



**SG SERIES GAS  
CONVECTION OVENS  
Customer Maintenance  
Manual**

**SPECIFICATION SHEETS**

**INSTALLATION / OPERATION MANUALS**

**ADDITIONAL RESOURCES**

**SERVICE MANUALS**

**HOBART SERVICE PARTS STORE**

**CATALOG OF REPLACEMENT PARTS**

## OVENS

**VULCAN****SG6 SERIES**  
**SINGLE DECK, DEEP DEPTH**  
**GAS CONVECTION OVENS**

**Model SG6D**  
Shown on optional casters

**SPECIFICATIONS**

Single section, deep depth gas convection oven, Vulcan Model No. SG6. Stainless steel front, sides and top. Painted legs. Independently operated stainless steel doors with double pane windows. Non-sag insulation applied to the top, rear, sides, bottom and doors. Porcelain enamel on steel oven interior measures 29"w x 26 $\frac{1}{8}$ "d x 20"h. Two interior oven lights. Five nickel plated oven racks measure 28 $\frac{1}{4}$ " x 24 $\frac{1}{2}$ ". Eleven position nickel plated rack guides with positive rack stops. One 60,000 BTU/hr. burner. Electronic spark igniter. Furnished with a two speed  $\frac{1}{2}$  H.P. oven blower-motor. Oven cool switch for rapid cool down. 120 volt, 60 Hz, 1 ph power supply required. 6' cord and plug. 7.7 amps total draw.

**Exterior Dimensions:**

40 $\frac{1}{4}$ "w x 45 $\frac{1}{8}$ "d (includes motor & door handles) 41 $\frac{3}{4}$ "d (includes motor only) x 54 $\frac{3}{4}$ "h on 23 $\frac{3}{4}$ " legs with feet. 23 $\frac{3}{4}$ " legs can adjust an additional 1" in length. Legs with casters are adjustable from 28" to 29 $\frac{1}{8}$ " in length.

CSA design certified. NSF listed.

**SPECIFY TYPE OF GAS WHEN ORDERING.**  
**SPECIFY ALTITUDE WHEN ABOVE 2,000 FT.**

- SG6D** Solid state temperature controls adjust from 150° to 500°F. 60 minute timer with audible alarm.
- SG6C** Computer controls with digital time and temperature readouts. 99-hour timer with audible alarm. Roast and Hold cycle. One hundred programmable menu selections. Shelf I.D. programming.

**STANDARD FEATURES**

- Stainless steel front, sides and top.
- Painted legs.
- Independently operated stainless steel doors with double pane windows.
- 60,000 BTU/hr. burner.
- Electronic spark igniter.
- $\frac{1}{2}$  H.P. two speed oven blower-motor. 120/60/1 with 6' cord and plug. 7.7 amps total draw.
- Oven cool switch for rapid cool down.
- Porcelain enamel on steel oven interior.
- Five nickel plated oven racks with eleven rack positions.
- $\frac{3}{4}$ " rear gas connection with combination gas pressure regulator and safety solenoid system.
- One year limited parts and labor warranty.

**OPTIONS**

- Complete prison package.
  - Security screws only
- Stainless steel legs.
- Casters.
- Simultaneous chain driven doors.
- 208V or 240V, 60 Hz, 1 ph, two speed,  $\frac{1}{2}$  H.P. blower motor. 208V, 4.2 amps; 240V, 3.6 amps.
- Second year extended limited parts and labor warranty.

**ACCESSORIES**

- Stainless steel rear enclosure.
- Extra oven rack(s).
- Rack hanger.
- Stainless steel drip pan.
- Flexible gas hose with quick disconnect and restraining device. Consult price book for available sizes.
- Down draft flue diverter for direct vent connection.
- Stainless steel open stand with adjustable rack supports, stainless steel shelf and choice of adjustable feet or casters.

