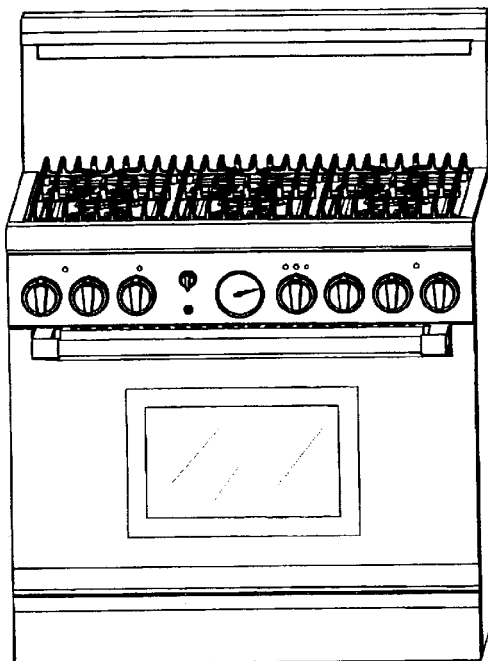


SERVICE MANUAL

for

**THERMADOR®
PROFESSIONAL RANGES**



**Model PDR366
with High Shelf PRS36HS**

Dual Fuel Model PDR36

FOR RESIDENTIAL USE ONLY

***Thermador*®**

INTRODUCTION

THIS SERVICE MANUAL CONTAINS INFORMATION THAT IS NECESSARY FOR SERVICING THE THERMADOR® PROFESSIONAL RANGES:

MODEL PDR 36

THIS MANUAL IS DESIGNED TO BE USED ONLY BY QUALIFIED SERVICE PERSONNEL. THERMADOR RECOMMENDS THAT CUSTOMERS DO NOT SERVICE THEIR OWN UNITS, DUE TO THE COMPLEXITY AND THE RISK OF HIGH-VOLTAGE ELECTRICAL SHOCK.

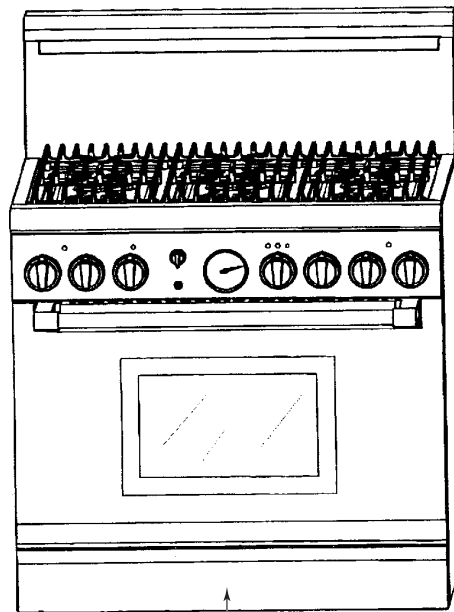
THE INFORMATION IS ORGANIZED TO HELP THE SERVICER EASILY FIND WHAT IS NEEDED TO REPAIR THE UNIT.

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GENERAL

SERIAL NUMBER/DATA STICKER LOCATIONS



Toe Panel

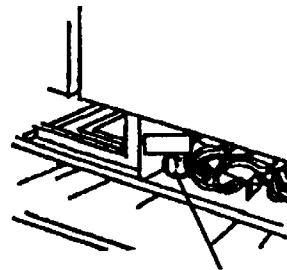
⚠ WARNING

ELECTRICAL SHOCK HAZARD

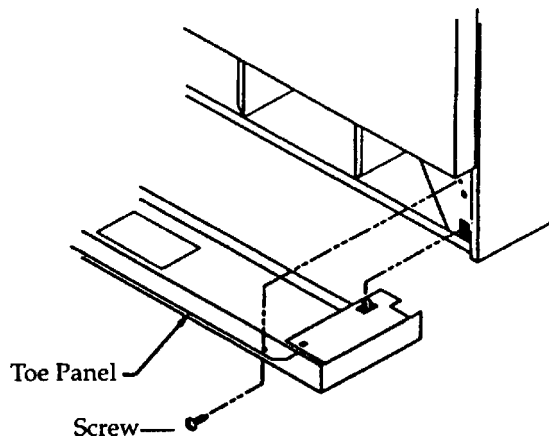
Be sure to turn off the electrical supply to the range before removing the toe panel; otherwise electrical shock could occur.

The Serial Number/Data Sticker shows the model and serial numbers of the range. It is located behind the toe panel at the bottom of the range. To access the Serial Number/Data Sticker, remove the two toe panel attachment screws and remove the panel.

The PDR Dual-Fuel models have the Serial Number/Data Sticker located on the vertical panel to the left of the electrical components.



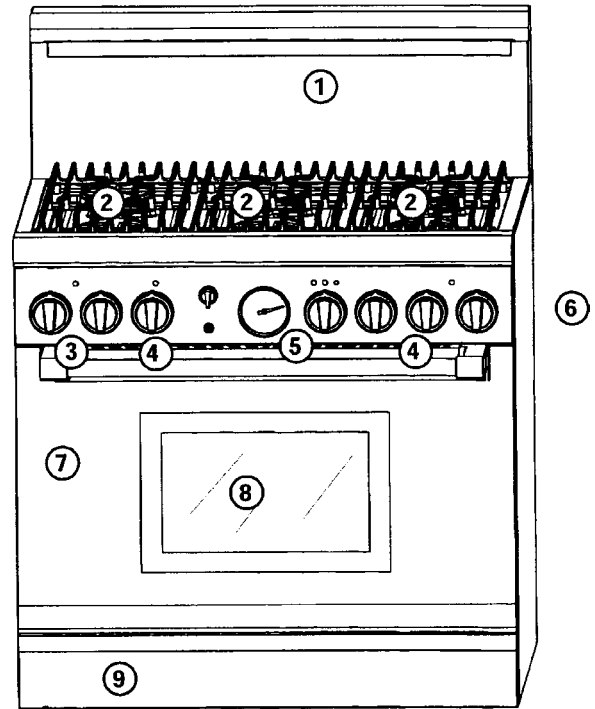
Serial Number/Data Sticker



MODEL AND PARTS IDENTIFICATION

Key for PDR Models

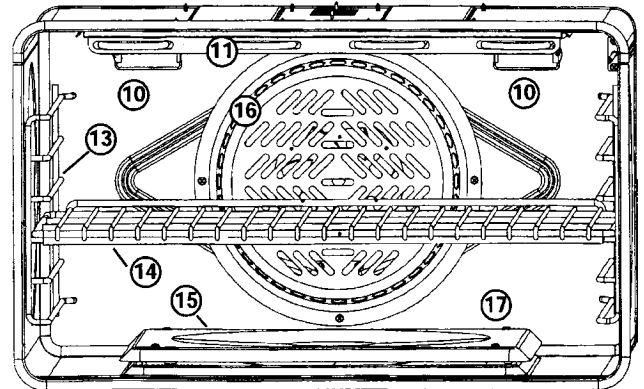
1. 22" High Shelf Backguard, 12" Low Back, or Island Trim (Backguard ordered separately)
2. Burner Grates & Burners
3. Control Knobs, ExtraLow® Burners (2)
4. Control Knobs, Standard Burners (4)
5. Oven Controls
6. Oven Light Switch
7. Oven Door
8. Viewing Window
9. Kick Panel



Dual-Fuel Model PDRS366 Shown

Electric Oven

10. Oven Interior Lights
11. Broil Element
13. Rack Guides
14. Oven Rack (3)
15. Bake Element
16. Convection Fan Covers
17. Heat Shields (2)



SYMBOLS YOU WILL SEE IN THE MANUAL

The following symbols are provided throughout this manual. For reasons of personal safety

and proper operation and servicing of the range, follow the instructions carefully each time you see one of the symbols.

WARNING

This symbol alerts you to such dangers as personal injury, burns, fire, and electrical shock.

CAUTION

This alerts you to actions that could cause product damage (scratches, dents, etc.), and damage to your personal property.

IMPORTANT SAFETY INFORMATION

WARNING

Be sure to turn off all electric and gas supplies to the range before servicing; otherwise, a fire or explosion may result causing property damage, personal injury, or death.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

GAS RANGE—WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch.
- Do not use any phone in the building.
- Immediately call your gas supplier from a neighbor's phone.
- Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

THERMADOR ASSUMES NO RESPONSIBILITY FOR ANY REPAIRS MADE ON OUR PRODUCTS BY ANYONE OTHER THAN AUTHORIZED THERMADOR SERVICE TECHNICIANS.

THERMADOR® WARRANTY

Length of Warranty	Thermador will pay for:	Thermador will not pay for:
<p>FULL ONE YEAR For one year from date of installation or date of occupancy for a new previously unoccupied dwelling. Save all dated receipts or other evidence of date of installation/occupancy date.</p>	<p>All repair labor and replacement parts found to be defective due to materials and workmanship. Service must be provided by a Factory Authorized Service Agency, during normal working hours. For a Service Agency nearest you, please call: 1-800/735-4328.</p>	<ol style="list-style-type: none"> 1. Service by an unauthorized agency. Damage or repairs by an unauthorized agency or use of unauthorized parts. 2. Chipping of porcelain, enamel, discoloration of chrome plating or the griddle plate. 3. Service visits to: <ul style="list-style-type: none"> • Teach you how to use the appliance. • Correct the installation. You are responsible for providing electrical wiring and/or gas installation and other connecting facilities. • Reset circuit breakers or replace home fuses. 4. Damage caused from accident, abuse, alteration, misuse, incorrect installation or installation not in accordance with local codes, or improper storage of the appliance. 5. Repairs due to other than normal home use.

This warranty applies to appliances used in normal family households; it does not cover their use in commercial situations. This warranty is for products purchased and retained in the 50 states of the U.S.A., the District of Columbia, and Canada. The warranty applies even if you should move during the warranty period. Should the appliance be sold by the original purchaser during the warranty period, the new owner continues to be protected until the expiration of the original purchaser's warranty period.

This warranty gives you specified legal rights. You may also have other rights which vary from state-to-state.

HOW TO OBTAIN SERVICE

For service, contact the Factory Authorized Service Agency in your area, the dealer from whom you purchased the appliance, or write us at the address shown below.

We want you to be a satisfied customer. If a problem arises that has not been resolved to your satisfaction, please let us know. Write to:

Consumer Relations Department
 5551 McFadden Avenue
 Huntington Beach, CA 92659

or phone:

(800) 735-4328

Please be sure to include the Model Number, Serial Number, (located on the data sticker), and the Date of Original Purchase.

INSTALLATION

IMPORTANT INSTALLATION INFORMATION

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service agency, manufacturer (dealer) or the gas supplier.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone.
- Follow the gas supplier's instruction
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

GAS TYPE VERIFICATION

Verify the type of gas supplied to the location. Ensure that the appliance is connected to the type of gas for which it is certified. All models are certified for use with natural gas. Field conversion of the appliance for use with propane gas supply will require a conversion kit. Refer to the product rating label which can be located as indicated on page 4.

CAUTION

When connecting the unit to propane gas, make certain the propane gas tank is equipped with its own high-pressure regulator in addition to the pressure regulator supplied with the range. **The maximum gas pressure to this appliance must not exceed 14.0 inches water column (34.9 millibars) from the propane gas tank to the pressure regulator.**

IMPORTANT

- A backguard must be utilized when there is less than a 12 inch horizontal clearance between combustible materials and the back edge of the cooktop. The Thermador Low Back backguard must be ordered separately and installed at the rear of the cooktop. For island installations and other installations with more than 12 inches of clearance, an optional stainless steel Island Trim is available to cover the backguard mounting flanges.
- Verify that the appliance is correct for the type of gas being provided.

This appliance has been tested in accordance with ANSI Z21.1 2000, Standard for Household Cooking Appliances (USA) and in accordance with CAN 1.1-M81 Domestic Gas Ranges (Canadian).

It is strongly recommended that this appliance be installed in conjunction with a suitable **overhead vent hood** (see "Ventilation Requirements" on page 10). Due to the high heat capability of this unit, particular attention should be paid to the hood and ductwork installation to assure it meets local building codes.

 **CAUTION**

To eliminate risk of burns or fire caused by reaching over heated surface units, cabinet storage located above the surface units should be avoided.

Check local building codes for the proper method of appliance installation. Local codes vary. Installation, electrical connections and grounding must comply with all applicable codes. In the absence of local codes the appliance should be installed in accordance with the

National Fuel Gas Code ANSI Z223.1 Current Issue and National Electrical Code ANSI/NFPA 70-Current Issue. In Canada, installation must be in accordance with the CAN 1 - B149.1 and .2 - Installation Codes for Gas Burning Appliances and/or local codes.

This appliance is equipped with an intermittent/interrupted ignition device that cycles the two far left surface burners on and off when in the ExtraLow[®] setting.

 **CAUTION**

When connecting the unit to propane gas, make certain the propane gas tank is equipped with its own high pressure regulator in addition to the pressure regulator supplied with this unit. The maximum gas pressure to this appliance is not to exceed 14.0 inches (37 mb) water column from the propane gas tank regulator.

