

**MAYTAG**

**Jenn-Air**

**Gas Wall Oven  
Service Manual**

16009722  
Issued 6/99

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## GENERAL SAFETY PRECAUTIONS

Information contained in this manual is intended for use by a qualified service technician. All tests and repairs should be performed by a qualified service technician equipped with proper tools and measuring devices. All component replacements should be made by a qualified service technician using only factory approved replacement parts.

Improper assembly or adjustment may occur if service or repair is attempted by persons other than qualified service technicians or if parts other than approved replacement parts are used. Improper assembly or adjustment can create hazardous conditions.

There can be a risk of injury or electrical shock while performing services or repairs. Injury or electrical shock can be serious or even fatal. Consequently, extreme caution should be taken when performing voltage checks on individual components of a product. **PLEASE NOTE:** Except as necessary to perform a particular step in servicing a product, the electrical power supply should **ALWAYS** be disconnected when servicing a product.

Further, this appliance **MUST** be properly grounded. Never plug in or direct-wire an appliance unless it is properly grounded and in accordance with all local and national codes. See installation instructions that accompany the product for grounding this appliance.

**USE ONLY GENUINE MAYTAG APPROVED FACTORY REPLACEMENT COMPONENTS.**

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## **INTRODUCTION**

The manual is printed in a loose format and is divided into sections relating to a general group of components and/or service procedures. Each section is further subdivided to describe a particular component or service procedure.

The subdividing of the subject matter, plus the loose leaf form, will facilitate the updating of the manual as new revised components are added or new models are introduced.

Each page of the manual will be identified in the lower, left and right-hand corners, and as new or revised pages are published, the manual can easily be updated by following the filing instructions on the cover letter of the supplement.

This service manual is a valuable tool and care should be taken to keep it up-to-date by promptly and proper filing of subsequent pages as they are used.

### **MODELS COVERED IN THIS MANUAL:**

**WG24000**

**WG30100**

**JGW8130**

**JGW9130**

**CGW3330**

**9112**

**9122**



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## SECTION 1. GENERAL INFORMATION

<b>CAUTION</b>
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### GAS SELF-CLEAN OVEN CONTROL, CAPILLARY AND BULB

NaK CAUTION

Bulb and capillary are filled with liquid metal fluid called NaK. Material is dangerous to eyes, skin, clothing, and combustibles. If this material comes into contact with the skin, immediately scrape it from the skin with a dry spatula or similar utensil. **Do Not Rub.** Then flush the skin thoroughly with water.

ambient, leakage will be quite slow because there is no internal pressure in the system. Seal system by crimping shut with pliers on each side of break. Flush crimped ends thoroughly with running water. Place crimped off units in a covered metal container, free of combustible materials, for disposal.

In the event of a system rupture at room

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## SPECIFICATIONS

All gas ovens requiring electricity operate with 120 VAC 60Hz. Each range should have its own 15 amp protective circuit breaker or fuse. BTU ratings may be found on the serial data plate on the unit.

<u>Conventional</u>	<u>Self-Clean</u>
120 Volts, 60Hz, 5 Amp.	120 Volts, 60Hz, 5 Amp.
Oven Burners N/LP @ 18,000 BTU	Bake N/LP @ 18,000 BTU Broil N @ 13,000 BTU Broil LP @ 14,000 BTU

**Note:** *Always refer to the rating plate on the unit.*

## CONVERSION/GAS PRESSURE/INSTALLATION

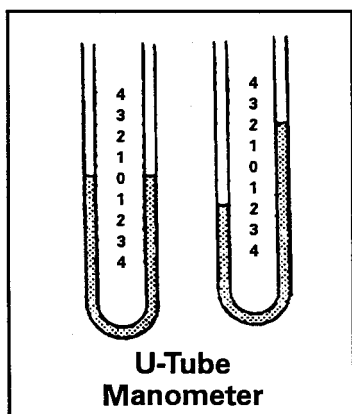
### General

Although there are many differences in gas ovens, there are many basic similarities. All have pressure regulators, burners, and a means of controlling the amount of gas allowed to flow. Gas ranges operate on the principle of combining a mixture of natural gas or liquified petroleum (LP) and air. Proper gas pressure and an appropriate quantity of air are prerequisite to normal and desired operation. Additionally, all burners (surface and oven) must be kept clean with all ports and openings free and clear of foreign matter for proper and safe operation.

### Gas Pressure

#### U-Tube Manometer (Water Column Gauge)

Example: *See figure 1-1*, the left hand picture shows zero (atmospheric) pressure on both sides of the manometer. The water level in both legs is at zero. The right hand picture shows a pressure applied to the manometer. In the left leg of the manometer, the water column is two (2) inches below the zero point, while in the right leg the water level is two (2) inches above the zero point. The gas pressure being read is thus four (4) inches of water column ( $2 + 2 = 4$ )



*Figure 1-1*

### Conversion

All domestic gas ovens are designed to operate on four (4) inches of water column when being used on natural gas and ten (10) inches of water column if used on LP gas. Hence, most ovens leave the factory set to operate as follows:

- Set for use with natural gas but easily convertible for use with LP.

"Easily convertible" means that no additional parts are required, merely minor adjustments to several components on the range. Universal orifices and convertible pressure regulators make this possible. Should there be any doubt as to which type of gas the oven is pre-set for, or whether or not it is convertible, refer to the **rating (name) data plate** on the unit.

### Conversion Procedure

1. Shut off gas supply.
2. Convert pressure regulator.
3. Tighten or loosen all orifice hoods (surface and oven) approximately 1 1/2 to 2 turns with a 1/2" wrench.

Self-cleaning gas ovens have dual oven valves, hence two (2) orifice hoods to be converted, bake and broil.

**Note:** If a oven adjusted for use on natural gas, is connected to LP, you may expect long yellow burner flames that result in extreme sooting.

Check the range model number plate to see if the range is approved for installation in mobile home and/or recreational vehicles. If approved the following items are applicable.



## MANUFACTURED HOMES

The installation of a range designed for mobile home installation must conform with the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 (formerly the Federal Standard for Mobile Home Construction and Safety, Title 24 HUD, Part 280) or, when such standard is not applicable, the Standard for Manufactured Home Installations, ANSIA225.1/NFPA501A-1987, or with local codes.

In Canada the range must be installed in accordance with the current CSA Standard C22.1 - Canadian Electrical Code Part 1 and Section Z240.4.1-Installation Requirements for Gas Burning Appliances in Mobile Homes (CSA Standard CAN/CSA - Z240MH).

## RECREATIONAL VEHICLES

The installation of a range designed for recreational vehicles must conform with state or other codes or, in the absence of such codes, with the Standard for Recreational Vehicles, ANSIA119.2 - latest edition.

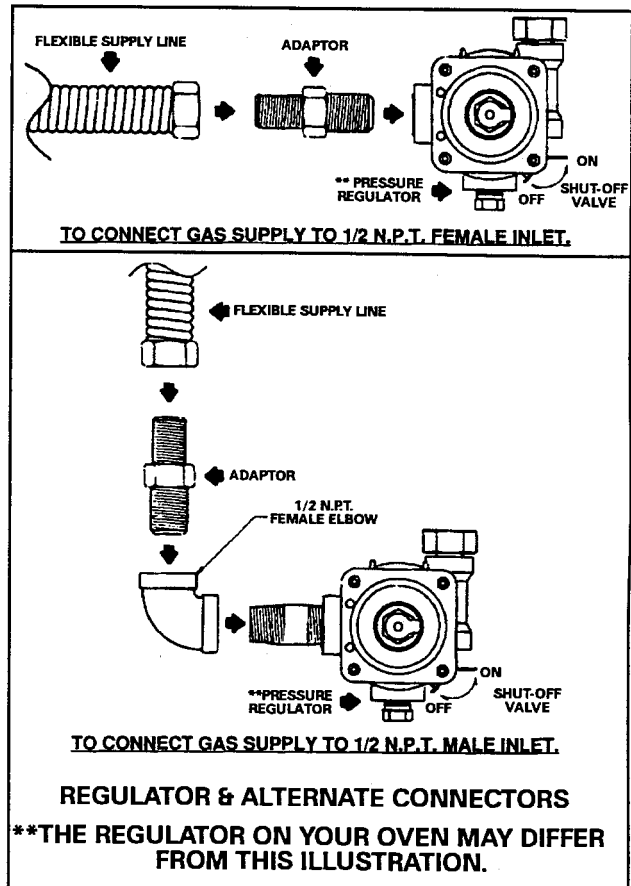
In Canada the range must be installed in accordance with Section C22.2 No. 148/CAN/CSA - Z240.6.2 - Electrical Requirements for R.V.'s (CSA Standard CAN/CSA - Z240 RV Series) and Section Z240.4.2 - Installation Requirements for Propane Appliances and Equipment in R.V.'s (CSA Standard CAN/CSA - Z240 RV Series).

## GAS SUPPLY

Installation of this oven must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSIZ223.1 - latest edition.

In Canada the oven must be installed in accordance with the current CGA Standard CAN/CGA-B149-Installation Codes for Gas Burning Appliances and Equipment and/or local codes.

