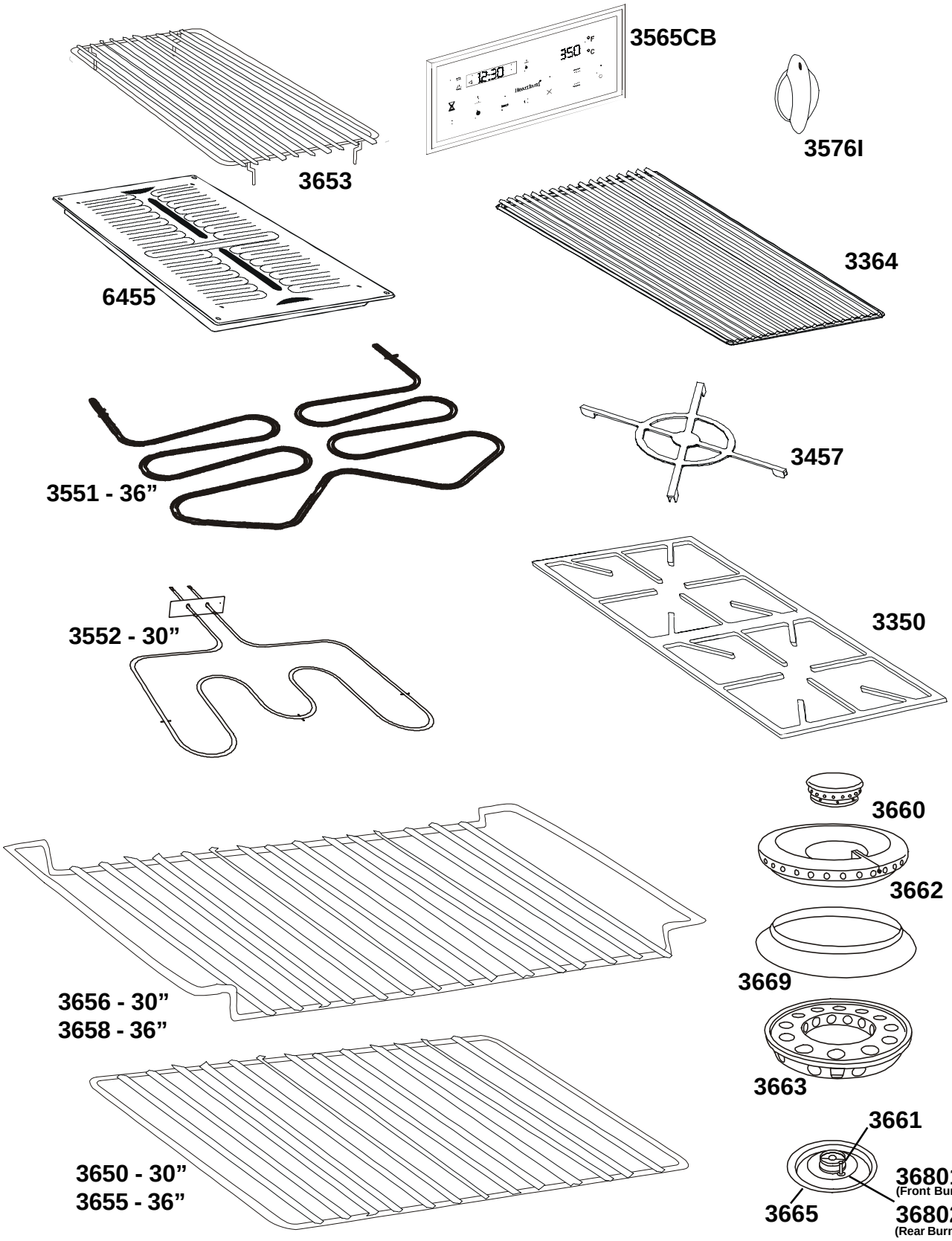
# Wiring Diagrams - Models 3620/3625



# *Exploded View & Parts:*

**Section 7-1**

## *Models 3520/3525; 3620/3625; 3620B/3625B*



# Exploded View & Parts:



## Models 3520/3525; 3620/3625; 3620B/3625B

| Part | Description |
|---|---|
| 3254-C* | Backguard: High back profile 30" Legacy (20" high) |
| 3254S | Backguard: High back profile 30" Metro (20" high) |
| 3255-C | Backguard: High back profile 36" Legacy (20" high) |
| 3255S | Backguard: High back profile 36" Metro (20" high) |
| 3250-C | Backguard: Low profile 30" Legacy (1 7/8" high) |
| 3250S | Backguard: Low profile 30" Metro (1 7/8" high) |
| 3251-C | Backguard: Low profile 36" Legacy (1 7/8" high) |
| 3251S | Backguard: Low profile 36" Metro (1 7/8" high) |
| 3252-C | Backguard: Standard profile 30" Legacy (6" high) |
| 39951S | Backguard: Standard profile 30" Metro (4 1/4" high) |
| 3253-C | Backguard: Standard profile 36" Legacy (6" high) |
| 39971S | Backguard: Standard profile 36" Metro (4 1/2" high) |
| 3552 | Bake element 3400 watt - 30” model |
| 3551 | Bake element 5000 watt - 36” model |
| 6217 | Bake/Broil safety limit (not shown) |
| 3554 | Broiler ribbon element 13x9 2500 watt x 2 - 36” model |
| 3555 | Broiler ribbon element 17x12 4000 watt - 30” model |
| 3321 | Burner tray: 30" & 36" BBQ, Legacy |
| 3621 | Burner tray: 30" & 36" BBQ, Metro |
| 3320 | Burner tray: 36" 6 burner, Legacy |
| 3520 | Burner tray: 36" 6 burner, Metro |
| 7344 | Burner valve ignition switch (all models) N.G. & LP |
| 3576I | Control knob - with red indicator |
| 3442-C | Control panel 30" Legacy |
| 3642 | Control panel 30" Metro |
| 3341-C | Control panel 36" 6 burner Legacy |
| 3542 | Control panel 36" 6 burner Metro |
| 3344-C | Control panel 36" BBQ Legacy |
| 3544 | Control panel 36" BBQ Metro |
| 9008 | Convection fan motor |
| 3553 | Convection ring element 2400 watt - 30” model |
| 3550 | Convection ring element 4800 watt - 36” model |
| 3608 | Cooling fan tubeaxial 230 volt 50/60 Hz |
| 3620 | Door black finish handle - Legacy |
| 3644 | Door chromed Handle - Legacy |
| 3577 | Door handle 30" Metro |
| 3641 | Door handle 36" Metro |
| 3578 | Door handle ends |
| 3597 | Door handle legs |
| 3568 | Door lock self clean mechanism |
| 3569S | Door stainless steel hinge |
| 3698 | Dual burner base - Venturi & Air Shutter included -(European only) |