This unit is designed as a cooking appliance. Based on safety considerations never use it for warming or heating a room.

VENTILATION REQUIREMENTS

It is strongly recommended that a suitable exhaust hood be installed above the range. Downdraft ventilation should not be used. The table below indicates the Thermador hoods, by model number, that are recommended for use with all ranges.

1. Select Hood and Blower Models

For wall installations, the hood width must, at a minimum, equal the width of the range cooking surface. Where space permits, a hood larger in width than the cooking surface may be desirable for improved ventilation performance.

For island installations, the hood width should, at a minimum, overhang the range cooking surface by 6" on both sides.

CAUTION: Ventilation hoods and blowers are designed for use with single wall ducting. However, some local building codes or inspectors may require double wall ducting. Consult local building codes and/or local agencies, before starting, to assure that hood and duct installation will meet local requirements.

Hood blower speeds should be variable to reduce noise and loss of heated or air conditioned household air when maximum ventilation is not required. Normally, the maximum blower speed is only required when using the grill.

2. Hood Placement

For best smoke elimination, the lower edge of the hood should be installed a minimum of 30" to a maximum of 36" above the range cooking surface.

If the hood contains any combustible materials (i.e. a wood covering), it must be a minimum of 36" above the cooking surface.

3. Consider Make-Up Air

Due to the high volume of ventilation air, a source of outside replacement air is recommended. This is particularly important for tightly sealed and insulated homes.

A qualified heating and ventilating contractor should be consulted.

RANGE WIDTH	WALL INSTALLATION		ISLAND INSTALLATION	
	HOOD*	BLOWER**	HOOD	BLOWER
36" RANGE	PH36ZS, 42ZS PHE36,42 HNW36YS HNW42 YS	VTR1000Q, VTR1400Q or VTN 1000Q VTR1000Q, VTR1400Q VTR1000Q, VTR1400Q	PHI48ZS HTNI42YS	VTR1000Q VTR1400Q VTR1000Q VTR1400Q

Notes: * For wall installations where adequate space is available, the installer or user may elect to use a hood that is wider than the range cooking surface. This may be particularly beneficial for those cases, such as a long duct run or heavy usage of the grill, in which improved capturing of the cooking exhaust is desired.

** Thermador offers a choice of remote (VTR1000Q or VTR1400q) or in-hood (VTN1000Q) blowers for use in wall installations.

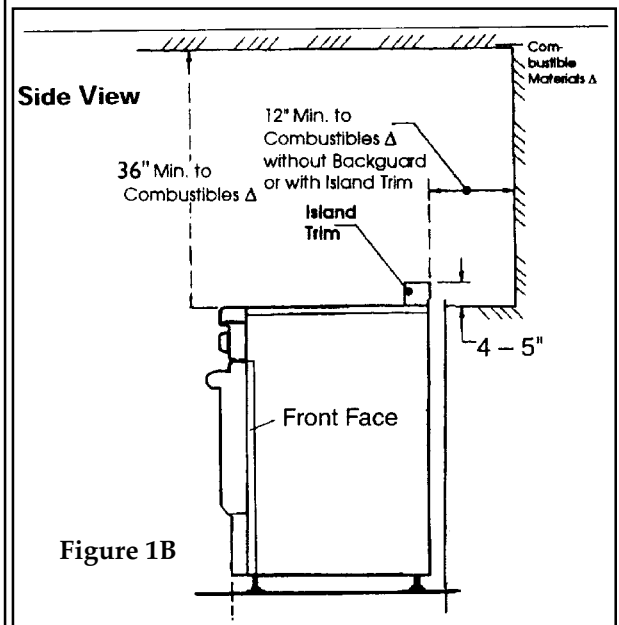
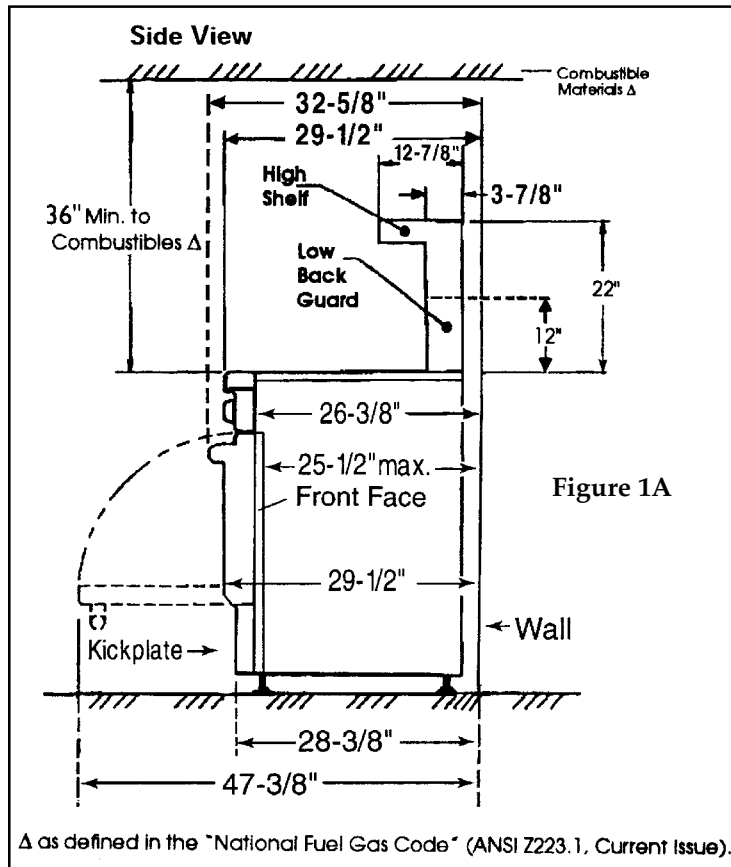
CABINET PREPARATION

1. The range is a freestanding unit. If the unit is to be placed adjacent to cabinets, the clearances, shown in Figures 1A and 1B, are required. The same clearances apply to island installations, except for the overhead cabinets, which must have a space wide enough to accept the flared island hood.
2. The 30" and 36" ranges may be recessed into the cabinets beyond the edge of the front face of the oven (see Figures 1A & 1B).
3. The gas and electrical supply should be within the zones shown in Figures 2A or 2B on page 12.
4. The maximum depth of overhead cabinets installed on either side of the hood is 13".
5. Any openings in the wall behind the range and in the floor under the range must be sealed.
6. When there is less than a 12" horizontal clearance between combustible material and the back edge of the range above the cooking surface, a Thermador Low Back or High Shelf backguard must be installed (see Figure 1A). When clearance to combustible material is over 12", a Thermador Island Trim may be used (see Figure 1B). Figures 1A and 1B indicate the space required for each type of backguard.
7. Always keep appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
8. Do not obstruct the flow of combustion and ventilation air to the unit.

⚠ CAUTION

In these installations, the door and cabinet can cause a pinching hazard.

3. The gas and electrical supply should be within the zones shown in Figures 2A or 2B on page 12.



GAS & ELECTRICAL SUPPLY ZONES

Gas & Electrical Supply Zone for PDR30 and PDR36 Dual-Fuel Ranges

Typical placement shown.
Other placement of Gas Supply and Electrical Receptacle within the Electrical and Gas Supply Zone is acceptable.

NOTE:
A Manual Gas Shut-Off Valve (not shown) must be easily accessible through an adjacent cabinet without moving the range.

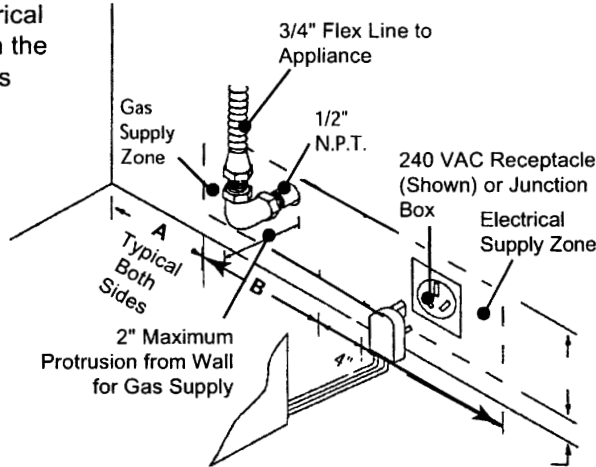


Figure 2A

The Dual-Fuel ranges may be connected to the power supply with a range supply cord kit or by hard-wiring to the power supply. It is the responsibility of the installer to provide the proper wiring components (cord or conduit and wires) and complete the electrical connection as dictated by local codes and ordinances, and/or the National Electric Code. The units must be properly grounded.

The range must be connected only to the type of gas for which it is certified. If the range is to be connected to propane gas, ensure that the propane gas supply tank is equipped with its own high pressure regulator in addition to the pressure regulator supplied with the range.

Model PDR36 A=7", B=9"

Gas & Electrical Supply Zone for PDR48 Dual-Fuel Range

Typical placement shown.
Other placement of Gas Supply and Electrical Receptacle within the Electrical and Gas Supply Zone is acceptable.

NOTE:
A Manual Gas Shut-Off Valve (not shown) must be easily accessible through an adjacent cabinet without moving the range.

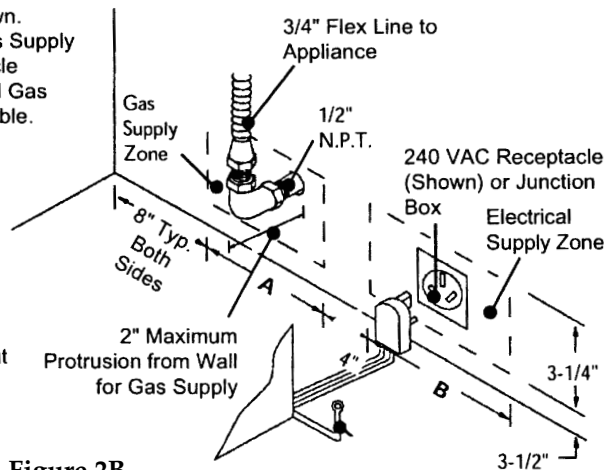


Figure 2B

The Dual-Fuel ranges may be connected to the power supply with a 3-pole, 3-conductor range supply cord kit, a 3-pole, 4-conductor range supply cord kit or by hard-wiring to the power supply. It is the responsibility of the installer to provide the proper wiring components (cord or conduit and wires) and complete the electrical connection as dictated by local codes and ordinances, and/or the National Electric Code. **The units must be properly grounded.**

The range must be connected only to the type of gas for which it is certified. If the range is to be connected to propane gas, ensure that the propane gas supply tank is equipped with its own high pressure regulator in addition to the pressure regulator supplied with the range.

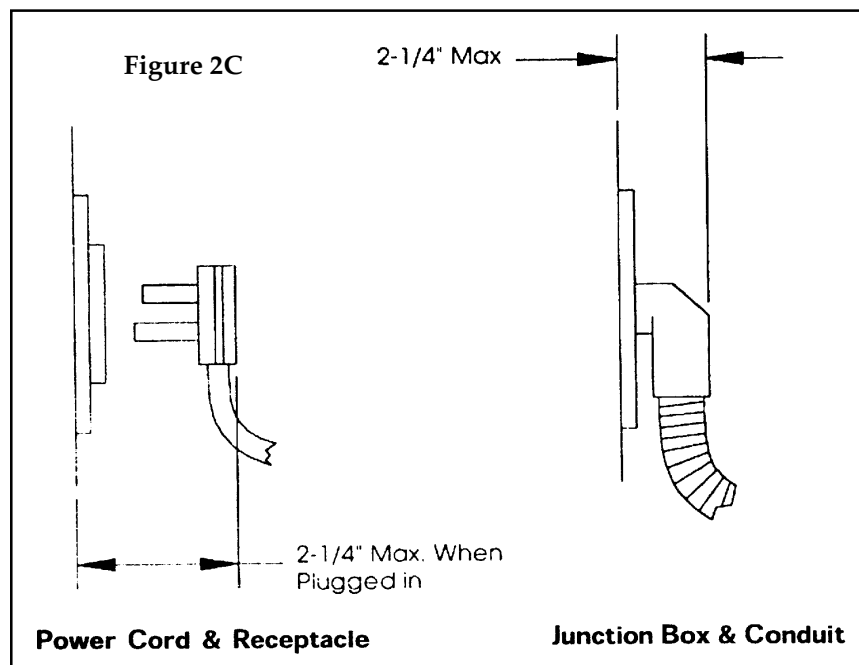
ELECTRICAL SUPPLY— DUAL FUEL RANGES

Installation of Dual Fuel ranges must be planned so that the rough-in of the junction box for the receptacle or conduit connection will allow maximum clearance to the rear of the unit.

When the power supply cord (not supplied) or conduit is connected to the mating receptacle or junction box cover, the combined plug/

receptacle or junction box cover / conduit connector should protrude no more than 2-1/4 inches from the rear wall (see Figure 2C).

This is especially critical if the junction box in the wall will be directly behind the junction box on the unit when the unit is installed (see Figure 7 on Page 20 for location of junction box on unit). To minimize binding when the unit is connected to the receptacle or junction box, orient the receptacle or conduit connector, and slide back into position.