1. GAS SUPPLY CONNECTION: *See figure 1-2*, A TRAINED SERVICEMAN MUST MAKE THE GAS INSTALLATION.



*Figure 1-2*

- a. A GAS CUTOFF VALVE SHOULD BE PUT IN AN ACCESSIBLE LOCATON IN THE SUPPLY LINE AHEAD OF THE OVEN, FOR TURNING ON AND TURNING OFF GAS SUPPLY. If oven is to be connected to house piping with flexible or semi-rigid mental connectors for gas appliances, CONNECTOR NUTS MUST NOT BE CONNECTED DIRECTLY TO PIPE THREADS. THE CONNECTORS MUST BE INSTALLED WITH ADAP-TORS PROVIDED WITH THE CONNEC-TOR.
- b. The house piping and/or oven connector used to connect the oven to the main gas supply must be clean, free of metal shavings, rust, dirt and liquids (oil or water). Dirt and other contaminants in the supply lines can work their way into the oven manifold and in turn

cause failure of the gas valves or controls and clog burners and/or pilot orifices.

- c. Turn off main gas valve of other gas appliances.

**CAUTION**

**DO NOT LIFT OR MOVE RANGE BY DOOR HANDLES, OR BACKGUARD.**

- d. Turn off main gas valve at meter.
- e. Before connecting oven, apply pipe thread compound approved for LPG to all threads.
- f. Connect oven to gas supply at regulator using adaptors supplied with flexible connector. Rigid pipe may also be used. See rating plate for type of gas oven has been manufactured for.
- g. Turn on main gas valve at meter, and re-light pilots at other gas appliances.
- h. Apply soap suds to gas connection at oven and check for leakage. Check for leakage at all gas connections and fittings in the oven.

**CAUTION**

**NEVER CHECK FOR LEAKS WITH A FLAME. WHEN LEAK CHECK IS COMPLETE, WIPE OFF ALL SOAP RESIDUE.**

**NOTE: USE OF A MANOMETER TO CHECK FOR GAS LEAKAGE IS ACCEPTABLE.**

- i. Connect electric supply cord to wall receptacle 120 volt 60 cycle alternating current, at 15 amperes.
- j. Adjust burner air shutter to the widest opening that will not cause the flame to lift or blow off the burner when cold.

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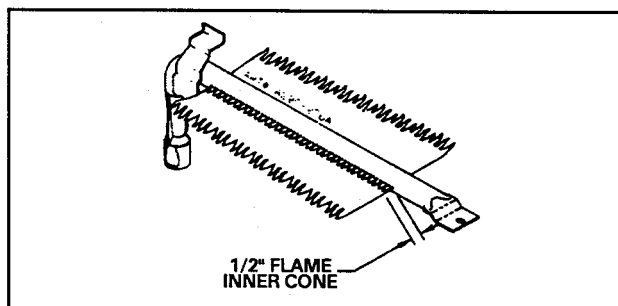
## Checking Pressure of House Piping System

1. The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 lbs./sq.in. (3.5kPa) (13.8 inch water column).
2. The appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to less than 1/2 lbs./sq.in. (3.5kPa) (13.8 inch water column).

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## Air Shutter - Oven Burner

1. The approximate length of the flame of oven burner is a 1/2 inch distinct inner blue flame, *see figure 1-3.*



**Figure 1-3**

2. Oven burner flame can be checked as follows:
  - a. Yellow flame on burner - open air shutter "2," *see figure 1-4.*
  - b. Distinct blue flame but lifting - close air shutter "2," *see figure 1-4.*
3. The oven burner air shutter adjustment is the same on ranges with a gas pilot or electric ignition.

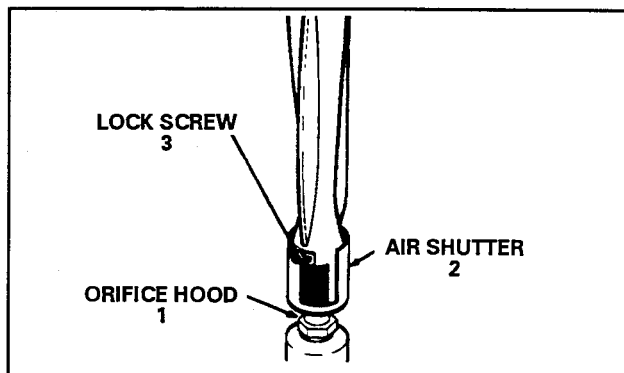


Figure 1-4

## GAS CONVERSION

### General

All ovens are equipped with double coaxial (universal) orifices and with a convertible gas regulator. The unit model number plate states which gas it was adjusted for at the factory. To convert the unit to either Natural Gas or LP Gas will require adjustment of the oven orifice/air shutter and replacement and/or adjustment of the pressure regulator converter cap.

Inlet pressure to the regulator should be as follows for both operation and checking of regulator setting:

INLET PRESSURE	NATURAL GAS	LP GAS
Minimum	5 inches	11 inches w.c.
Maximum	14 inches	14 inches w.c.

## REGULATOR CONVERSION

The unit regulator must be set to match the type gas supply used. If converting from natural gas to LP gas, the regulator must be converted to regulate LP gas. If converting from LP gas to Natural gas, the regulator must be converted to regulate Natural gas.

TO CONVERT THE PRESSURE REGULATOR FROM ONE GAS TO ANOTHER, DO EITHER (1), (2) OR (3) BELOW: YOUR UNIT WILL BE EQUIPPED WITH ONE OF THE THREE REGULATOR TYPES SHOWN ON **FIGURE 1-5, 1-6, AND 1-7.**

1. Remove the cap, push down and turn counter-clockwise. Turn the cap over and reinstall, *see figure 1-5.*

**NOTE: THE GAS TYPE YOU ARE CONVERTING TO MUST BE VISIBLE ON THE INSTALLED REGULATOR CAP.**

2. Remove plastic dust cover from cap nut on top of regulator. Remove cap nut from regulator (plastic dust cover comes off with nut). **IMPORTANT: Remove plastic dust cover from cap nut and reinstall on opposite side of cap nut. Reinstall cap nut to regulator and replace dust cover.**

### CAUTION

***Be sure marking for the type of gas to which regulator has been converted is visible in top of cap nut before replacing plastic dust cover, see figure 1-6.***

3. Remove cap and forcibly snap out plastic plunger from bottom of cap. Turn plunger over and forcibly snap back in original location, *see figure 1-7.*

**NOTE: PLUNGER MUST SNAP INTO POSITION: THE GAS TYPE YOU ARE CONVERTING TO MUST BE VISIBLE ON LOWER SIDE OF PLUNGER.**

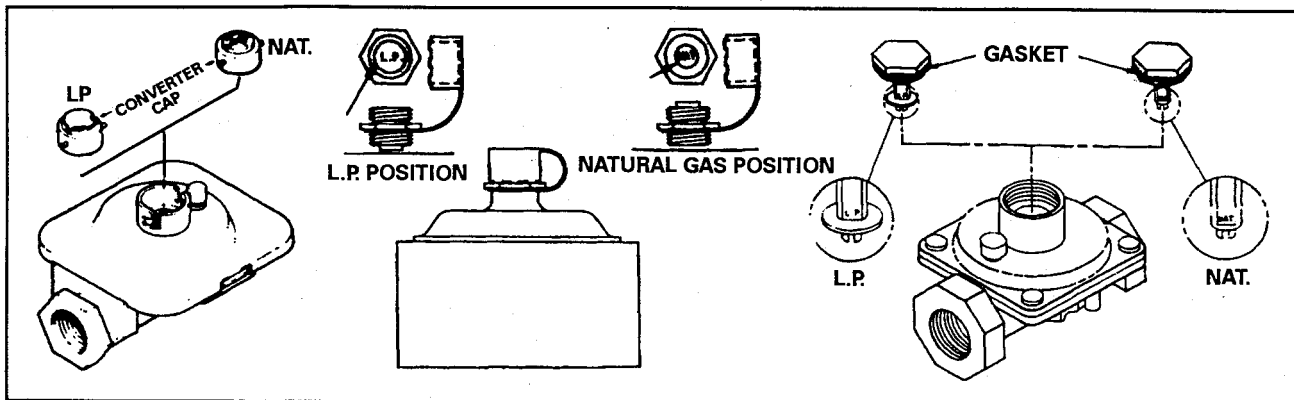


Figure 1-5

Figure 1-6

Figure 1-7

## ORIFICE CONVERSION

### 1. FROM NATURAL GAS TO LP/PROPANE GAS:

- Change the pressure regulator from natural to LP setting, *see figure 1-5, 1-6 or 1-7.*
- Screw the burner orifice hoods down tight against the pins, *see figure 1-8.*
- Adjust burner air shutter to the widest opening that will not cause the flame to lift or blow off the burner when cold.

### 2. FROM LP/PROPANE GAS TO NATURAL GAS:

- Change the pressure regulator from LP to natural setting, *see figure 1-5, 1-6, or 1-7.*
- Screw the burner orifice hoods away from the pins, *see figure 1-9.*
- Adjust burner air shutter to the widest opening that will not cause the flame to lift or blow off the burner when cold.