**VULCAN**

a division of ITW Food Equipment Group LLC

P.O. Box 696 ■ Louisville, KY 40201 ■ Toll-free: 1-800-814-2028 ■ Local: 502-778-2791 ■ Quote & Order Fax: 1-800-444-0602



## SG6 SERIES SINGLE DECK, DEEP DEPTH GAS CONVECTION OVENS

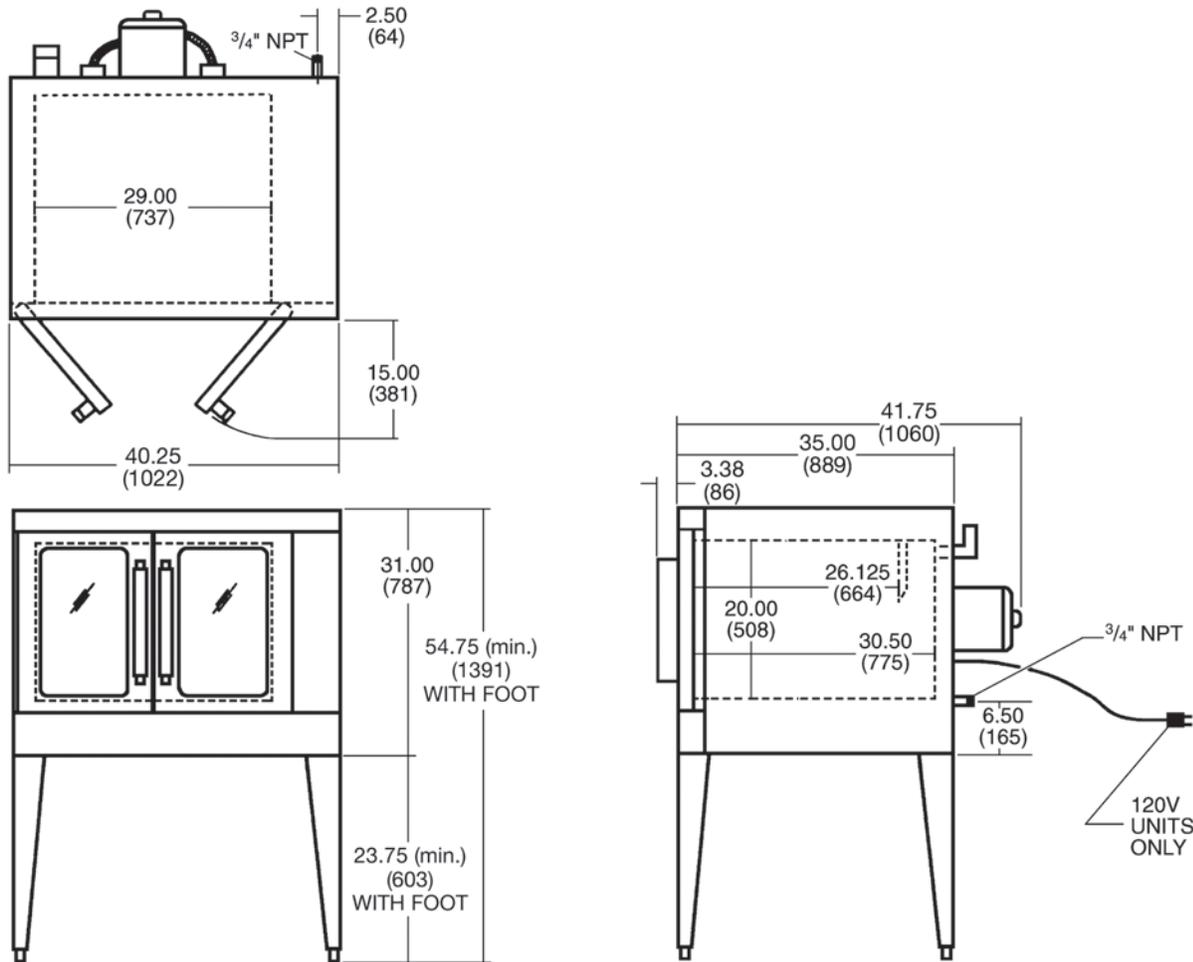
### INSTALLATION INSTRUCTIONS

1. A combination gas pressure regulator and safety solenoid system is included in this unit. Natural gas is 5.0" W.C., Propane gas is 10.0" W.C.
2. An adequate ventilation system is required for commercial cooking equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02289. When writing, refer to NFPA No. 96.
3. These units are manufactured for installation in accordance with ANSZ223.1 (latest edition), National Fuel Gas Code. Copies may be obtained from American Gas Association Inc.,

Accredited Standards Committee Z223, 400 N. Capitol St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471.