UNPACKING, MOVING, & PLACING THE RANGE

⚠ CAUTION

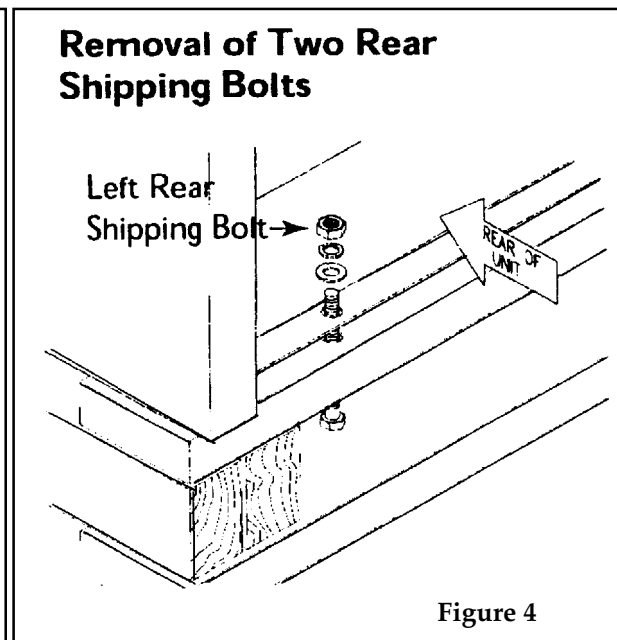
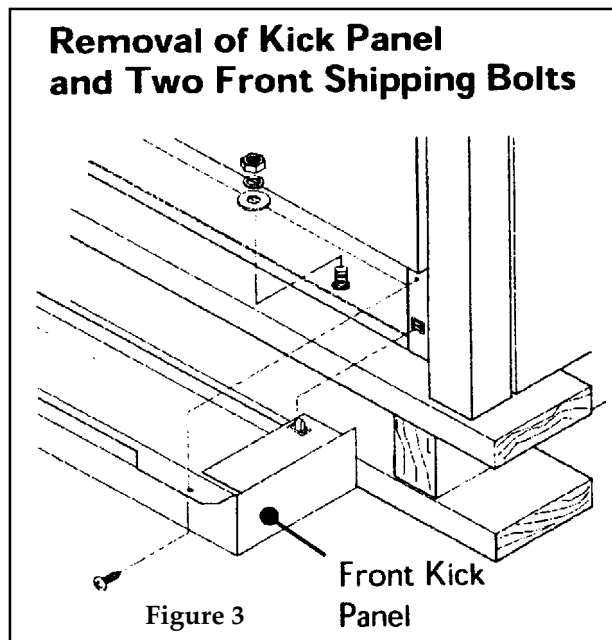
Proper equipment and adequate manpower must be used in moving the range to avoid damage to the unit or the floor. The unit is heavy and rests on adjustable steel legs.

The range has an approximate shipping weight as shown in Chart A. It is recommended that the grates, griddle, burner caps, front kick panel and oven racks be removed to facilitate handling. This will reduce the weight as shown in Chart A and allow the range to pass through 30" doorways (see Chart B and Figures 1A and 1B on Page 11). Do not remove the grill or griddle assemblies.

Remove the outer carton and packing material from the shipping base. Remove the front kick panel (see Figure 3) by removing two (2) screws at the top and pulling forward. The dual fuel ranges are held to the skid by four (4) bolts. The front two (2) are behind the kick panel, (see Figure 3), and the rear two (2) are located on the bottom flange of the range back (see Figure 4). All-gas ranges are held in place by 4 bolts, two (2) as shown in Figure 3, and two (2) at the rear as shown in Figure 4. After removing the bolts, the range must be lifted and removed from the skid.

Chart A	36" Range
Shipping Weight	444 lbs.
Weight W/O Packing Materials	390 lbs.
After Removing Door(s), burner caps, front kick panel, and oven racks	295 lbs.

Chart B	36" Range
Doorway Width Required (Unit Assembled)	30-7/8"
Doorway Width Required (Oven Door(s) Removed)	29-1/2"

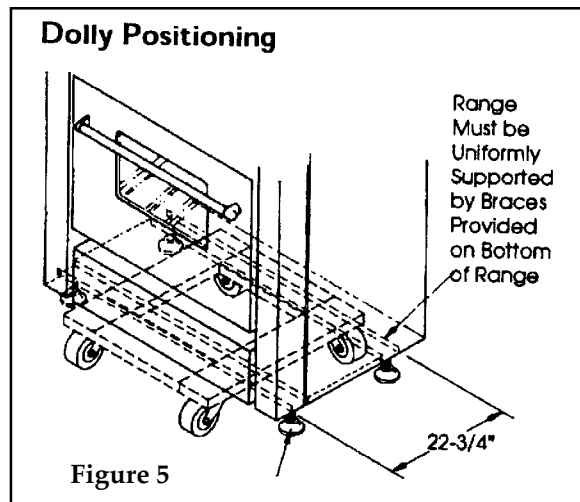


Due to the weight, a dolly with soft wheels should be used to move this unit. The weight must be supported uniformly across the bottom (see Figure 5).

After transporting the professional range by dolly close to its final location, the range can be tipped back and supported on the rear legs while the dolly is carefully removed. THE FLOOR UNDER THE LEGS SHOULD BE PROTECTED (WOOD STRIPS, CARPET, PANELING, ETC.) BEFORE PUSHING THE UNIT

INTO POSITION. The anti-tip device must be installed, gas and electric connections should be made, and the backguard installed before the range is placed in its final position.

For proper performance the professional range must be level. The range is leveled by adjusting the legs with a wrench. Replace the kick panel and install oven door. **It is important that the two (2) screws retaining the kick panel are secure to prevent accidental access to hot surfaces.**



INSTALLING THE ANTI-TIP DEVICE (MODELS PDR30 & PDR36 DUAL FUEL RANGES)

Part No.	Qty.	Description
415078	4	Screw, Phillips, #10 x 1/2"
487310	1	Anti-Tip Bracket, Floor-Mounted

The anti-tip bracket (Figure 6A) may be attached to a solid wood cabinet having a minimum wall thickness of 3/4".

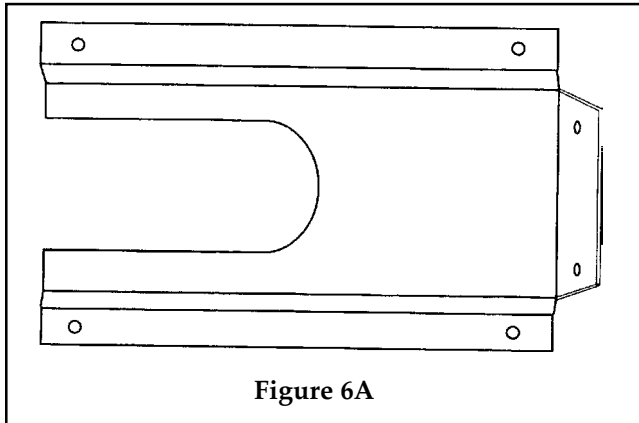


Figure 6A

The thickness of the wall or floor may require use of longer screws, available at your local hardware store.

In all cases, at least two (2) of the bracket mounting screws must be fastened to solid wood or metal.

Use appropriate anchors when fastening the mounting bracket to any material other than hardwood or metal.

Prepare holes at fastener locations as identified below:

- For walls, wall studs, or floors composed of solid wood or metal, drill 1/8" pilot holes.
- For walls or floors composed of dry-wall, sheet-rock or other soft materials, drill 3/16" holes to a minimum depth of 1-3/4", then tap plastic anchors into each of the holes using a hammer.
- For walls or floors composed of concrete or concrete block, drill 3/16" holes to a minimum depth of 1-3/4", then tap concrete anchors into each of the holes using a hammer.
- For walls or floors having ceramic tile covering, drill 3/16" holes through the tile only, then drill into the material behind the tile as indicated immediately above.

If the range is moved to a new location, the Anti-Tip Device must be removed and reinstalled.

MOUNTING THE ANTI-TIP BRACKET

The alternative floor mounted bracket shall be installed as follows:

- a) Place bracket on floor in position shown in Figure 6B.
- b) Secure to floor or wall stud.
- c) Later, when the unit is installed, the adjustable leg will slide under the bracket.

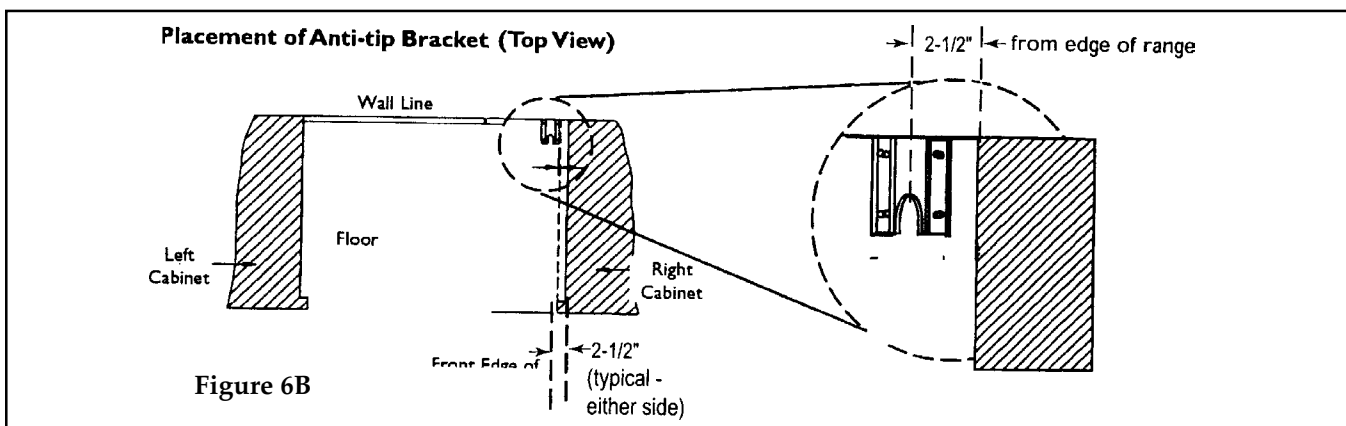


Figure 6B

GAS REQUIREMENTS & HOOKUP

Verify the type of gas being used at the installation site. As shipped from the factory, all units are configured for use on natural gas. For use with propane gas, the unit must be converted. Field conversion for use with propane must only be done by qualified service personnel. Contact the dealer where the unit was purchased or Thermador (800-735-4328). The field conversion kit for all Professional Dual Fuel (PDR series) ranges is Thermador Model CTLPKIT.

For installation of the appliance at high altitude, please consult your local gas company for their recommendation of the correct orifice sizes and any other necessary adjustments that will provide proper gas combustion at specified altitudes.

CAUTION

When connecting unit to propane gas, make certain the propane gas tank is equipped with its own high pressure regulator in addition to the pressure regulator supplied with the appliance. The pressure of the gas supplied to the appliance regulator must not exceed 14" (37 mb) water column.

NATURAL GAS REQUIREMENTS

Inlet Connection: 3/4" N.P.T. (Minimum 3/4" diameter flex line)

Supply Pressure: 6" to 14" water column. (14.9 to 37 mb)

Manifold Pressure: 5" water column (12.5 mb)

PROPANE GAS REQUIREMENTS

Inlet Connection: 3/4" N.P.T. (Minimum 3/4" diameter flex line)

Supply Pressure: 11" to 14" water column. (27.4 mb to 37 mb)

Manifold Pressure: 10" water column (24.9 mb)

For Massachusetts Installations:

1. Shutoff valve must be a "T" handle gas cock.
2. Flexible gas connector must not be longer than 36".
3. Not approved for installation in a bedroom or a bathroom unless unit is direct vent.

HOOKUP

A manual gas shutoff valve must be installed external to the appliance, in an accessible location from the front, for the purpose of shutting off the gas supply. The supply line must not interfere with the back of the unit. Make sure the gas supply is turned off at the manual shut-off valve before connecting the appliance.

The range is supplied with its own pressure regulator that has been permanently mounted within the range body.

Use 3/4" flex line to connect between the gas supply and the appliance manifold pipe, which exits the upper left rear of the appliance. The appliance manifold pipe connection is 1/2" NPT (see Figures 2A, or 2B on Page 12.) Use caution to avoid crimping the 3/4" flex line when making bends.

The gas supply connections should be made by a competent technician and in accordance with local codes or ordinances. In the absence of a local code, the installation must conform to the National Fuel Gas Code ANSI Z223.1, Current Issue.

Always use pipe dope or Teflon[®] tape on the pipe threads, and be careful not to apply excessive pressure when tightening the fittings.

Turn on the gas and check the supply line connections for leaks using a soap solution. Do not use a flame of any sort to check for leaks.