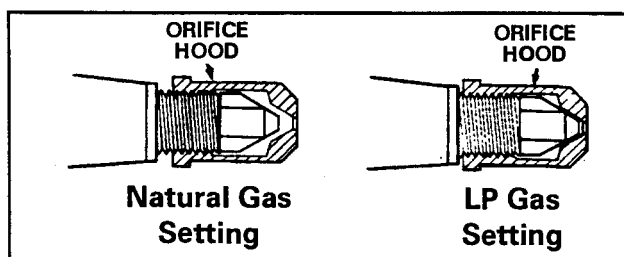


Figure 1-8

Figure 1-9

## GLOW BAR (OVEN ONLY)

### Major Components

- Electric Oven Control
- Glow Bar
- Electric Oven Valve

### Typical Operation

The glow bar system is completely reliant upon electricity. When the oven control is turned on, 120 VAC is provided to the glow bar ignitor and the gas valve circuit. The high resistance of the glow bar ignitor limits current flow through the ignitor - gas valve. Continual current flow through the circuit causes the glow bar ignitor to glow brighter and the resistance of the ignitor decreases which increases the current flow through the ignitor-gas valve circuit. This increases the amount of heat generated by the heater which causes the bi-metal to bend. At a point the ignitor resistance will have decreased to provide approximately 3.5 amps of current flow through the ignitor gas valve circuit. In approximately 45 seconds, the glow bar ignitor temperature will have increased to approximately 2650°F. The voltage drop across the gas valve terminals will have increased to about three (3) volts AC which will indicate enough current flow to provide bi-metal heat to cause the gas valve to open providing gas flow to the oven burner. The heat from the glow bar ignites the gas. The sensing element of the oven control then

cycles contacts within the oven control, opening and closing to cycle the glow bar, safety valve and burner to maintain the desired (set) temperature.

**NOTE: *This system cannot be operated without electricity.***

Air Shutter	The adjustable shutter on the burner which controls the amount of air used in combustion.
Ampere (Amp)	The standard unit for measuring the strength of an electric current; amount of current sent by one volt through a resistance of one ohm. The amount or the rate of flow of electrical current.
BTU	British Thermal Unit. The amount of heat required to raise the temperature of one pound of water 1°F. While temperature on a thermometer shows intensity of heat, BTU applies to the amount of heat.
Burner	The component on a gas appliance where the air-fuel mixture burning takes place.
Calibration	Adjusting thermostat heat level to agree with oven temperature setting. (Should be performed by a qualified service technician.)
Manometer	An instrument used to measure gas pressure in inches of water column.
Orifice	Controls the flow of gas by screwing the orifice cap in or out of the valve.
Oven Thermostat Control	Serves as a master ON/OFF switch for main gas to safety valve, meters pilot gas, and senses temperature
Pressure Regulator	A device for limiting and maintaining a uniform outlet gas pressure.
Safety Valve	Once heater pilot has heated safety valve capillary (about 45 seconds), the safety valve opens and allows main gas to the oven burner.
Self-Clean	Oxidizes accumulated food soils during a special high-temperature cleaning cycle.
Voltage	Used to measure electrical pressure.
Wattage	Unit of measurement of the capability of electricity to do work.



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## SECTION 2. COMPONENT DESCRIPTION

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### GLOW BAR IGNITION

The ignition system is comprised of three main components:

- electric thermostat
- silicon carbide ignitor
- electric oven valve

These components are wired in series and although the oven control and glow bar require 120 VAC, 60Hz., the oven valve operates on low voltage (about 3 volts). Therefore, 120 VAC should never be applied directly to the oven valve terminals. The glow bar is the power source for the oven valve.

### Operating Parameters

Glow Bar Ignitor	
Electrical	120 VAC, 60Hz.
Max. Temperature	2650°F
Amps	3.2 to 3.6 at 116 VAC
Resistance	50 to 400 ohms (cold) ambient temp. 75°F
Oven Valve	
Electrical Rating	3.2 amps at 2.94 volts AC 3.6 amps at 3.3 volts AC

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### VALVE & IGNITOR

Electrical steady state current through series connected ignitor valve circuit is between 3.2 and 3.6 amps at 120 VAC.

#### Operation

When the thermostat is turned on, cycling contacts are made and the series ignitor-valve is energized. As current begins to flow, the ignitor starts to heat and its resistance decreases. As the resistance decreases, the current flow through the low resistance heater coil of the special gas valve increases, **see figure 2-1**. The gas valve opens and ignition occurs when three volts are developed across the gas valve heater coil. The gas valve does not open until after the ignitor

has reached gas ignition temperature. As the ignitor approaches its maximum temperature of 2650°F its resistance now starts to increase. The limiting or equilibrium current flow is approximately 3.5 amps. When the oven reaches the set temperature the thermostat cycling contacts open, thus breaking the electrical circuit. The gas valve shuts off the gas flow and the ignitor cools. To maintain oven temperature, the previous operating cycle repeats.

**Note:** *The electric thermostat used for glow bar ignition cannot be calibrated in the field.*

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## HI LIMIT SWITCH

The high limit switch is a normally closed switch. The switch opens on temperature rise. If the backguard reaches 240°F the switch opens and breaks the circuit to the ignitor and the unit starts to cool. As the temperature falls below 140°F the switch closes, the circuit is made to the ignitor, and the ignition process takes place.

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## BLOWER

The blower is on at all times during the clean mode. The blower is activated by a thermo-disc that closes at 150°F and opens at 135°F.

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## CLEAN CYCLE

When the clean cycle is programmed the following occurs:

- The broil burner will come on for the first 30 minutes. The electronic control will then remove the electric signal from the broil relay contact and close the bake relay contact. The bake burner will come on and complete the clean cycle.

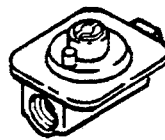
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## OVEN SENSOR

The oven sensor is located inside the oven cavity, attached to the rear wall of the cavity. As the oven temperature increases, the resistance of the sensor increases. The resistance is measured by the electronic control to determine oven temperature.

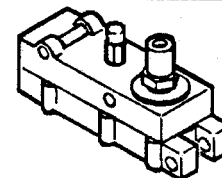
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## REGULATORS AND SAFETY VALVES



Regulator

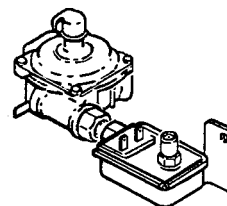
Figure 2-1



Safety Valve

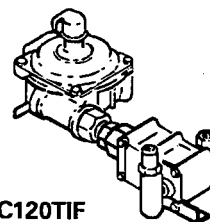
Figure 2-2

**Note:** This type regulator may also be used on some electric ignition ranges.



SC121TIF

Electric ignition regulator and safety valve



SC120TIF

Self-Cleaning range regulator and dual safety valve

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## DOOR HINGE

The hinge used on the wall oven is spring mounted and has an adjusting screw (upper right) that allows raising or lowering the top of the door on either side, left or right.

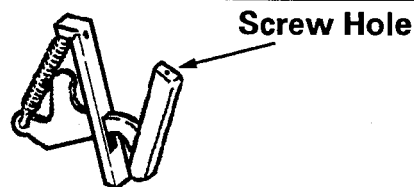


Figure 2-3



## CLOCK

The clocks used on the gas wall oven models are the Electronic Time of Day Clock, RSI, and the T2 Clock.

**Electronic Time of Day Clock** - Uses a mechanical thermostat and an electronic clock. To set the clock press the clock key until the indicator in the clock switch illuminates, use either slew key to set the time and then press any function key to exit the clock set mode, *see figure 2-4.*

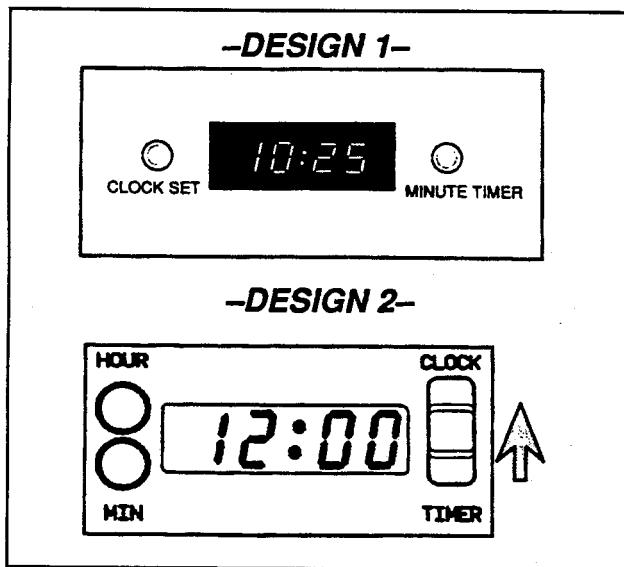


Figure 2-4

**RSI** - The keypads for the RSI clock activate a mechanical switch mounted to the face of the control and have an activation force of 12 to 28 ounces of pressure needed to close the selected switch, *see figure 2-5.*

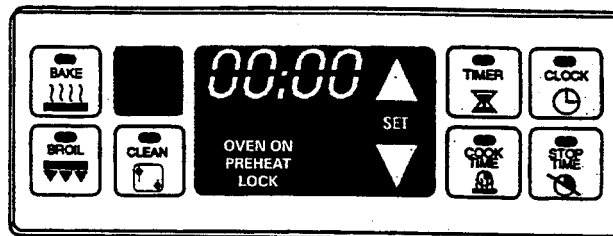


Figure 2-5

**T2 Clock** - The T2 Clock controls continually checks the control and/or oven failures and displays an "F" code and an auxiliary code which are saved in memory. Both the "F" code and the second code for the last fault occurrence may be displayed by pressing CANCEL within one second after power-up, or by powering up the control with the membrane switch disconnected, *see figure 2-6.*