4. Clearances:
 

	Combustible	Non-combustible
Rear	0"	0"
Right Side	2"	0"
Left Side	1"	0"
5. This appliance is manufactured for commercial installation only and is not intended for home use.
6. The installation location should not experience temperatures below -20°C (-4°F).



MODEL NO.	WIDTH	DEPTH (INCLUDES HANDLES)	HEIGHT	BTU/HR. PER OVEN	TOTAL BTU/HR.	ELECTRICAL	WEIGHT			
							WITH SKID & PACKAGING		WITHOUT SKID & PACKAGING	
							LBS.	KG	LBS.	KG
SG6	40 1/4"	45 1/8"	54 3/4"	60,000	60,000	120/60/1	492	223	433	196



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**NOTE:** In line with its policy to continually improve its products, Vulcan reserves the right to change materials and specifications without notice.

**O V E N S****VULCAN****SG66 SERIES  
DOUBLE DECK, DEEP DEPTH  
GAS CONVECTION OVENS**

**Model SG66D**  
shown with optional casters

**SPECIFICATIONS**

Double section, deep depth gas convection oven, Vulcan Model No. SG66. Stainless steel front, sides, top and legs. Independently operated stainless steel doors with double pane windows. Non-sag insulation applied to the top, rear, sides, bottom and doors. Porcelain enamel on steel oven interiors measures 29"w x 26<sup>1</sup>/<sub>8</sub>"d x 20"h. Two interior oven lights per section. Five nickel plated oven racks per section measure 28<sup>1</sup>/<sub>4</sub>" x 24<sup>1</sup>/<sub>2</sub>". Eleven position nickel plated rack guides with positive rack stops. One 60,000 BTU/hr. burner per section. 120,000 BTU/hr. total input. Electronic spark igniters. Furnished with a two speed 1/2 H.P. oven blower-motor per section. Oven cool switch for rapid cool down. 120 volt, 60 Hz, 1 ph power supply required. 6' cord and plug. 7.7 amps total draw per section.

**Exterior Dimensions:**

40<sup>1</sup>/<sub>4</sub>"w x 45<sup>1</sup>/<sub>8</sub>"d (includes motor & door handles) 41<sup>3</sup>/<sub>4</sub>"d (includes motor only) x 70"h on 8" legs.

CSA design certified. NSF listed.

**SPECIFY TYPE OF GAS WHEN ORDERING.  
SPECIFY ALTITUDE WHEN ABOVE 2,000 FT.**

- SG66D** Solid state temperature controls adjust from 150° to 500°F. 60 minute timer with audible alarm.
- SG66C** Computer controls with digital time and temperature readouts. 99-hour timer with audible alarm. Roast and Hold cycle. One hundred programmable menu selections. Shelf I.D. programming.

Double deck ovens are supplied as separate units with a stacking kit.

**STANDARD FEATURES**

- Stainless steel front, sides, top and legs.
- Independently operated stainless steel doors with double pane windows.
- 60,000 BTU/hr. burner per section. 120,000 BTU/hr. total input.
- Electronic spark igniters.
- 1/2 H.P. two speed oven blower-motor. 120/60/1 with 6' cord and plug. 7.7 amps per section. 15.4 amps total draw.
- Oven cool switch for rapid cool down.
- Porcelain enamel on steel oven interiors.
- Five nickel plated oven racks with eleven rack positions per section.
- 3/4" rear gas connection with combination gas pressure regulator and safety solenoid system.
- One year limited parts and labor warranty.

**OPTIONS**

- Complete prison package.
  - Security screws only.
- 208V or 240V, 60 Hz, 1 ph, two speed, 1/2 H.P. blower motor. 208V, 4.2 amps; 240V, 3.6 amps.
- Casters.
- Simultaneous chain driven doors.
- Stainless steel rear enclosure.
- Second year extended limited parts and labor warranty.

**ACCESSORIES**

- Extra oven rack(s).
- Rack hanger(s).
- Stainless steel drip pan.
- Flexible gas hose with quick disconnect and restraining device. Consult price book for available sizes.
- Down draft flue diverter for direct vent connection.