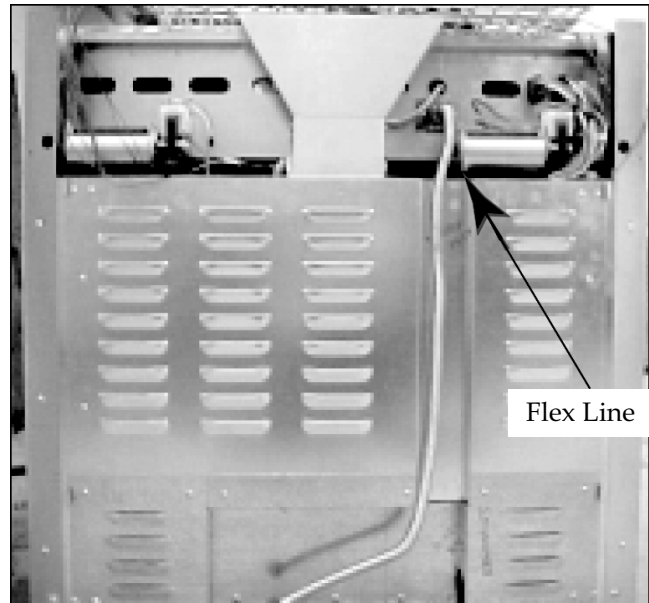


Photo A

ELECTRICAL REQUIREMENTS, CONNECTION, & GROUNDING

Prior to servicing appliance, always disconnect appliance electrical supply cord, if so equipped, from wall receptacle. If appliance is hard-wired to power supply, disconnect power to unit by turning off the proper circuit breaker or disconnecting the proper fuse.

Dual Fuel range model PDR36 can be connected or hard-wired to the power supply.

Chart C

Electrical Supply Requirements				
Model	Voltage	Current Rating	Frequency	Phase
PDR36	120/240 VAC	40 Amps	50/60 Hz	Single

For the PDR Dual-Fuel Ranges, a neutral supply wire must be provided from the power source (breaker/fuse panel) because critical range components, including the surface burner spark re-ignition module, require 120 VAC to operate safely and properly. An improper 120/240 VAC power supply will cause malfunction, damage this appliance, and possibly create a condition of shock hazard. If the correct power supply circuit is not provided, it is the responsibility and obligation of the installer or user to have proper power supply connected. This must be accomplished in accordance with all applicable local codes and

ordinances by a qualified electrician. In the absence of local codes and ordinances, the power supply connection shall be in accordance with the National Electric Code.

Observe all governing codes and ordinances when grounding. In the absence of these codes or ordinances observe National Electrical Code ANSI/NFPA No. 70 Current Issue.

Electrical wiring diagrams and schematics have been placed in the toe kick area of the range for access by a qualified service technician.

The PDR Dual Fuel Ranges may be connected to a 120/208 VAC power supply.

Chart D

Power Supply Wire-Rating & Size Requirements					
Model Number	Voltage Rating (Min.)	Temperature Rating	Conductor Size, AWG		
			L1, L2	Neutral	Ground
PDR36	300 VAC	105°C	10	12	10

CAUTION

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa.).

The appliance and its individual shut off valve must be disconnected from the gas supply piping system during any pressure

testing of the system at test pressures in excess of 1/2 psig (3.5 kPa.).

When checking the manifold gas pressure, the inlet pressure to the regulator should be at least 6.0" (14.9 mb) W.C. for natural gas or 11.0" (27.4 mb) for propane.

Do not attempt any adjustment of the pressure regulator.

Dual Fuel models must be connected to the power supply utilizing one of the following methods. For all methods of connection, the length of the cord or conduit/wiring must allow the unit to be slid completely out of the cabinet without having to unplug or disconnect the unit from the power supply. Recommended minimum free length of cord or conduit is four feet. Electrical installations and grounding must be in accordance with all local codes and ordinances, and/or the National Electric Code, as applicable.

4-CONDUCTOR CORD

NORMALLY, A UNIT MUST BE CONNECTED TO THE POWER SUPPLY WITH A 3-POLE, 4 CONDUCTOR CORD KIT RATED AT 125/250 VOLTS, 50 AMPERES, AND MARKED FOR USE WITH RANGES.

The cord kit must be attached to the range junction box with a strain relief which will fit a 1-3/8" diameter hole. If not already equipped, the cord must have #10 closed loop lugs attached to the free ends of the individual conductors, preferably soldered in place.

PERMANENT CONNECTION (HARD WIRING)

Units may be hard wired to the power supply. The installer must provide approved flexible aluminum conduit, 3/4" trade size, maximum 6 feet long. Locate the junction box on the rear of the unit and remove cover (refer to Figure 7). Remove the ground strap retaining screw and bend the ground strap up (refer to Figure 8 on the next page). The conduit must be installed to the junction box using an approved conduit connector.

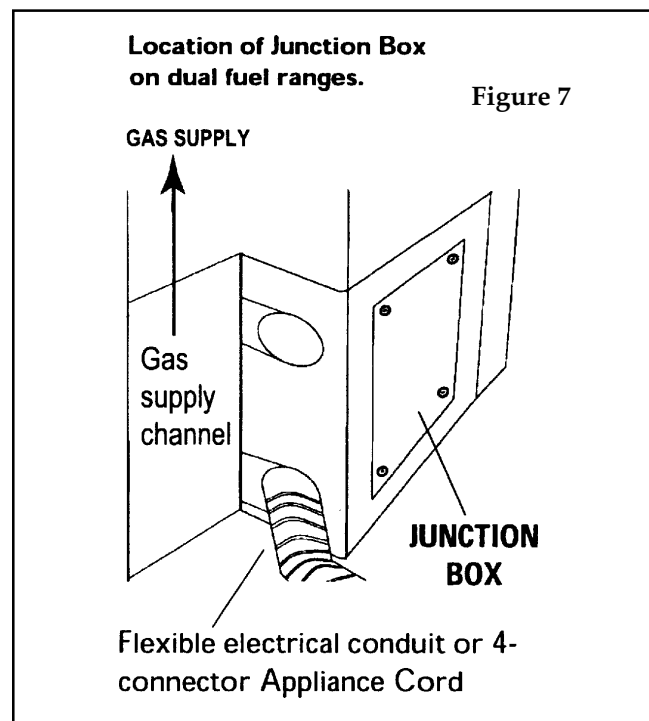
Wiring for the unit is to be brought into the junction box through the conduit (refer to "Chart D" on Page 19 for rating of wiring and sizing of individual conductors). The ends of the wiring must have #10 closed-loop lugs attached, preferably soldered in place.

Make the connections to the terminal block provided. Secure the ground lead to the junction box with the screw previously used to secure the ground strap (refer to Figure 9 on the next page). The free end of the conduit must be connected to a junction box provided in the gas and electrical supply zone, as shown in Figure 2A on Page 12.

3-CONDUCTOR CORD

WHERE LOCAL CODES AND ORDINANCES PERMIT GROUNDING THROUGH NEUTRAL, AND CONVERSION OF SUPPLY TO 4-WIRE IS IMPRACTICAL, UNIT MAY BE CONNECTED TO THE POWER SUPPLY WITH A 3-POLE, 3-CONDUCTOR CORD KIT RATED AT 125/250 VOLTS, 50 AMPERES, AND MARKED FOR USE WITH RANGES.

The cord kit must be attached to the range junction box with a strain relief which will fit a 1-3/8" diameter hole. If not already equipped, the cord must have #10 closed-loop lugs attached to the free ends of the individual conductors, preferably soldered in place.



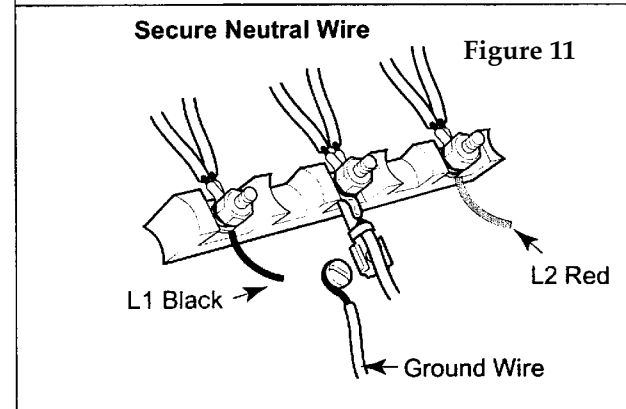
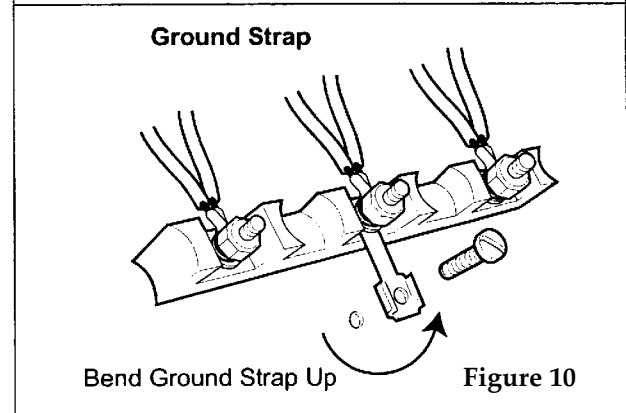
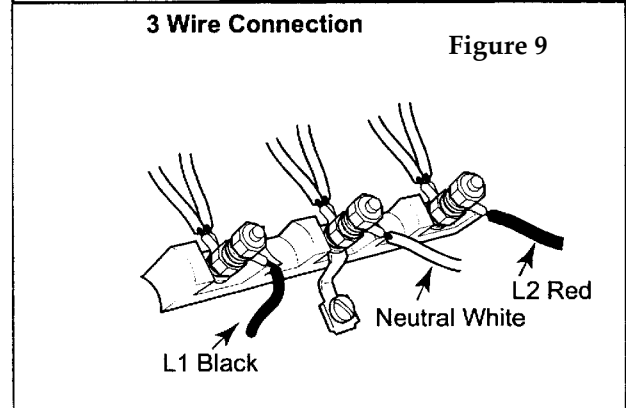
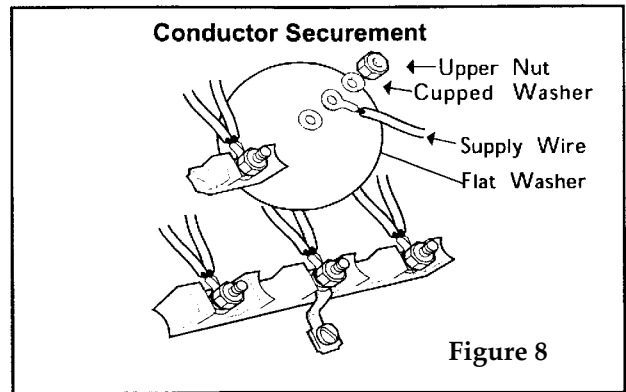
A 3- or 4-conductor supply may be connected to the terminal block.

3-Wire Lead Connection

1. Remove upper nuts only from the terminal block studs. Do not remove nuts which secure range internal wiring leads.
2. Secure the neutral, grounded wire of the supply circuit, to the center stud of the terminal block with nut (see Figure 9).
3. Secure the L1 (black) and L2 (red) power leads to the outside terminal block studs (brass colored) with nuts.
4. Tighten nuts securely.

4-Wire Connection

1. Remove upper nuts only from the terminal block studs. **Do not remove lower nuts which secure range internal wiring leads.**
2. Remove ground strap screw and bend the strap up, as shown in Figure 10.
3. Secure the neutral wire to the center stud of the terminal block with nut.
4. Secure the L1 (black) and L2 (red) power leads to the outside terminal studs (brass colored) with nuts (see Figure 11).
5. Secure the bare copper ground lead to the range chassis using the ground screw previously used for the ground strap.
6. Tighten all connections securely.



BACKGUARD INSTALLATION

The backguard must be attached before sliding the range into the final installed position. A Low Back or High Shelf backguard must be installed when there is less than a 12" clearance between combustibles and the back of the range above the cooking surface (see Figure 1A on Page 11).

An Island Trim is available for covering the backguard mounting flanges for island installations, where there is a minimum of 12" of horizontal clearance between combustibles and the back of the range (see Figure 1B on Page 11).

The backguard is inserted into the guide channels on the back of the range (see Figure 12 & Photo B). Secure the backguard with the (4) sheet metal screws provided.