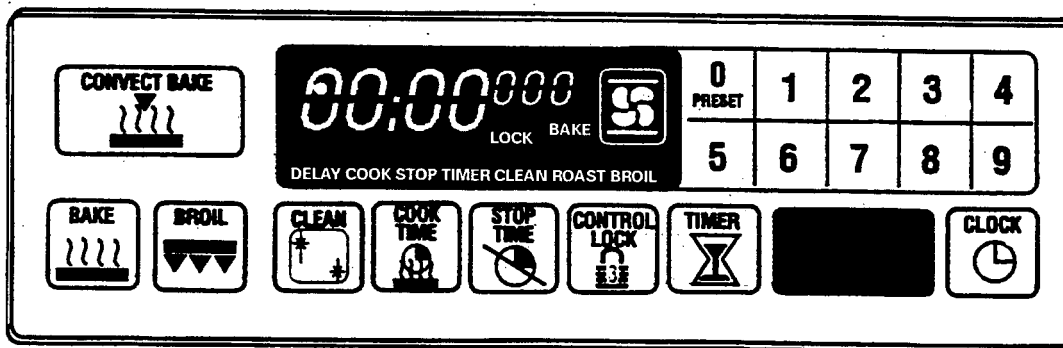


Figure 2-6

## OPERATION OVERVIEW OF EACH CONTROL MODE

<b>BAKE</b>	In the bake mode, a temperature is entered, and optionally a bake time. The bake cycle will begin and continue until the user stops the operation, or the set bake time is reached.
<b>BROIL</b>	In the broil mode, a temperature range is entered, either LO or HI, and the broil process will begin and continue until the user stops the operation.
<b>CLEAN</b>	The clean function will not operate until the door latch has been placed in the lock position. When the clean mode is selected, a clean time is entered, from 2 to 4 hours inclusive, and a preset temperature is activated.
<b>STOP TIME/COOK TIME</b>	The cook time function can be used to operate a timed bake cycle. The stop time function can be used in conjunction with cook time to operate a delayed bake cycle.
<b>TIMER</b>	The timer function operates independently of other oven functions. In timer mode, a desired time is set by the user and the control begins and continues countdown until the set duration has expired, at which point an audible signal will sound.

## SECTION 3. COMPONENT ACCESS

### CONTROL PANEL

#### Access for 24" Models

1. Remove the three screws securing the top trim piece.
2. Remove the trim piece and the overlay.
3. Remove the four screws, one at the upper left and right and one at the lower left and right, securing the control panel.
4. Lower the control panel and you have access to the clock and the thermostat.

#### Access for 30" Models

1. Slide the unit forward about 3" to keep from scratching cabinets when removing the trim.
2. Open the door as wide as possible.
3. Remove the two screws at the upper left and right corners and the two screws at the lower left and right corners of the front trim.
4. Remove the upper trim piece.
5. Lift the overlay and clock up and out.

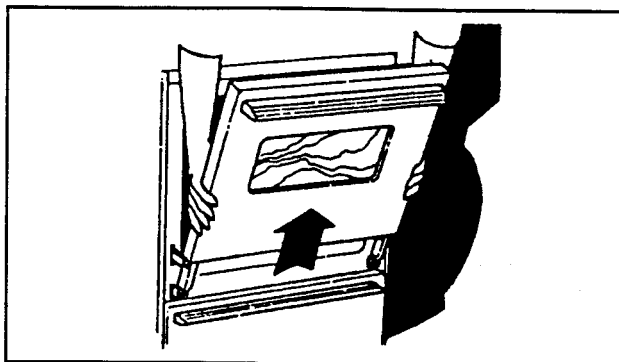


Figure 3-1

#### CAUTION

*Hinge arms are spring mounted and will slam shut against the unit if accidentally hit. NEVER PLACE HANDS OR FINGERS BETWEEN THE HINGES AND THE FRONT OVEN FRAME. Injury may occur if hinge snaps back.*

#### Replacement

Grasp door at each side, align slots in the door with the hinge arms and slide door down onto the hinge arm until completely seated on hinges.

Do not attempt to open or close door until door is completely seated on hinge arms. Never turn oven on unless door is properly in place.

### DOOR

#### Removal

Open door to the "stop" position (opened about four inches) and grasp door with both hands at each side. Do not use handle to lift door. Lift up evenly until door clears the hinge arms, *see figure 3-1*.

### OVEN LIGHT

**Non self-clean ovens:** Be sure bulb and oven are cool before replacing bulb. Very carefully remove bulb with dry pot holder to prevent possible harm to hands. Replace with a 40-watt APPLIANCE bulb. Reconnect power to the oven.

**Self-clean ovens:** Remove four screws and plates, *see figure 3-2*. Use care when removing gasket, it may tear. Replace with a 40-watt APPLIANCE bulb. Reconnect power to the oven.

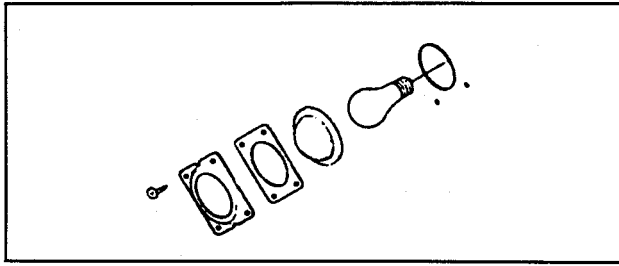


Figure 3-2

## OVEN SENSOR

### To access

1. Remove the two screws securing the sensor to the back wall of the cavity.
2. Carefully slide the sensor forward and work the molex connector through the opening on the rear wall of the cavity.
3. Disconnect the molex connector.

### To reinstall

1. Fasten the molex connector.
2. Using a Phillips screwdriver, apply pressure to the connector.
3. Keep tension on the connector and work the sensor back into position. Keep feeding the wire into the cavity until you feel resistance against the rear panel. This will ensure the connector is slid back far enough and reduce the risk of damage to the connector when the oven is in use.
4. Tighten the two screws.

## BROIL IGNITOR

1. Remove oven door.
2. Remove two screws from the ignitor mounting bracket on oven back.
3. Remove the two screws holding ignitor to burner bracket. Carefully pull ignitor forward.

4. Gently pull ignitor wires through oven wall until disconnect block is on inside of oven. Disconnect and test with probes of ohmmeter.

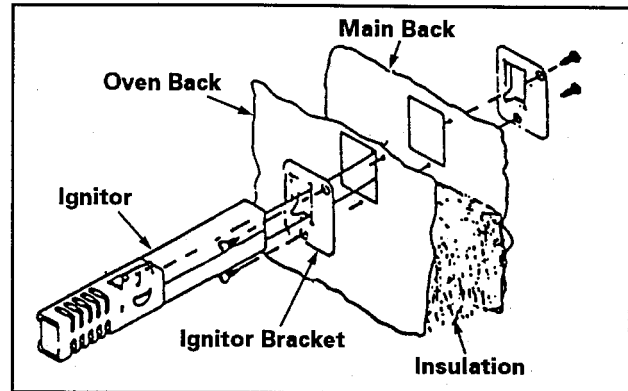


Figure 3-3

## BROIL BURNER

1. The broil burner flame should be a clean, blue flame with distinct inner cones approximately 3/8" long. A soft, lazy flame with indistinct cones means too much gas or not enough air. A noisy, lifting flame means too much air. If adjustments are necessary you must first loosen the lock screw located at the top of the air shutter, then rotate the air shutter to the correct setting, retighten the screw.
2. Broil burner flame can be checked as follows (without burner baffle in place):
  - a. If yellow flame - increase size of air shutter opening.
  - b. If distinct blue flame, but lifting - decrease size of air shutter opening.
3. The air shutter should be set approximately 2/3 open for Natural gas, and approximately full open for LP gas.
4. The broil burner air shutter adjustment is the same on ovens with a gas pilot or electric ignition.

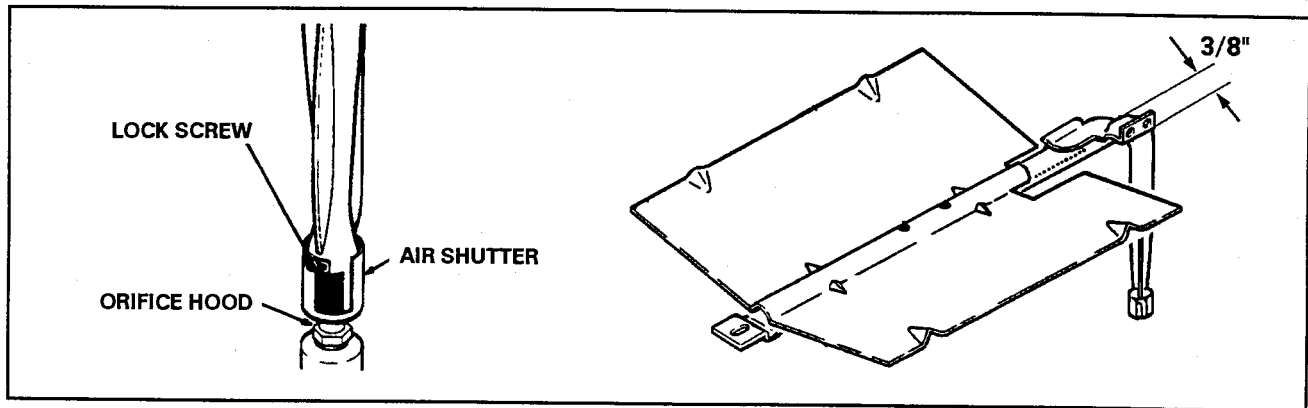


Figure 3-4

Figure 3-5

## OVEN BOTTOM

Your oven will be equipped with one of the following types of oven bottoms. Be sure oven bottom is cool.