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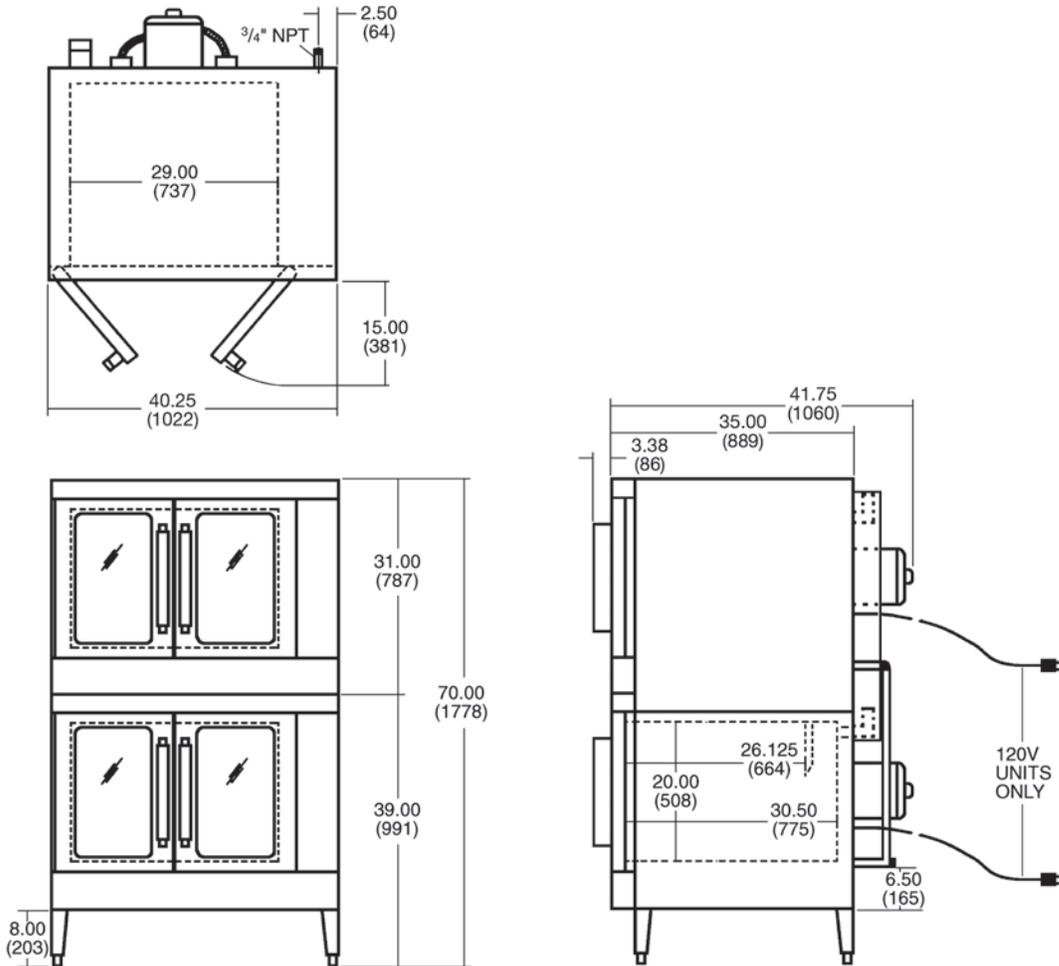


## SG66 SERIES DOUBLE DECK, DEEP DEPTH GAS CONVECTION OVENS

### INSTALLATION INSTRUCTIONS

1. A combination gas pressure regulator and safety solenoid system is included in this unit. Natural gas is 5.0" W.C., Propane gas is 10.0" W.C.
2. An adequate ventilation system is required for commercial cooking equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02289. When writing, refer to NFPA No. 96.
3. These units are manufactured for installation in accordance with ANSZ223.1 (latest edition), National Fuel Gas Code. Copies may be obtained from American Gas Association Inc., Accredited Standards Committee Z223, 400 N. Capitol St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471.
4. Clearances:
 

	Combustible	Non-combustible
Rear	0"	0"
Right Side	2"	0"
Left Side	1"	0"
5. This appliance is manufactured for commercial installation only and is not intended for home use.
6. The installation location should not experience temperatures below -20°C (-4°F).