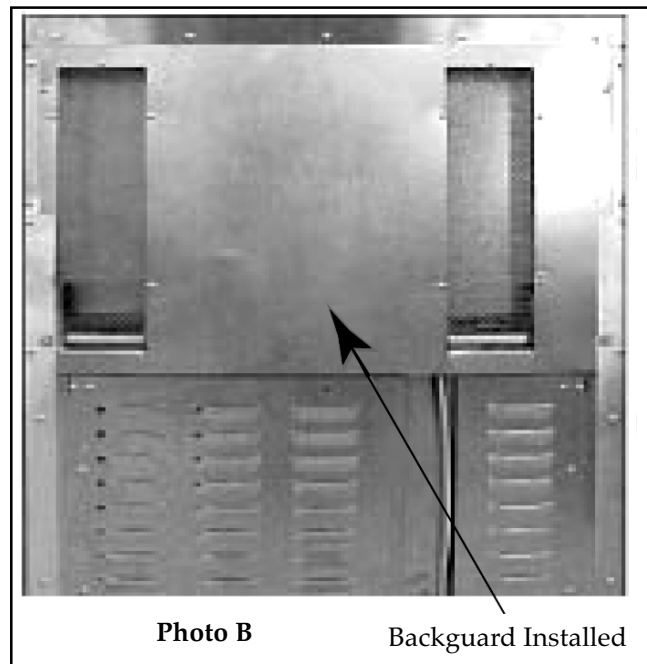
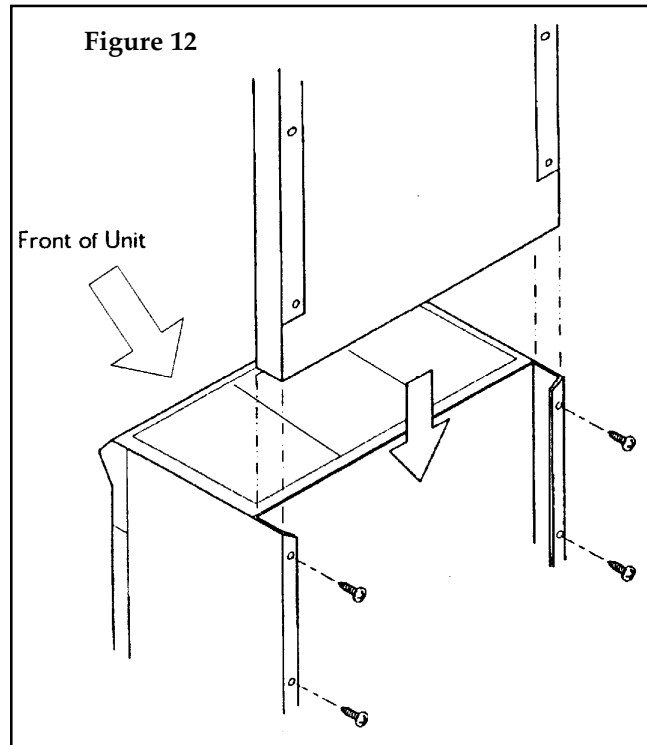


Chart E

Backguard Kit Model Numbers				
Model Number	9" Standard Low Back	12" Low Back	22" High Shelf	1-1/2" Island Trim
PDR36	N/A	LB36R	HS36R	IT36R

DOOR INSTALLATION

⚠ CAUTION

The door is heavy and requires two people to handle it properly.

Refer to Figures 13 and 14 and Photos C - E.

1. Insert the door hinge into the hinge pocket in the front frame. When the door is properly installed, the bottom edge will be parallel to the front of the range and the hinge will click into position and support the weight of the door.
2. Tip the door parallel to the floor to free the hinge locking pin.
3. Carefully remove the pins. The door is now free to close. Install the hinge retainer clips.
4. Adjust the door height so the latch lock lever and spacer gauge enters the slot in the door liner as the door is closing and the top of the door should be parallel to the bottom of the control panel.

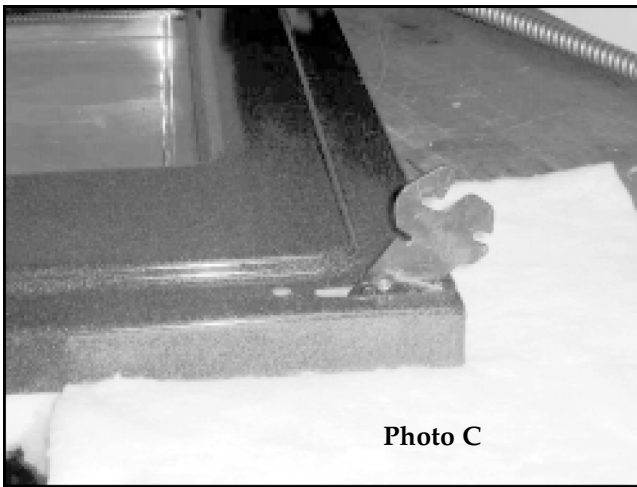
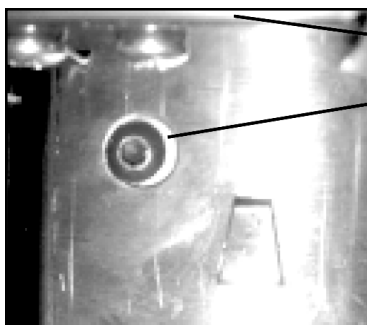


Photo C

Insert the door hinge with the hinge pocket in the front frame.



Bottom Of Door
Height Adjusting Screw

Photo D

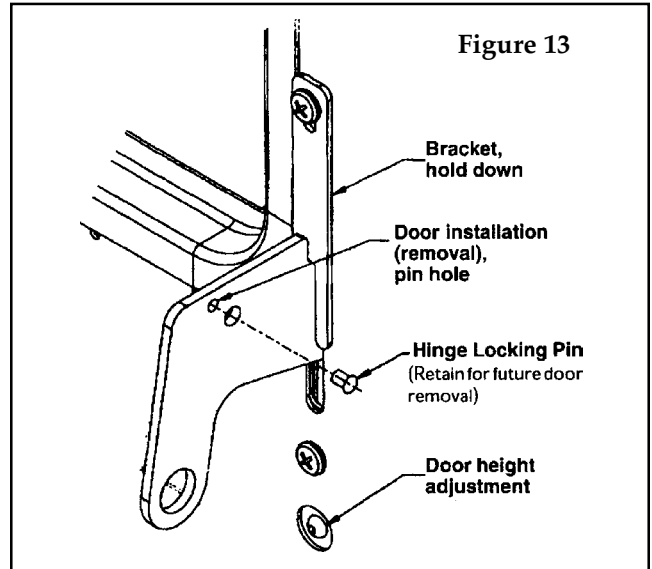


Figure 13

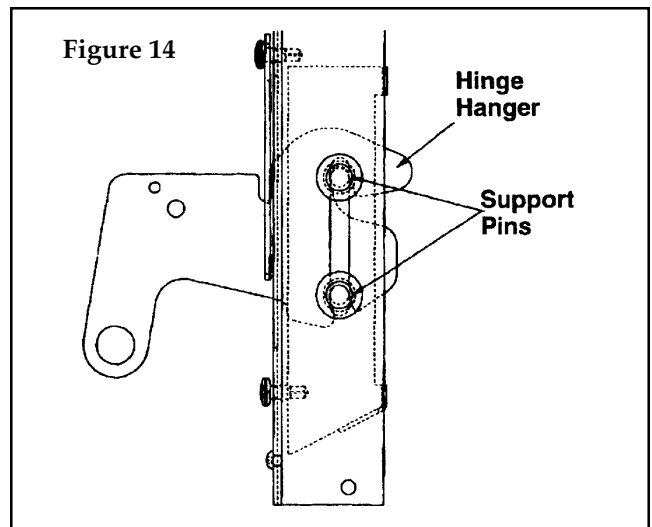


Figure 14



Hinge Locking Pin

Photo E

TESTS AND ADJUSTMENTS

⚠ CAUTION

Burner adjustments must be made by a qualified technician at the time of installation. Extreme care should be used when adjustments are made after installation. Improper or lack of adjustments may cause a hazard or void your warranty.

Install any loose components, such as burner caps and grates, that may have been removed earlier. Be certain that burner caps seat properly into the alignment slots in the burner bases. Before testing operation of the appliance, verify that the unit and the gas supply have been carefully checked for leaks and that the unit has been connected to the electric power supply. Turn the manual gas shutoff valve to the open position. Check operation of the sealed gas burners and grill by pushing and turning each knob counterclockwise to "HI". The burner igniters will click until the flame ignites. The two far left sealed burners feature XLO[®], causing the flame to cycle on and off when the knob is set to the XLO range. This is normal operation. Burner flames should be blue and stable with no yellow tips, excessive noise, or lifting of the flame from the burner. If any of these conditions exist, check that the air shutter (grill and griddle only) or burner ports are not blocked or clogged. Remove any blockages that exist. If the flame is too yellow, indicating insufficient air, adjust the shutter counterclockwise to increase air inlet (grill and griddle only).

The sealed top burner flames should be approximately 1" to 1-1/4" high. The griddle and grill flames should be as shown in Figure 15).

NOTE: No air shutter or low flame adjustment is necessary or possible with the sealed top burners.

TO CLEAN AND PROTECT EXTERIOR SURFACES

The stainless steel surfaces may be cleaned by wiping with a damp soapy cloth, rinsing with clear water and drying with a soft cloth to avoid water marks. Any mild glass cleaner will remove fingerprints and smears.

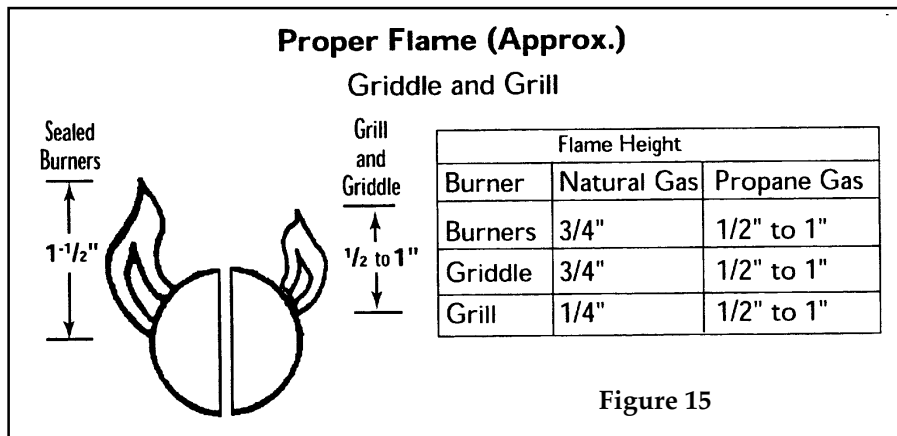
For discolorations or deposits that persist, refer to the Care and Use Manual.

To polish and protect the stainless steel, use a cleaner/ polish such as Stainless Steel Magic[®].

DO NOT allow deposits to remain for long periods of time.

DO NOT use ordinary steel wool or steel brushes. Small bits of steel may adhere to the surface causing rust.

DO NOT allow salt solutions, disinfectants, bleaches or cleaning compounds to remain in contact with stainless steel for extended periods. Many of these compounds contain chemicals which could prove harmful. Rinse with water after exposure and wipe dry with a clean cloth.

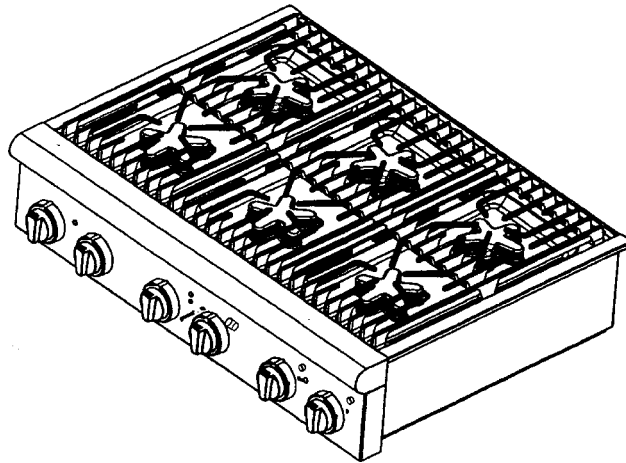


COOKTOP SECTION

COOKTOP COMPONENTS

The cooktop section of the PDR 366 range has 6 surface burners. Two XtraLow on the left side, and four standard burners in the center and right side. There is no griddle or grille on

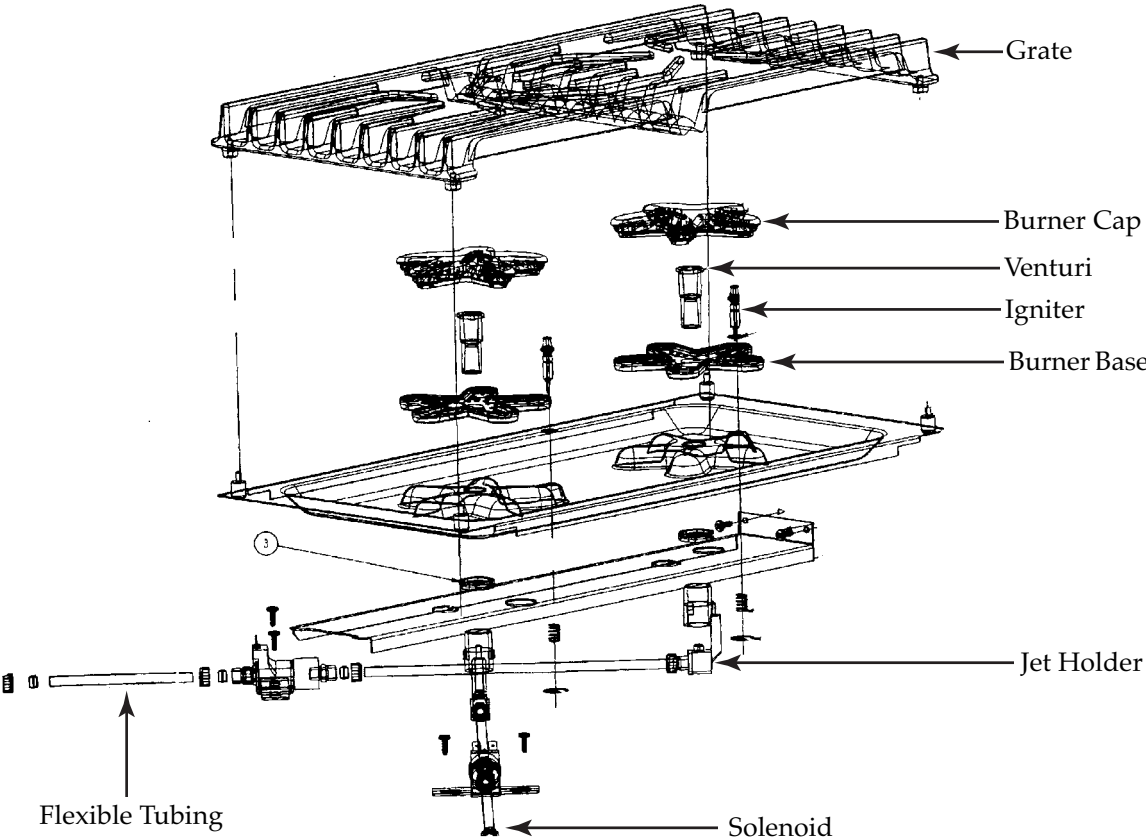
this unit. All surface burners are 15,000 B.T.U. burners. The conversion kit to convert the burners from L.P. to natural gas is: CTLPKIT.