### Removal

When cool, remove the oven racks. Slide the two catches, located at each rear corner of the oven bottom, toward the front of the oven.

Lift the rear edge of the oven bottom slightly, then slide it back until the holes in the front edge of the oven bottom clear the pins in the oven front frame. Remove oven bottom from oven.

### Replacement

Fit holes onto pins, lower rear of oven bottom and slide the catches back to lock oven bottom into place, *see figure 3-6*.

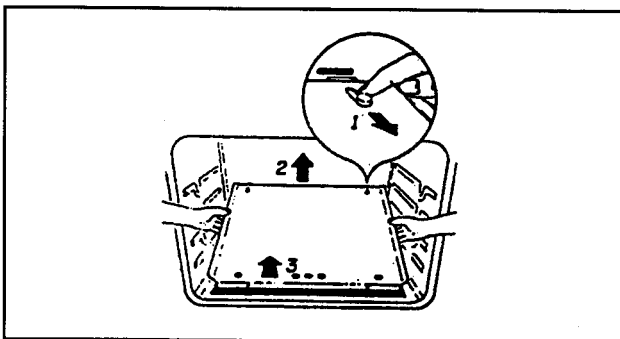


Figure 3-6

## BAKE IGNITOR

1. Remove the oven door, oven bottom plate, and flame spreader.
2. Remove the two screws from the ignitor mounting bracket on oven back.
3. Remove the two screws holding ignitor to burner bracket. Carefully pull ignitor forward.
4. Gently pull ignitor wires through oven wall unit until disconnect block is on the inside of oven. Disconnect and test with probes of ohmmeter.

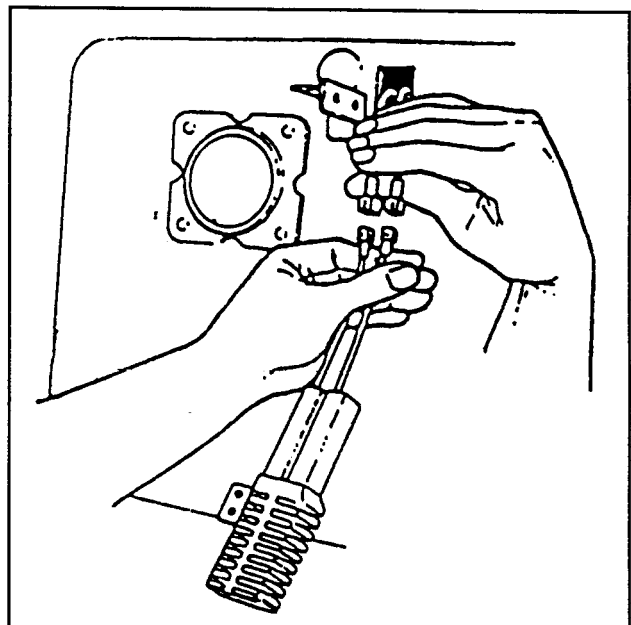


Figure 3-7

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## BAKE BURNER

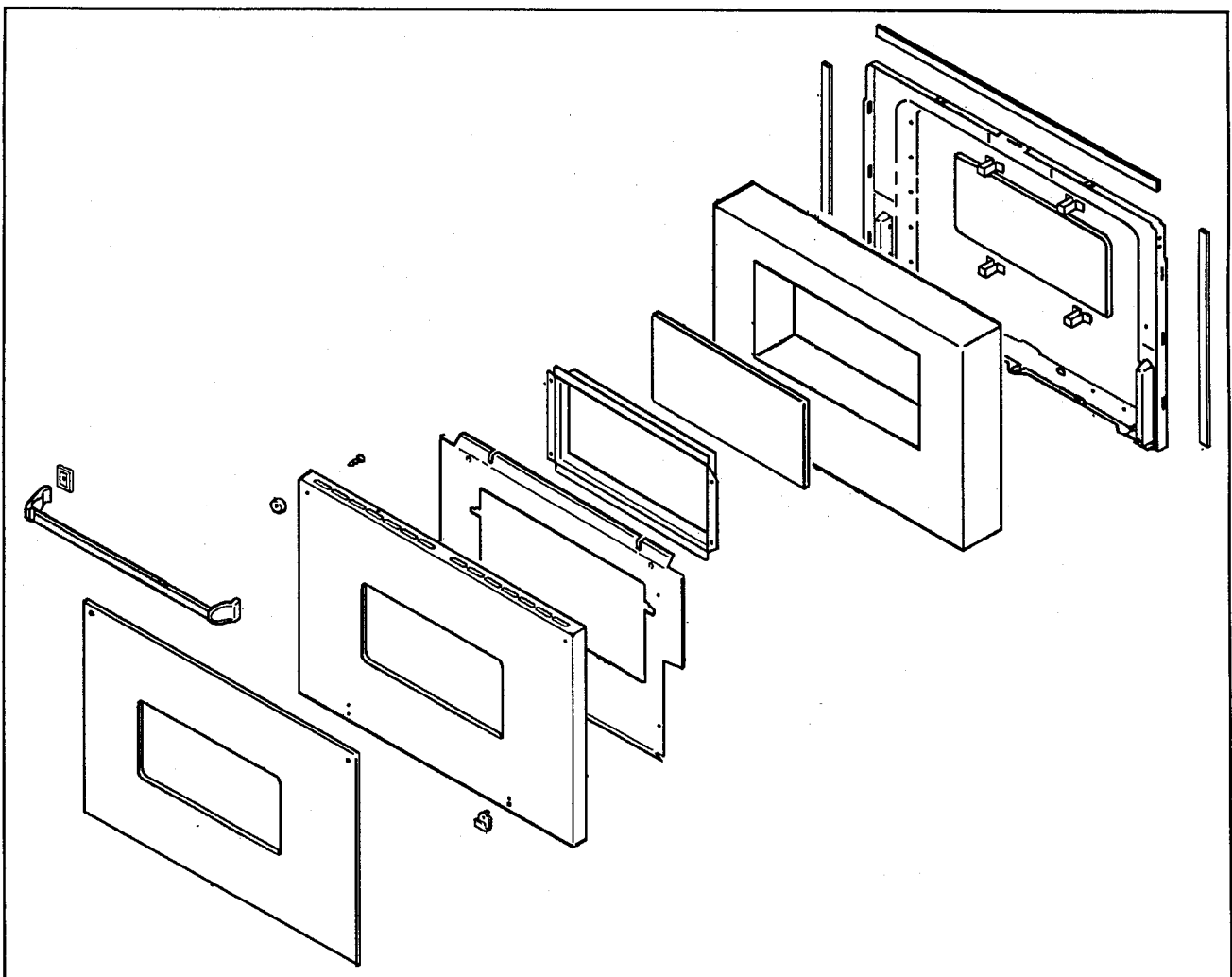
1. The bake burner flame should be a clean, blue flame with distinct inner cones approximately 1/2" long. A soft, lazy flame with indistinct cones means too much gas or not enough air. A noisy, lifting flame means too much air. If adjustments are necessary you must first loosen the lock screw located at the top of the air shutter, then rotate the air shutter to the correct setting, and tighten screw.
2. Bake burner flame can be checked as follows (without burner baffle in place):
  - a. If yellow flame - increase size of air shutter opening.
  - b. If distinct blue flame, but lifting - decrease size of air shutter opening.

3. The air shutter should be set approximately 2/3 open for natural gas, and approximately full open for LP gas.
4. The oven burner air shutter adjustment is the same on ovens with a gas pilot or electric ignition, *see figures 3-4 and 3-5.*

---

## SERVICING THE DOOR

Some door frames are made of molded plastic. The top, bottom and sides of the frame are held together by the use of tabs, slot, and groves. Each side trim has three bent tabs that hook over slots in the door liner.

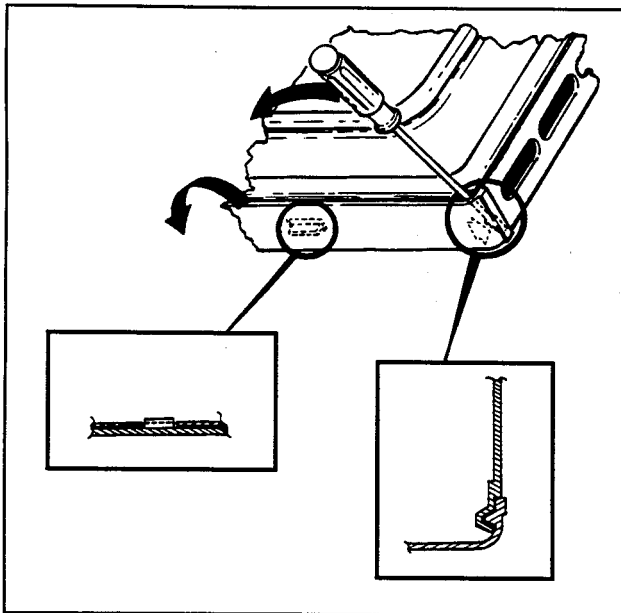


**Figure 3-8**

## Frame Removal

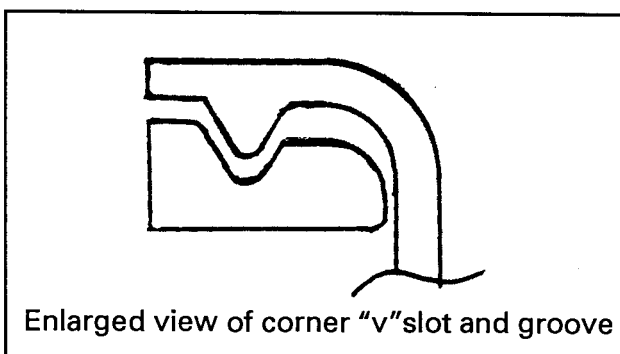
**NOTE:** *The end cap trim on the gas self-clean door handle must be removed prior to being able to remove the door frame. For removal squeeze the two small prongs under each end of the door handle.*

1. Lift off door and lay down with door liner facing up.
2. Place a small screwdriver in one of the lower corners of the door frame.
3. Exert pressure so as to separate the "v" groove from the "v" slot at the corner, see *figure 3-9*.