| 3665 | Dual burner base - Venturi & Air Shutter included -(N.A. only) |
| 3669 | Dual burner beauty trim ring - Black |
| 3663 | Dual burner cross ring - Brass |
| 3661 | Dual burner inner base - Brass |
| 3660 | Dual burner inner head - Black |
| 3662 | Dual burner outer head - Black |
| 3689 | Dual burner valve LP |

* (-C) = Colour to be specified

| Part | Description |
|---|---|
| 3688 | Dual burner valve N.G. |
| 36802 | Electrode C/W 400 mm lead (used for rear burners) |
| 36801 | Electrode C/W 680 mm lead (used for front burners) |
| 565CB | Electronic timer |
| 35581 | Electronic timer Cable (57”) - 30”/36"- 6 burner models (not shown) |
| 3588 | Electronic timer Cable (66”) 36” -BBQ models (not shown) |
| 3565PB | Electronic timer Relay Board (not shown) |
| 3556 | Gas regulator (5" NG/10" LP) |
| 3350 | Grate double cast |
| 3364 | Grill |
| 7382 | Grill burner valve LP |
| 7367 | Grill burner valve NA N.G. |
| 35621 | Halogen oven lamp lense only (not shown) |
| 3562 | Halogen replacement light bulb (10 watts) (not shown) |
| 3430-C | Kick plate 30" Legacy |
| 3630 | Kick plate 30" Metro |
| 3530-C | Kick plate 36" Legacy |
| 3530 | Kick plate 36" Metro |
| 3397-C | Leg Legacy |
| 3466 | Leg Metro |
| 3460 | Leg Metro SS cover |
| 6387 | Oven door gasket (high temp) 6 ft. required |
| 3424-C | Oven door outer shell 30" Legacy |
| 3624 | Oven door outer shell 30" Metro |
| 3324-C | Oven door outer shell 36" Legacy |
| 3524 | Oven door outer shell 36" Metro |
| 3571 | Oven probe |
| 35932 | Oven probe 2-Pin shielded cable wire |
| 3650 | Oven rack 30" |
| 3655 | Oven rack 36" |
| 3656 | Oven rack offset 30" |
| 3658 | Oven rack offset 36" |
| 3653 | Roasting rack (fits in broiler pan) |
| 6382 | Self Clean, resettable, high limit (not shown) |
| 3347-C | Side panel left Legacy (30" & 36") |
| 3547 | Side panel left Metro (30" & 36") |
| 3334-C | Side panel right Legacy (30" & 36") |
| 3534 | Side panel right Metro (30" & 36") |
| 3457 | Small pot ring (Trivet) |
| 7199 | Spark module 0+2, 36" models only -(controls 2 left burners)-not shown |
| 7402 | Spark module 0+5, all 30" models -36" models: controls 4 right burners |
| 3439-C | Stove top 30" Legacy |
| 3639 | Stove top 30" Metro |
| 3339-C | Stove top 36" Legacy |
| 3539 | Stove top 36" Metro |
| 3619 | Thermodisk (Tubeaxial fan) |
| 3616 | 25 amp relay 2 pole 230 volt (36" models) (not shown) |