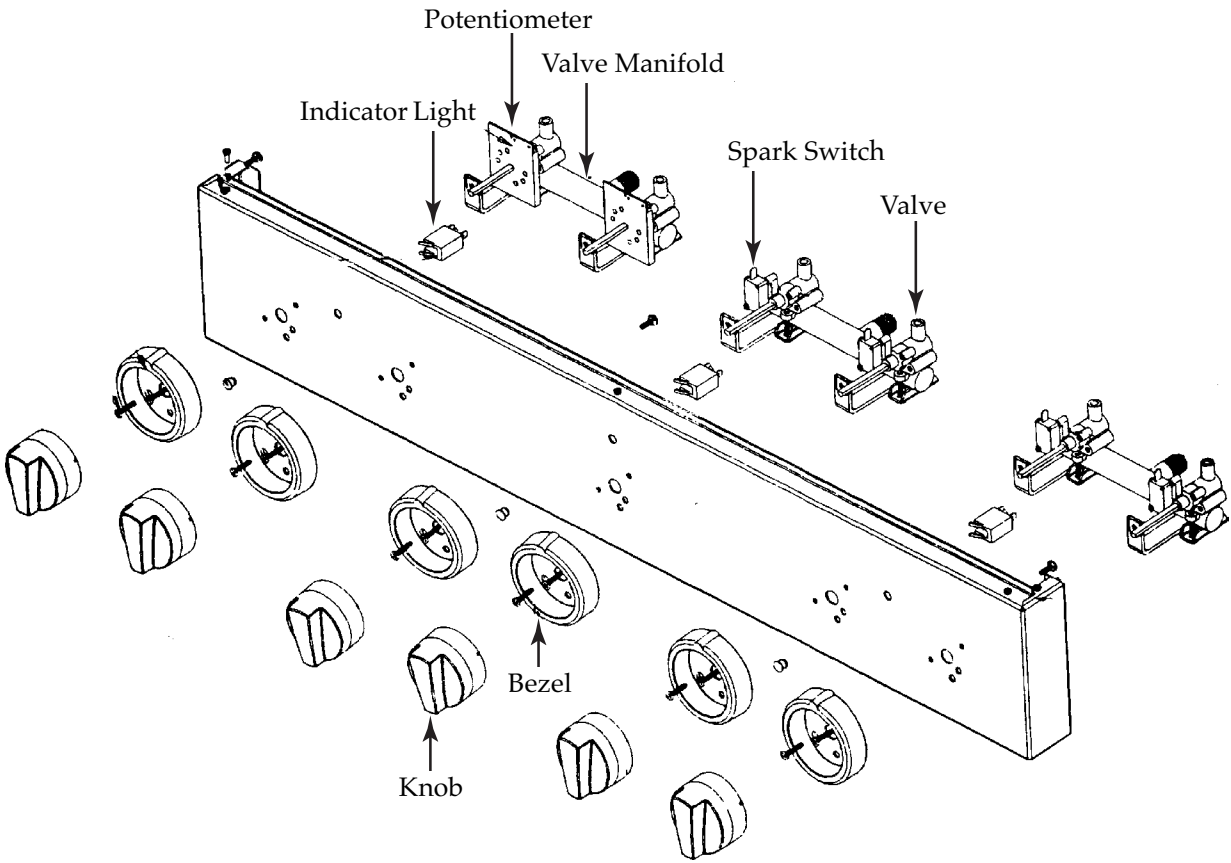
The cooktop section of the PDR366 unit is comprised of the following parts:

- | | |
|--------------------------------------|------------------------------------|
| 1 Pressure regulator | 8 Flexible gas lines |
| 1 Main supply manifold | 6 Spark switches |
| 3 Valve supply manifolds | 2 Gas solenoids for X-Low burners |
| 2 15,000 B.T.U. sequenced valves | 3 Indicator lights |
| 4 15,000 B.T.U. non-sequenced valves | 2 Potentiometers for X-Low burners |
| 6 Fixed surface burner gas orifices | 1 Spark module |
| | 1 Simmer controller |

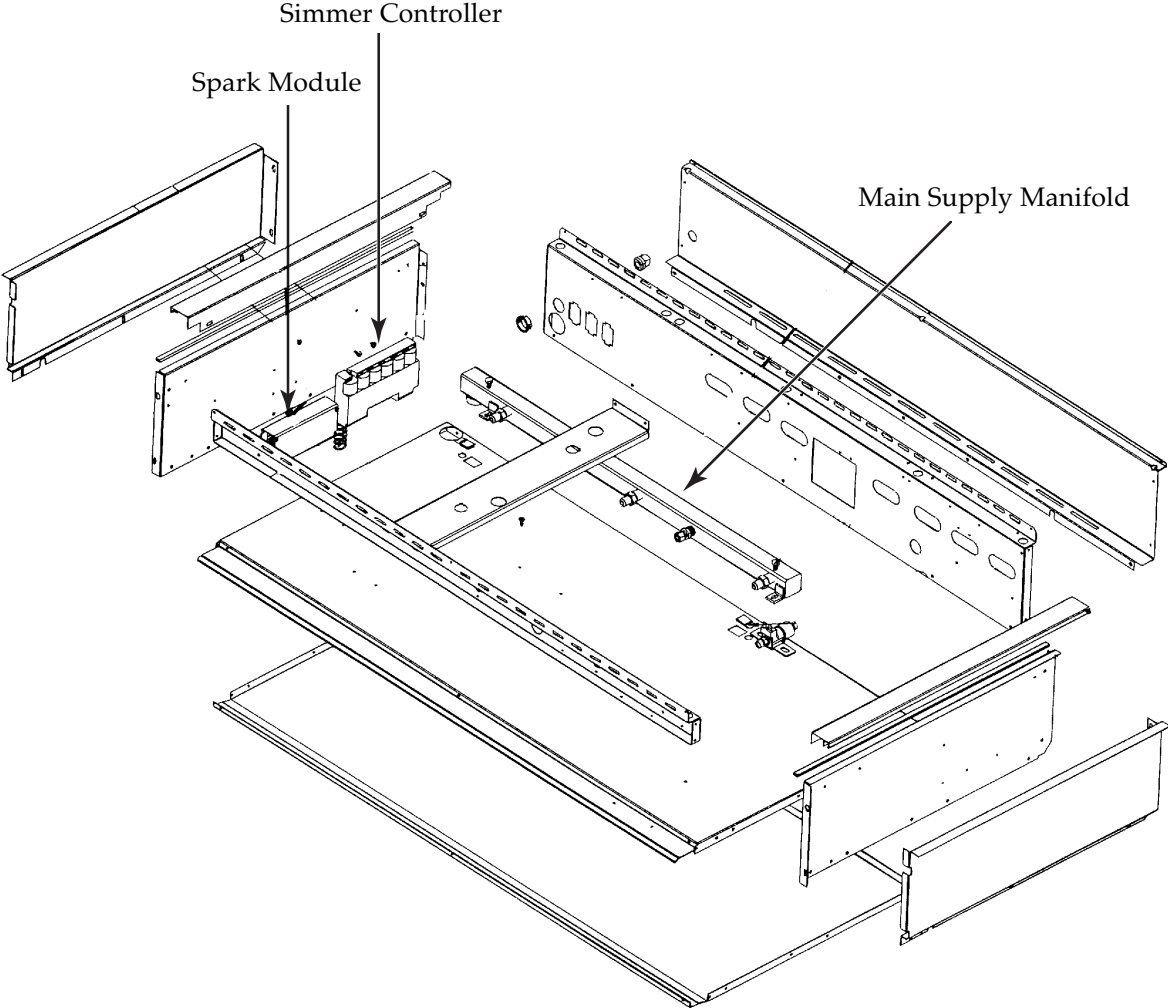
BURNER COMPONENTS



CONTROL PANEL COMPONENTS



BURNER BOX COMPONENTS



FEATURE OPERATION GAS FLOW

NON-SEQUENCED 15,000 B.T.U. STAR BURNERS

Gas flows from supply, through pressure regulator to main manifold; gas flows to valve supply manifold. When valve is turned to “on,” gas flows to jet holder orifice and to the burner where ignition occurs.

SEQUENCED 15,000 B.T.U. STAR BURNERS

Gas flows from supply, through pressure regulator to main manifold; gas flows to gas supply manifold. When valve is turned “on,” gas flows to gas solenoid. When coil is energized, gas flows to jet holder orifice and to the burner, where ignition occurs.

COMPONENT DESCRIPTION

Gas Parts

Pressure Regulator

The pressure regulator reduces the supply water column pressure to the required water column pressure to operate the appliance. The supply water column pressure is supplied by the natural gas meter in a house, or by the propane tank to the house where propane tank is used.

Example: There is normally about 8” of water column pressure floating in a house. The regulator reduces that pressure to 5” water column pressure at the cooktop manifold, that is the operating pressure.

Main Supply Manifold

The main supply manifold receives gas from the pressure regulator. The supply manifold sends gas to the valve manifolds. The main supply manifold is connected to the valve manifold using 3/8” flex tubing with flared connections.

Valve Supply Manifold

The valve supply manifold provides gas to two control valves mounted on the manifold. There is one supply manifold for each two valves.

Sequenced Burner Valve

The sequenced valve is a manual gate valve. Pushing and turning the valve allows the gas to flow through the valve to the burner. The sequenced valve gives you the XtraLow feature.

Non-Sequenced Burner Valve

The non-sequenced valve is a manual valve. Pushing and turning the valve allows the gas to flow through the valve to the burner. The non-sequenced valve does not have the XtraLow feature.

Gas Orifices

Hood Orifices—The fixed hood orifices are used on the griddle and grill burners. These orifices are not adjustable.

Spud Orifices—The spud orifices are used on the 15,000 B.T.U. star burners.

Bypass Screws

Bypass screws are part of the gas valve. The bypass screws determine the size of the low burner flame. The bypass screws are factory preset for natural gas. When an LP conversion is done, the bypass screws are closed all the way.

Flexible Gas Lines

There are two sizes of flexible gas lines. The 3/8” gas line supplies gas from the main manifold to the valve supply manifold. This gas line uses flared connection nuts. The 5/16” gas line supplies gas from the valve to the burner orifice. This gas line uses compression fittings.

Electrical Parts

Spark Switch

The spark switch is a normally-open switch. It is mounted on the gas valve. As you turn the gas valve to “on,” you close the switch. The closed switch activates the spark module, and indicator lights.

Gas Solenoids

The gas solenoid is a diaphragm-controlled valve. The valve is closed in its normal state. When current is applied to the electric coil on the solenoid, magnetism raises the diaphragm, and allows the gas to flow through the solenoid to the burner. There are two types of gas solenoids.

- 110 VDC solenoid coil for star burner XtraLow burners.
- 110 VAC solenoid coil for griddle.

Indicator Lights (3)

Left light indicates two left burners.

Center light indicates two center burners.

Right light indicates two right burners.

Potentiometer

The potentiometer is a variable resistor. The potentiometer also serves as a voltage divider. The pot serves two purposes. First, it serves as a spark switch to activate the spark module through the simmer controller. Second, during XtraLow, it sends variable resistance to the simmer controller (variable resistance from the pot to the simmer controller is dictated by the position of the knob) to make XtraLow burners cycle.

Electronic Parts

Spark Module

The spark module is a six channel spark module (6-point reigniter). The spark module provides spark to the spark ignitors to ignite the flame. Once the flame is on, if the flame goes out, the spark module sends spark to reignite the burner. Six channel means it can provide flame rectification to six burners. The spark module receives 120 VAC. These 120 VAC are stepped up and rectified to 14k VDC by a step up transformer, and a series of zener diodes in the module. These 14 k VDC are the spark sent to the ignitors to light the burner.

A single igniter for the surface burners used with the 6-point reigniter (self grounded).