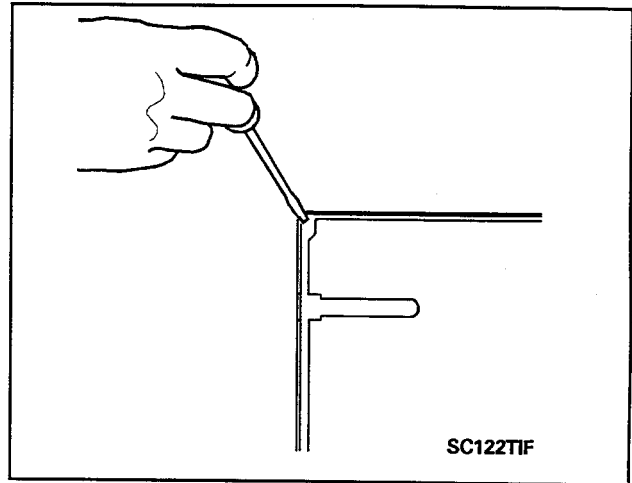


**Figure 3-9**

4. Remove the three screws securing the bottom trim to the frame.



**Figure 3-10**



**Figure 3-11**

## DOOR HINGE

### To access

1. Open the door to the stop position.
2. Lift the door up and off the hinges.
3. Remove the two 5/16" hex head screws securing the hinge to the frame.
4. Pull the hinge forward through the opening in the frame.

### To reinstall

1. Push the hinge through the opening in the frame.
2. Line the screw hole in the hinge up with the holes in the frame.
3. Insert the two 5/16" hex head screws in the screw holes.
4. Tighten the screws.
5. Slide the door onto the hinge.





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## SECTION 4. TROUBLESHOOTING

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### GLOW BAR IGNITION

#### To check silicon carbide ignitor

1. Visually check that ignitor is not broken and that is properly positioned adjacent to the burner (about 1/2 inch from burner ports).
2. Disconnect electrical power. Remove burner from orifice and gently pull ignitor wires through hole until quick-disconnect block is inside oven cavity. For the broil ignitor, make sure insulation is in hole when replacing disconnect block.
3. Disconnect the block or connection. with an ohmmeter attach one probe to one of the ignitor leads, and one to the other. A cold glow bar will have 50 to 400 ohms resistance.

As the resistance of the silicon carbide ignitor is determined by the temperature of the ignitor, a resistance measurement is of little value except to determine a direct short in the ignitor (less than 50 ohms), or in essence an open ignitor (in excess of 400 ohms), at room temperature.

#### To check electric oven valve

1. Disconnect electrical power and shut off oven gas.
2. Using an ohmmeter, check for continuity across the two (2) terminals. (Dual valves have two sets of terminals, one for bake, one for broil). Resistance should be approximately 1 ohm.

**NOTE: It is possible that the glow bar may appear bright and glowing but the valve does not open. If such is the case, and continuity indicates the valve is good, you will have to check the valve "live" as follows:**

1. Use caution.
2. Shut off oven gas supply.
3. When the ignitor glows but the gas valve does not open, a clamp on AC ammeter (**Maytag part number 20000002**) should be used of determine whether the valve or the ignitor is at fault. The amperage can be checked at any point of the range where the jaws of the ammeter can be clamped around one side of the line supply.

After connecting the ammeter around one side of the line, observe current draw of the appliance while the oven is not programmed to bake or broil. Then select the bake/broil function that is not operating and observe the current reading. If the current difference is less than 3.2 amps with no ignition suspect the ignitor, if the current difference is 3.2 amps or higher with no ignition suspect the gas valve or gas supply to the oven.

**NOTE: Remember the ignitor and valve are wired in series. Should the ignitor fail to glow, check the valve for continuity first to make sure its heater coil is not open. If the valve is good, then check the ignitor and the power supply.**

#### To test the oven sensor

1. Disconnect the appliance from power.
2. Allow the oven and oven sensor to cool to room temperature.
3. Remove the sensor probe cover located at the rear of the range directly behind the mounting location of the oven sensor.
4. Disconnect the oven sensor at the connector blocks.
5. Connect an ohmmeter across the terminals of the oven sensor block.

6. At room temperature of between 60° to 80°F, the resistance should be between 1060 and 1100 ohms.
7. Connect one ohmmeter lead to one of the terminals of the oven sensor connector block and the other lead to ground on the range.
8. If any resistance other than infinite resistance (open) is indicated, then suspect the oven sensor.
9. Reattach the connector block and sensor probe cover.

**To test the bake relay contact**

1. Disconnect the unit from power.
2. Remove the wires from terminals P3 and P2.

**NOTE: *Insulate the exposed portion of the terminal connector on the removed wires with insulating electrical tape to prevent the risk of accidental electrical shock or damage to components.***

3. Connect an ohmmeter to terminals P3 and P2 with insulated alligator clips.
4. No continuity should be indicated.
5. Reconnect the unit to power.

**To test the broil relay contacts**

1. Disconnect the unit from power.
2. Remove the wires from terminals P5 to P2.

**NOTE: *Insulate the exposed portion of the terminal connector on the removed wires with insulating electrical tape to prevent the risk of accidental electrical shock or damage to components.***

3. Connect an ohmmeter to terminals P5 and P2 with insulated alligator clips.

4. No continuity should be indicated.
5. Reconnect the unit to power.

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**FAULT CODES**

**RSI Controls**

The RSI control will be equipped with 3 fault codes, which will show the associated code on the right side of the time display.

F1	Control circuitry, sounds alarm and inhibits cook modes.
F2	Open or shorted sensor, sounds alarm and inhibits cook modes. Ohm sensor at room temperature. The resistance should be 1060 to 1100 ohms.
F9	Door lock fault, displayed if the control is unable to recognize the door lock input and the unlock switch state.

## T2 CONTROLS

Model: CGW3330

The T2 control continually checks for control or oven failures and will display an "F" code when a fault is detected. The "F" code and an auxiliary code is saved in memory.

CODE	2ND CODE	DESCRIPTION	WHEN CHECKED*	DEBOUNCE
F1	1	Runaway temp while cooking, 650°F	Latch unlocked	6 seconds
F1	2	Runaway temp while cleaning, 935°F	Latch locked	6 seconds
F1	3	Shorted Key	Always	45 seconds
F1	4	Keyboard disconnected	Always	30 seconds
F1	5	Cancel key input out of range	Always	30 seconds
F1	6	Relay enable circuit malfunction	Relays disabled	30 seconds
F1	7	Slave micro not functioning	Always	30 seconds
F1	8	Option input or sensor input failure	Always	30 seconds
F1	9	Memory error/control not calibrated	Memory reading	0 seconds
F3	1	Sensor failure or sensor circuit failure	Cook or clean active or programmed	6 seconds
F9	1	Motorized latch will not lock	Latch option is motorized, and latch should be locked	6 seconds
F9	2	Motorized latch will not unlock	Latch option is motorized, and latch be unlocked	30 seconds
F9	3	Latch inputs indicate that the latch is both locked and unlocked	Always	30 seconds

## To recall the Fault Code

1. Press bake and select a 100°F oven temperature.
2. Re-press bake and continue holding until the preheat temperature and sensor temperature is displayed.
3. The last fault code in memory will be displayed.
4. The first number will be the main code and the second number will be the sub code.

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## OVEN CALIBRATION

Models: **WG30100, JWG8130, JWG9130**

For the RSI and T2 Clock the following procedure should be followed:

1. Press the bake pad and select an oven temperature of 550°F.
2. Press and hold the bake pad for 3 to 5 seconds within 30 seconds of selecting bake.
3. Two numbers will appear in the display. This will reveal if the unit has been calibrated before and by how much.
4. Use the slew pads, for the RSI clock, or the number pads for the T2 clock. Pressing the pad will raise or lower the temperature in increments of 5° degrees.

## Mechanical Thermostat

1. Turn control to OFF position and remove the dial.
2. Insert screwdriver through the center of the shaft to engage the slot of the calibration screw. Using the screwdriver blade as a reference point, turn the calibration screw clockwise to lower the temperature or counterclockwise to increase oven temperature. Each calibration mark on

front of calibration plate represents 25°F. Make certain that the stem does not move during adjustment.