The igniter plug serves two purposes. First, it receives DC voltage from the module to spark and ignite the burner. Second, the igniter senses the presence of a flame. If the flame goes out, the ignitor signals the controller or spark module, and the controller or spark module sends a spark to the burner through the spark module.

OVEN SECTION

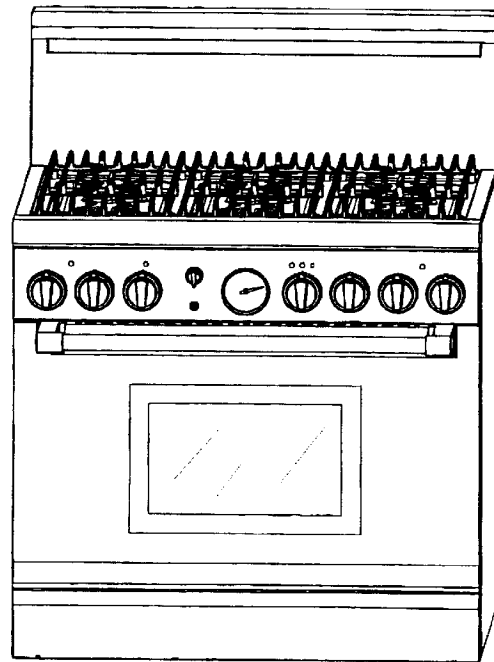
OVEN COMPONENTS

The oven section of the PDR366 range has one oven with the following modes:

- Bake
- Convection Bake
- Broil
- Self-Clean

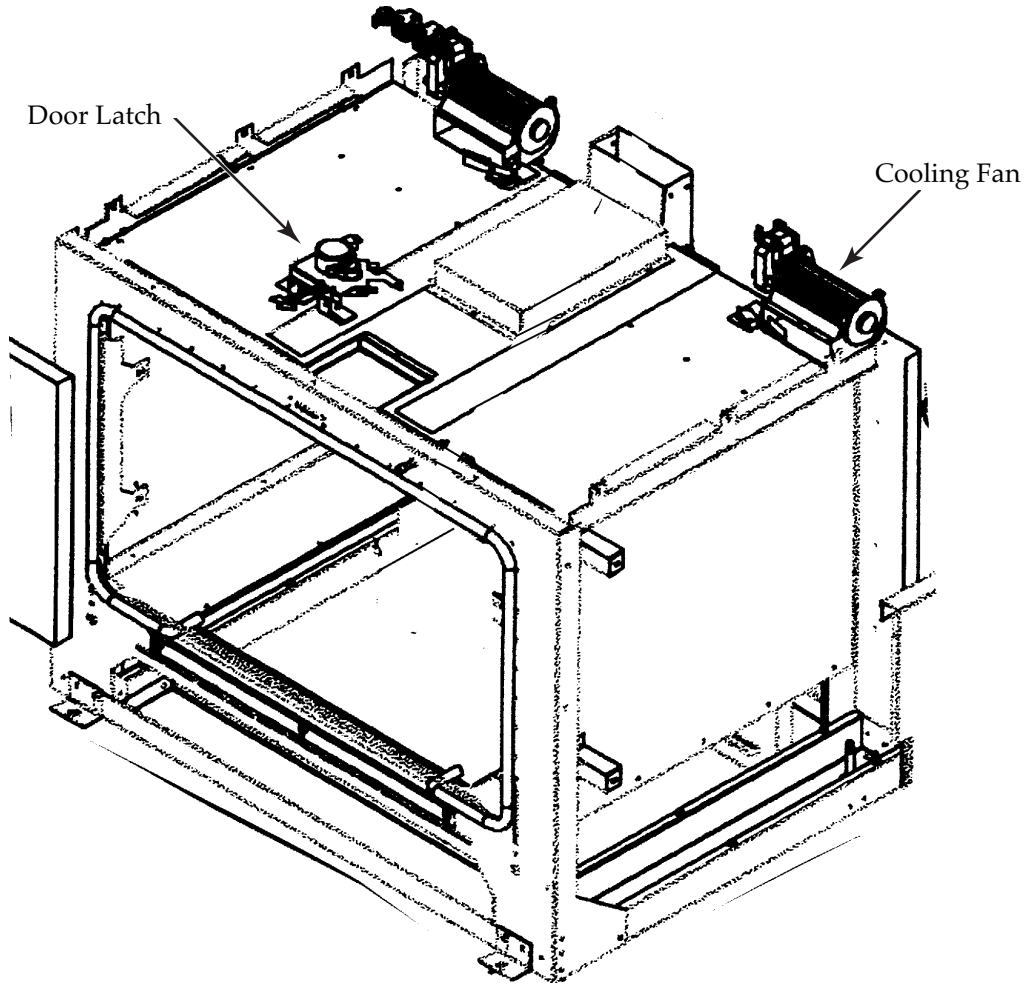
The oven section of the PDR366 unit is comprised of the following parts:

- 1 Selector switch
- 1 Temperature gauge
- 1 Light switch
- 3 Indicator lights
- 1 Temperature indicator (variable resistor)
- 1 Door plunger
- 1 Latch assembly
- 2 Blower motors
- 2 Sail switches
- 2 High temperature cutouts
- 1 Convection assembly
- 1 Bake element
- 1 Broil element
- 1 Electronic control board
- 2 Halogen lights
- 1 Sensor



Model PDR366
with High Shelf Model PRS36HS

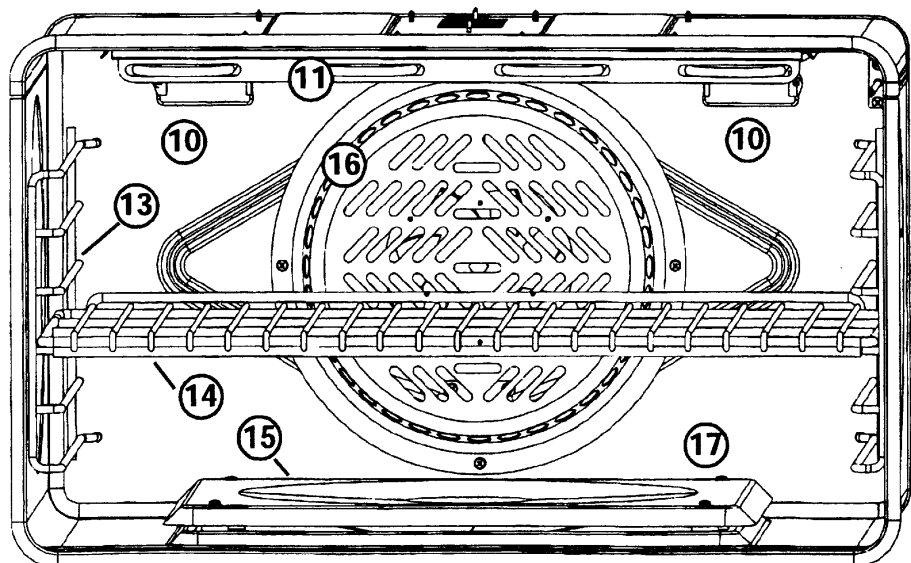
TOP COMPONENTS



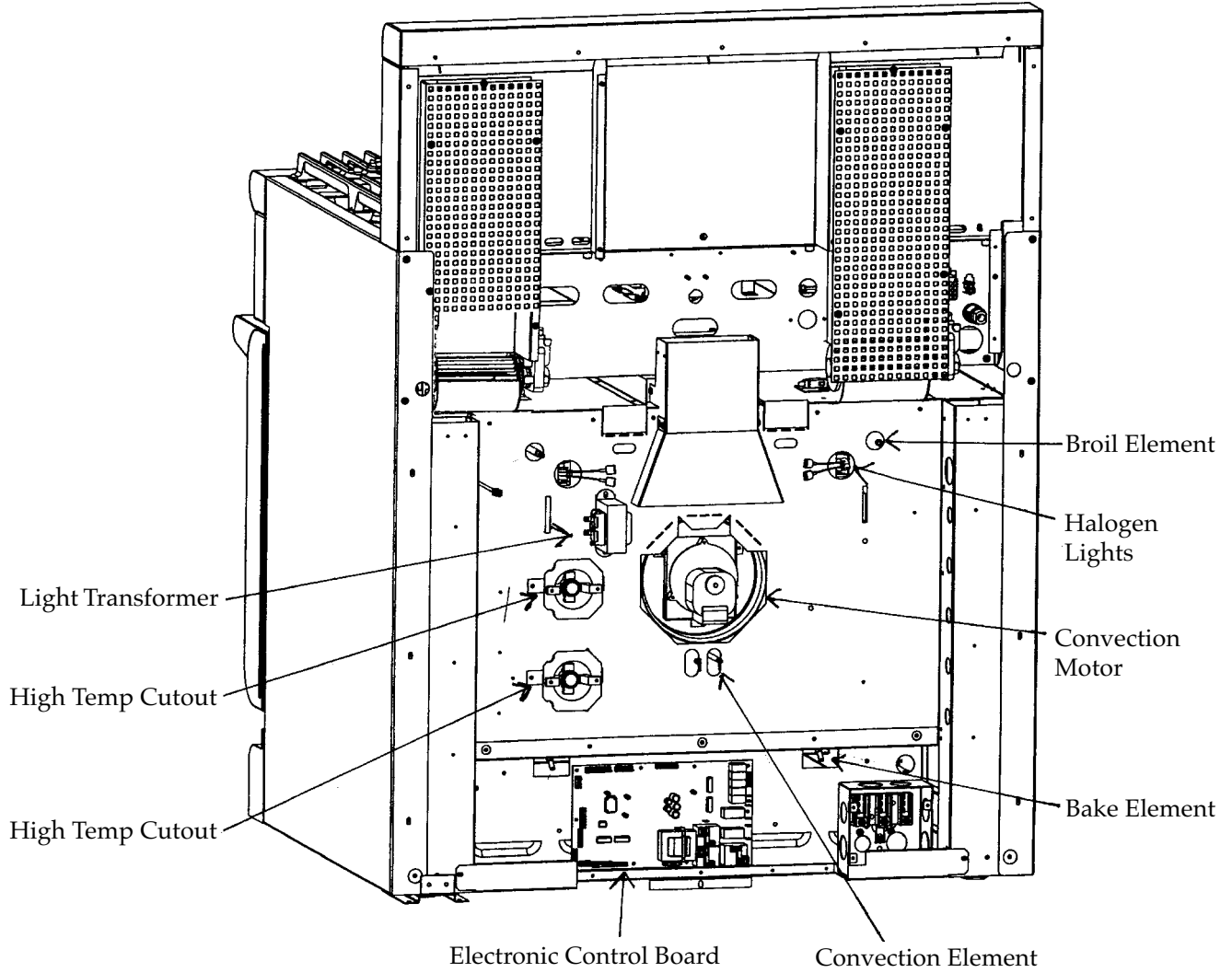
INTERIOR COMPONENTS

Electric Oven

- 10. Oven Interior Lights
- 11. Broil Element
- 13. Rack Guides
- 14. Oven Rack (3 Included)
- 15. Bake Element
- 16. Convection Fan Covers
- 17. Heat Shields (2)



REAR COMPONENTS



COMPONENT DESCRIPTION

Electronic Range Control

The Emerson Appliance Control (ERC) is a microprocessor-based relay board. What this means is that it has logic. The ERC uses signal voltage to detect switch function.

The switches used with the ERC control to detect signal voltage are as follows:

- Plunger (door) switches—activated by physical door movement.
- Paddle (air) switches—activated by air movement from the cooling fans.
- Latch lock/unlock switches—activated by latch motorized cam movement.

Switch Function Is Critical In The Pro Range

The plunger (door) switch clean must physically close before the range can proceed into self. The latch lock/unlock switches must also open/close before the range can proceed into self clean. The paddle (air) switches must also physically close by air movement from the cooling fans before the range proceeds into any mode. If the cooling fans do not function, and the range goes into a high temperature mode, the plenum could overheat and damage the electronic controls.

Here's How It Works

The board sends out signal voltage to specific switches. If the switch is functioning properly, the signal returns to the board, the chip reads the signal and the selected mode continues.

Example:

Signal voltage flows to the paddle switch. When the paddle switch closes, the signal returns to the ERC, and the selected mode continues. If the paddle switch does not close, the signal does not return to the ERC. The ERC will then flash an error code. Simply stated, the board sends out a signal, and the signal must return to the board.

Oven Selector Switch

The oven rotary selector switch has six positions. The switch has seven connector tabs. These tabs send current to specific components when a mode is selected.

Temperature Gauge

The temperature gauge confirms the temperature set on the knob. The temperature gauge is a 2-stage gauge. The first stage is to rise and indicate the selected temperature. The second stage is to incrementally indicate the increased selected temperature.

Example:

If you set the oven for 350, the gauge will rise to 350, and stop. If you increase the temperature to 450, the gauge will climb to 450, and stop. The temperature gauge will not show the temperature overshoot and the call for heat.

Light Switch

The toggle light switch is “open” in the down position. Raising the toggle closes the switch and turns on the oven light.

Indicator Lights

The PDR oven has indicator lights for Oven, Heating, and Cleaning. The oven light illuminates when a mode is selected. It stays on until the selector is turned to Off. The heating light cycles on and off with the oven. The cleaning light illuminates when the oven is in the Clean cycle.