3. Replace dial.
4. Recheck calibration by setting dial at 400° mark and do the following:
  - a. Place a weighted thermocouple or mercury thermometer in center of oven. The thermocouple or thermometer can be weighted by using a letter-size sheet of aluminum foil about 5"x 8". Fold the foil five times doubling the thickness with each fold. After the fifth fold, place the thermocouple tip in the center of the aluminum piece and fold once more. Finally fold the sides so the foil clings to the thermocouple tip.
  - b. With thermostat dial in the OFF position, make certain OFF mark on the dial agrees with reference point of the bezel or panel; misalignment will affect calibration.
  - c. Turn the dial to 350° mark. Allow oven to heat until control cycles "ON and OFF" thermostatically at least three times. This will allow oven temperature to stabilize and eliminate possible error resulting from initial oven temperature overshoot and/or undershoot.
- d. After the control has cycled thermostatically three or more times, note the oven temperature when the burner cycles on. Recalibrate only if the average of these two temperature readings varies greater than 24° from the dial setting.

**NOTE: The oven burner will cycle on and off at full rate at all dial settings below the 575° marking. There is no bypass flame.**

## Oven "Browning Adjustment" Feature

Some thermostat knobs can be adjusted. To determine if the thermostat knob is adjustable, remove the knob. If there are two adjustment screws on the back, and increase and decrease temperature, then it is adjustable.

### Adjustment

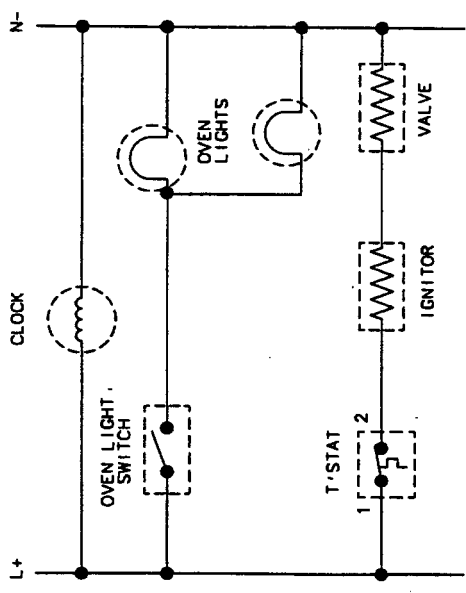
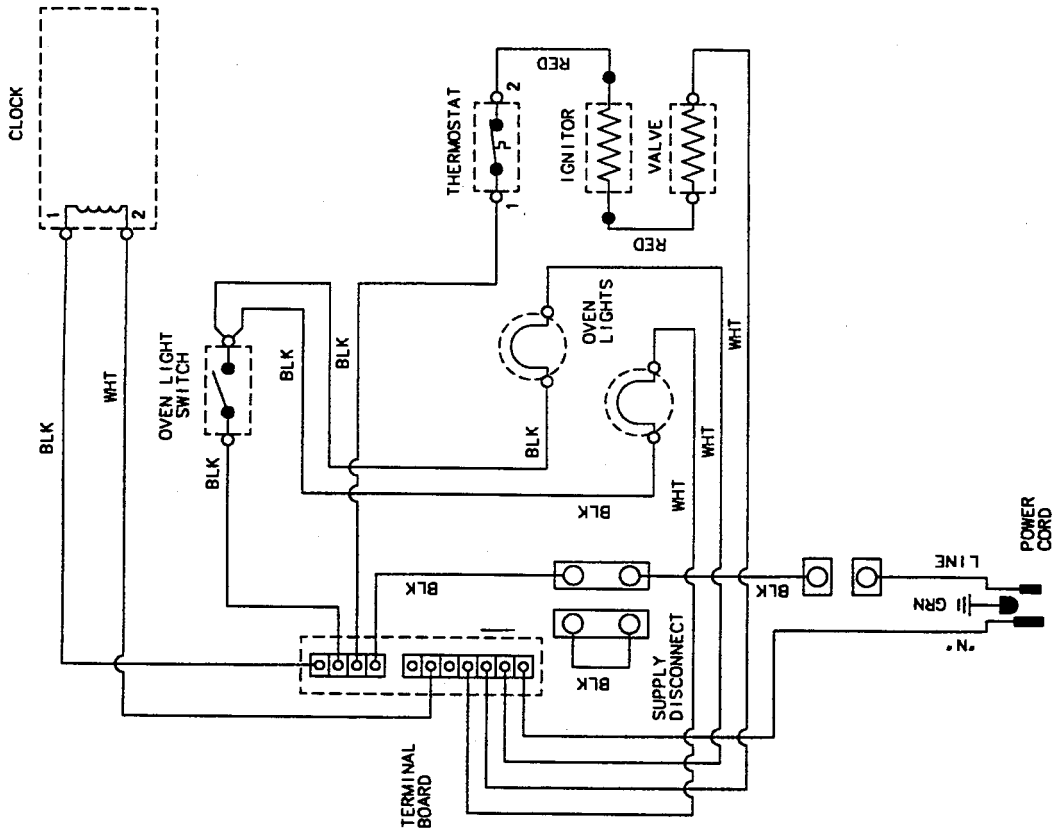
1. Remove the knob from the range, look at the back of the knob and note the current setting before making any adjustment.
2. Hold the knob firmly in one hand so the pointer (on the rear of the skirt) is at the top. With the other hand, loosen the screws. Turn the knob to move the pointer in the direction desired. Turning the knob to the right will increase the browning, and to the left will decrease the browning. Tighten screw, maintaining the new desired setting.
3. Place the knob back on the shaft by aligning the flat area of the knob to the shaft. Recheck the oven browning. Adjustment can be made up to a maximum of three lines.

**NOTE:** *In either of the calibration procedures the thermostat can only be adjusted a maximum of +35° or - 35°.*



# SECTION 5. WIRING DIAGRAMS

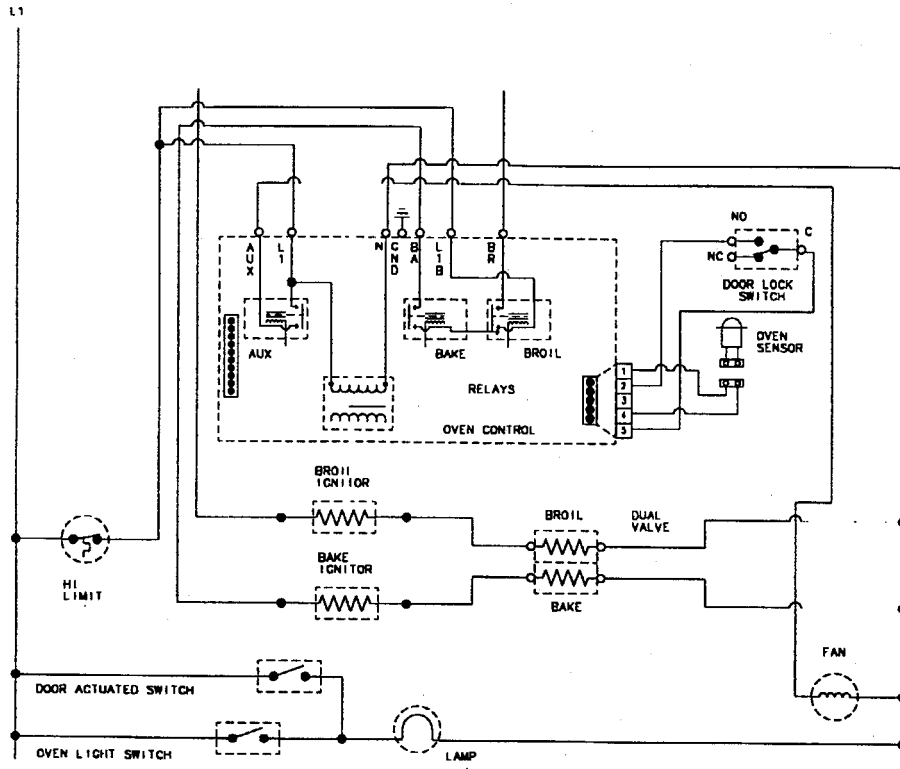
MODEL: WG24000, 9112, 9122



SCHEMATIC

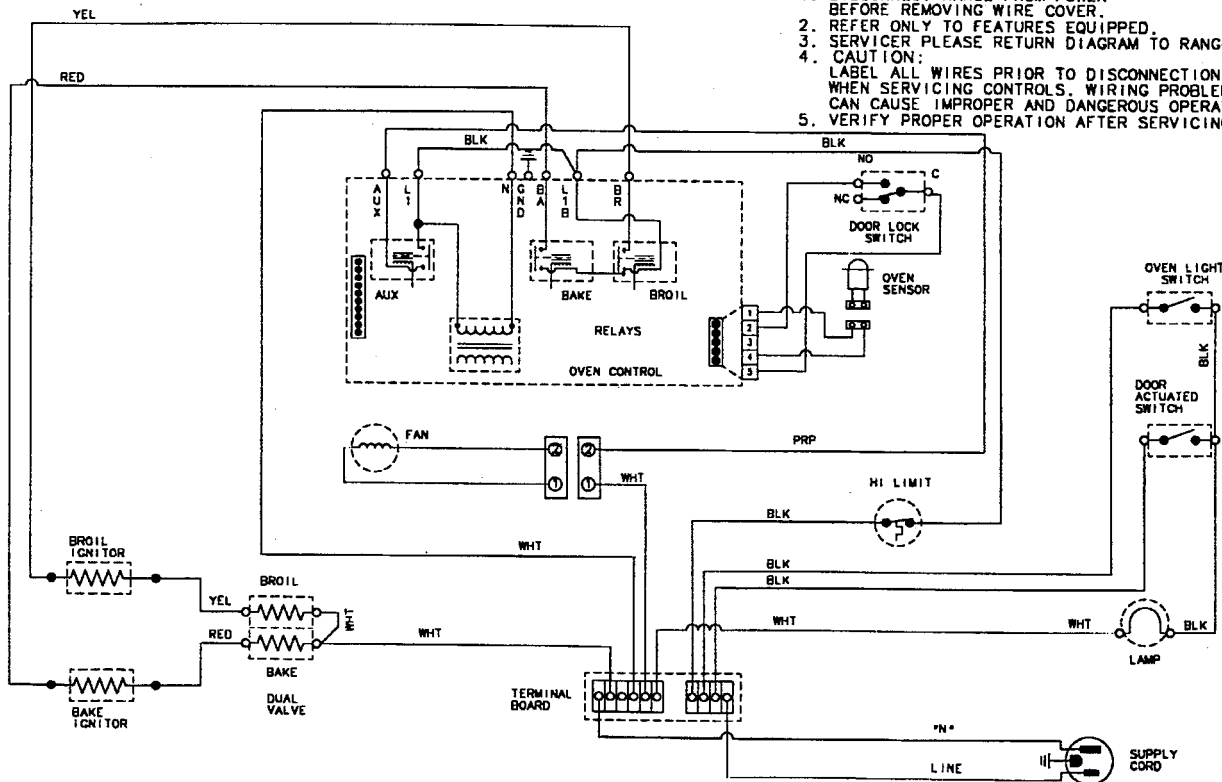
- NOTICE:**
1. DISCONNECT RANGE FROM POWER BEFORE REMOVING WIRE COVER.
  2. REFER ONLY TO FEATURES EQUIPPED.
  3. SERVICER PLEASE RETURN DIAGRAM TO RANGE.
  4. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING PROBLEMS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
  5. VERIFY PROPER OPERATION AFTER SERVICING.

# MODEL: WG30100



RELAY CONTACTS	LINE 1 / BROIL		SEE NOTE
	LINE 1	BROIL	
DOOR LOCK SWITCH	NO	COM	SEE NOTE
	OPEN	OPEN	
	OPEN	CYCLES	SEE NOTE
	OPEN	CYCLES	
	OPEN	CYCLES	SEE NOTE
	OPEN	CYCLES	
	CLOSED	CYCLES	SEE NOTE
	CLOSED	CYCLES	

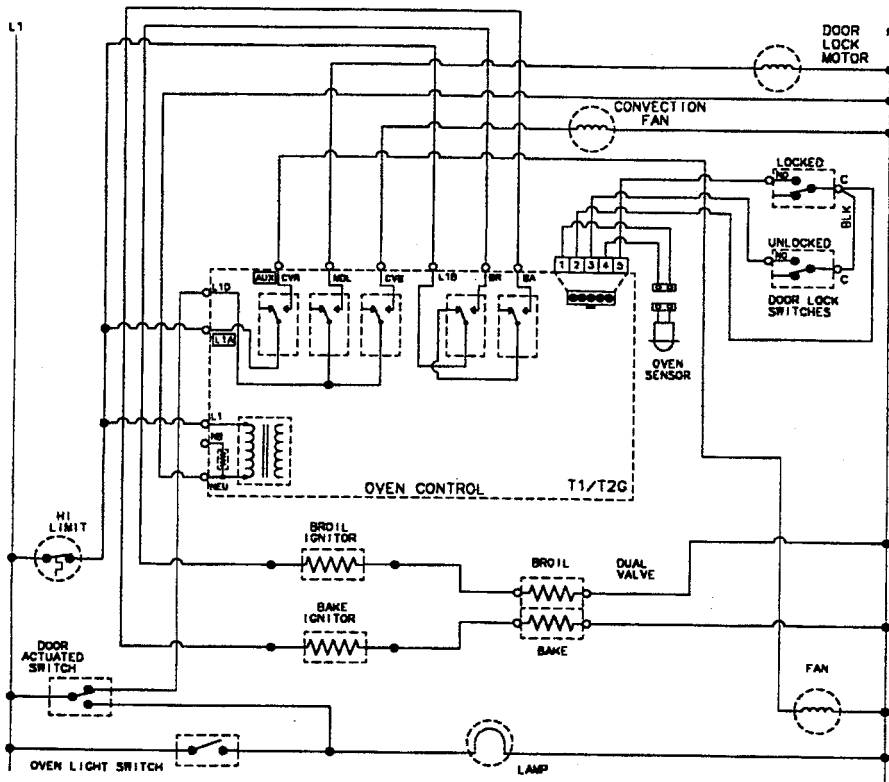
- NOTICE:**
1. DISCONNECT RANGE FROM POWER BEFORE REMOVING WIRE COVER.
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- NOTICE:**
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  2. REFER ONLY TO FEATURES EQUIPPED.
  3. SERVICER PLEASE RETURN DIAGRAM TO RANGE.
  4. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING PROBLEMS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
  5. VERIFY PROPER OPERATION AFTER SERVICING.



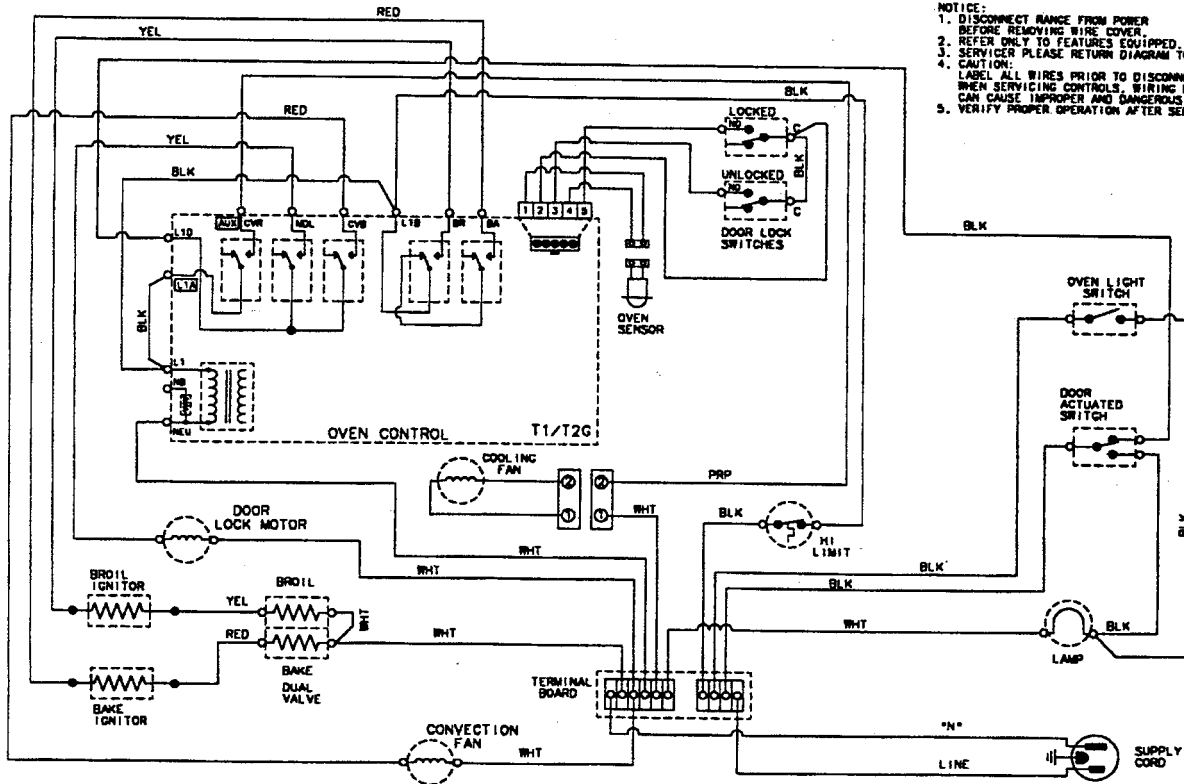
# MODEL: JGW8130, JGW9130



RELAY CONTACTS	LINE 1/	BAKE
DOOR LOCK SWITCH	NO COM	
	OPEN	OPEN
	CLOSE	CLOSE
	NO COM	
	OPEN	OPEN
	CLOSE	CLOSE
	NO COM	
	OPEN	OPEN
	CLOSE	CLOSE

NOTES:  
 1- LINE/BROIL CLOSED FIRST PART OF CYCLE.  
 2- LINE/BAKE CLOSED SECOND PART OF CYCLE.

- NOTICE:**
1. DISCONNECT RANGE FROM POWER BEFORE REMOVING WIRE COVER.
  2. REFER ONLY TO FEATURES EQUIPPED.
  3. SERVICER PLEASE RETURN DIAGRAM TO RANGE.
  4. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING PROBLEMS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
  5. VERIFY PROPER OPERATION AFTER SERVICING.



- NOTICE:**
1. DISCONNECT RANGE FROM POWER BEFORE REMOVING WIRE COVER.
  2. REFER ONLY TO FEATURES EQUIPPED.
  3. SERVICER PLEASE RETURN DIAGRAM TO RANGE.
  4. CAUTION: LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING PROBLEMS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.
  5. VERIFY PROPER OPERATION AFTER SERVICING.





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