Variable Resistor (Temperature Selector)

The variable resistor (50k ohm potentiometer) regulates the oven temperature based on the feedback it receives from the platinum RTD sensor, located in the oven cavity. This feedback is interpreted as a command to turn the heating elements on or off by activating the control board relays. Variable resistance is dictated by the position of the knob.

Plunger (Door) Switches

This is a double-pole, double-throw switch activated by physical door movement.

Latch Assembly

The latch assembly is a 120 VAC motor-driven latch assembly. The latch assembly has lock and unlock switches that are activated by motor cam movement. The lock/unlock switches must physically open and close before the oven will proceed into the Self-Clean mode. Both switches are single-pole, double-throw. In the idle latch position, the door unlock switch is closed. Once the latch motor ramps, the door unlock switch opens, and the door lock switch closes.

Cooling Fans

The oven has two cooling fans activated by 120 VAC. These two fans cool the mid-plenum assembly, and activate the sail (paddle) switches.

Paddle (Sail) Switch

The paddle (air) switch is a single-pole, single-throw, normally-open switch. It is activated by air movement from the cooling fans.

High Temperature Cutout

The high temperature cutout is a single-pole, single-throw, normally-closed thermal disk. It will open when the surface temperature reaches 350 degrees. It is manually resettable.

Convection Motor Assembly

The convection motor assembly is comprised of a motor, spacer, and a hex nut. The nut has a left-handed thread. The motor rotates clockwise and is rated at 120 VAC.

Bake Element

The bake element is rated at 2,400 watts, and draws 10 amps at 240 volts.

Broil Element

The broil element is rated at 4,000 watts, and draws 17 amps at 240 volts.

Convection Element

The convection element is rated at 2750 watts, and draws 11 amps at 240 volts.

Sensor

The platinum RTD sensor senses the cavity temperature, and sends a signal to the control board to turn the heating elements on or off.

DIAGNOSTICS

PDR366 OVEN TIME CHARTS

The following chart indicates how many seconds the elements are on during a 60 second cycle in a specific mode.

Mode	Bake On	Broil On	Convection On
Convection Broil Preheat	0	60	0
Convection Broil	0	60	0
Convection Bake Preheat	15	45	0
Convection Bake	15	0	45
Bake Preheat	60	60	0
Bake	60	8	0
Broil Preheat	0	60	0
Broil	0	60	0
Clean Preheat	0	60	0
Clean	60	30	0

PDR366 OVEN SEQUENCE OF EVENTS

Convection Bake & Broil:

- Cooling fans run.
- Convection motor runs.
- Oven and heating lights turn on.
- Elements turn on per time chart.
- The temperature gauge ramps to the set temperature and remains on set temperature until either the set temperature changes, or the mode is stopped (Convection Broil, the gauge ramps to Broil setting 5 minutes after the mode is initiated).

Bake Mode:

- Cooling fans run.
- Convection motor runs.
- Oven, and heating lights turn on.
- Elements turn on per time chart.
- The temperature gauge ramps to the set temperature, and remains on set temperature until either the set temperature changes, or the mode is stopped.

Broil Mode:

- Cooling fans run.
- Convection motor runs.
- Oven, and heating lights turn on.
- Elements turn on per time chart.
- The gauge ramps to Broil setting 5 minutes after the mode is initiated.

ERROR CODES

The control continuously monitors system parameters for control and oven failures and reports a fault code when a system problem is detected. The control utilizes the “oven” and “heating” blue indicator light to report a detected fault code. The control will continue to flash the lights in the appropriate sequence as long as the fault exists.

Detection of a fault does not hinder the ability of the control to continue to function if the fault is not critical for the intended operation. For example, if the range door latch is inoperative, the range will continue to cook (the fault will only prevent the range from self cleaning).

Error	Code	Description
E1	22	EEPROM error
E2	01	Control not calibrated
E3	10	Sensor open
E4	12	Sensor shorted
E5	21	Potentiometer failure
E6	32	Over temp-cooking
E7	23	Over temp-cleaning
E9	43	No cooling fans
E11	44	Door latch fault
E12	11	Exp. board not connected
E13	13	Vcc lift off error
E14	55	Selector switch error

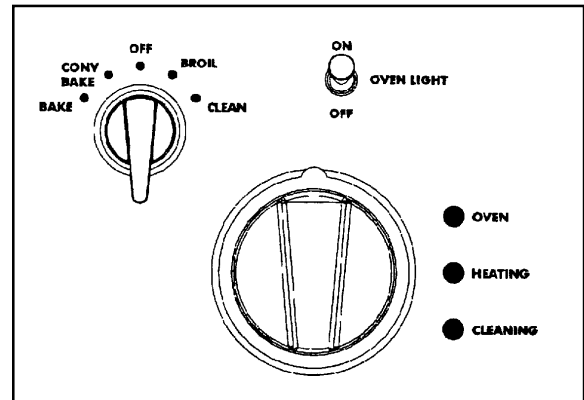
HOW TO INTERPRET CODES

When a fault occurs, the control will flash the blue oven, and heating lights sequentially to indicate the fault. The fault codes have two numbers. These numbers are interpreted by the number of times the lights flash. The top light (oven) will flash the first number of flashes, and the bottom (heating) light will flash the second number of flashes.

Example:

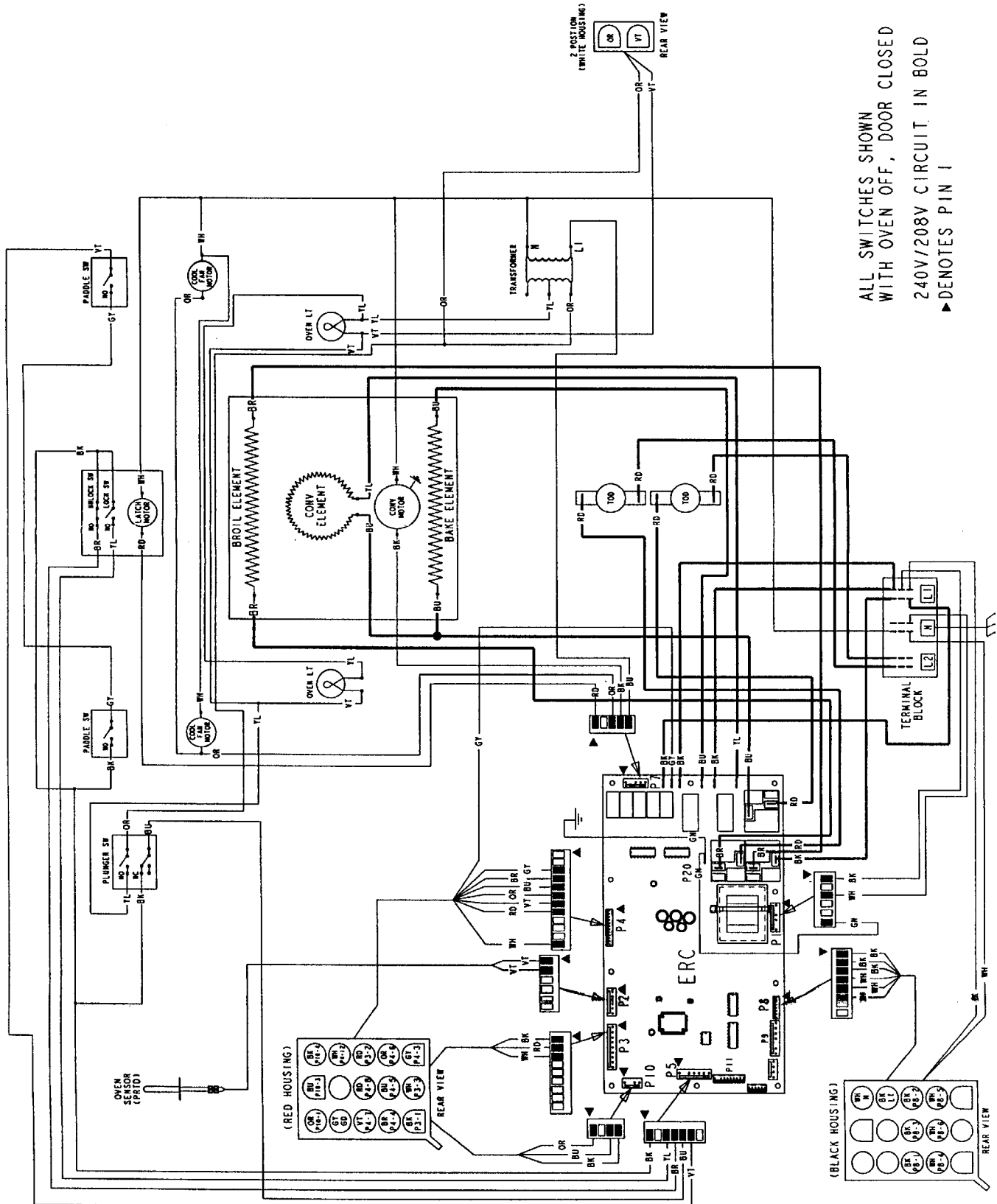
Error “E9” means there are no cooling fans. The error code is “43.” The oven light will flash 4 times, then the heating light will flash 3 times, pause, and continue this sequence as long as the fault is present.

Oven Control Knobs

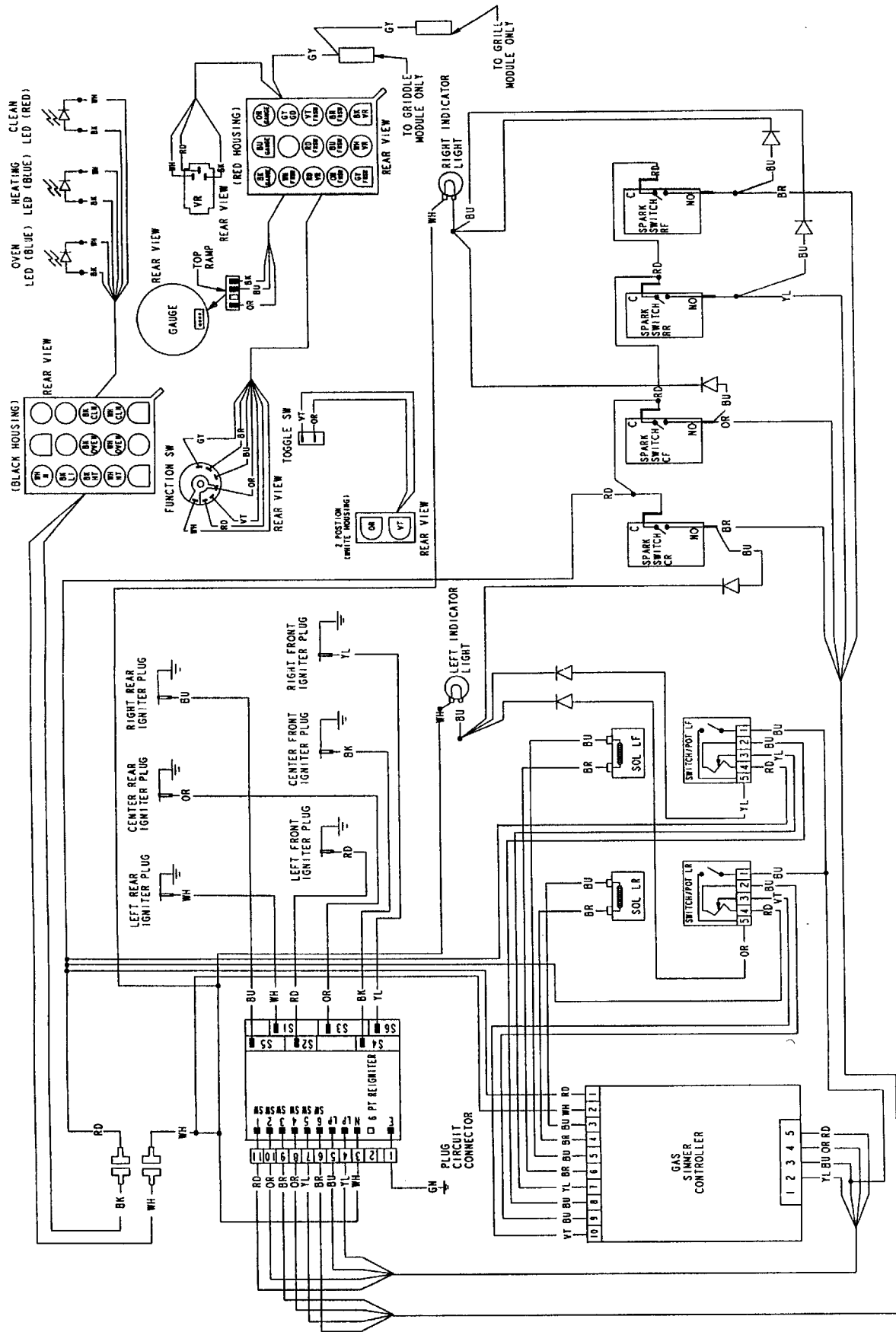


WIRING DIAGRAMS

PDR366 RANGE REV. B



PDR366 COOKTOP REV. B



— NOTES —

Thermador®

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