MODEL NO.	WIDTH	DEPTH (INCLUDES HANDLES)	HEIGHT	BTU/HR. PER OVEN	TOTAL BTU/HR.	ELECTRICAL	WEIGHT			
							WITH SKIDS & PACKAGING		WITHOUT SKIDS & PACKAGING	
							LBS.	KG	LBS.	KG
SG66	40 1/4"	45 1/8"	70"	60,000	120,000	120/60/1	984	446	866	392



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## OVENS

**VULCAN****SG4 SERIES  
SINGLE DECK GAS CONVECTION OVEN**

**Model SG4**  
Shown on optional casters

**SPECIFICATIONS**

Single section, gas convection oven, Vulcan Model No. SG4. Stainless steel front, sides and top. Painted legs. Independently operated stainless steel doors with double pane windows. Non-sag insulation applied to the top, rear, sides, bottom and doors. Porcelain enamel on steel oven interior measures 29" w x 22<sup>1</sup>/<sub>8</sub>" d x 20" h. Two interior oven lights. Five nickel plated oven racks measure 28<sup>1</sup>/<sub>4</sub>" x 20<sup>1</sup>/<sub>2</sub>". Eleven position nickel plated rack guides with positive rack stops. One 60,000 BTU/hr. burner. Gentle bake selector switch. Electronic spark igniter. Furnished with a two speed 1/2 H.P. oven blower-motor. Oven cool switch for rapid cool down. Equipped with 6' cord and plug. Requires 120 volt, 60 Hz, 1 ph power supply providing 7.7 amps draw.

**Exterior Dimensions:**

40<sup>1</sup>/<sub>4</sub>" w x 41<sup>1</sup>/<sub>8</sub>" d (includes motor & door handles) 37<sup>3</sup>/<sub>4</sub>" d (includes motor only) x 54<sup>3</sup>/<sub>4</sub>" h on 23<sup>3</sup>/<sub>4</sub>" legs with feet. 23<sup>3</sup>/<sub>4</sub>" legs can adjust an additional 1" in length. Legs with casters are adjustable from 28" to 29<sup>1</sup>/<sub>8</sub>" in length.

CSA design certified. NSF listed.

**SPECIFY TYPE OF GAS WHEN ORDERING.**  
**SPECIFY ALTITUDE WHEN ABOVE 2,500 FT.**

- SG4D** Solid state temperature controls adjust from 150° to 500°F. 60 minute timer with audible alarm.
- SG4C** Computer controls with digital time and temperature readouts. 99-hour timer with audible alarm. Roast and Hold cycle. One hundred programmable menu selections. Shelf I.D. programming.

**STANDARD FEATURES**

- 60,000 BTU/hr. burner.
- Gentle bake mode selector switch.
- Solid state temperature controls adjust from 150° to 500°F.
- 60 minute timer with audible alarm.
- Oven cool switch for rapid cool down.
- Electronic spark igniter.
- Independently operated stainless steel doors with double pane windows.
- Stainless steel front, sides and top.
- Painted legs.
- 1/2 H.P. two speed oven blower-motor. 120/60/1 with 6' cord and plug. 7.7 amps total draw.
- Porcelain coated enamelled steel.
- Five nickel plated oven racks with eleven rack positions.
- 3/4" rear gas connection with combination gas pressure regulator and safety solenoid system.
- One year limited parts and labor warranty.

**OPTIONS**

- Casters.
- 208V or 240V, 60 Hz, 1 ph, two speed, 1/2 H.P. blower motor. 208V, 4.2 amps; 240V, 3.6 amps.
- Second year extended limited parts and labor warranty.

**ACCESSORIES**

- Stainless steel open stand with adjustable rack supports, stainless steel shelf and choice of adjustable feet or casters.
- Oven/steamer accessory kit. Includes stainless steel marine edge top. Requires 8" legs in lieu of standard legs.
- Extra oven rack(s).
- Rack hanger.
- Stainless steel drip pan.
- Flexible gas hose with quick disconnect and restraining device. Consult price book for available sizes.
- Down draft flue diverter for direct vent connection.
- Stainless steel rear enclosure.

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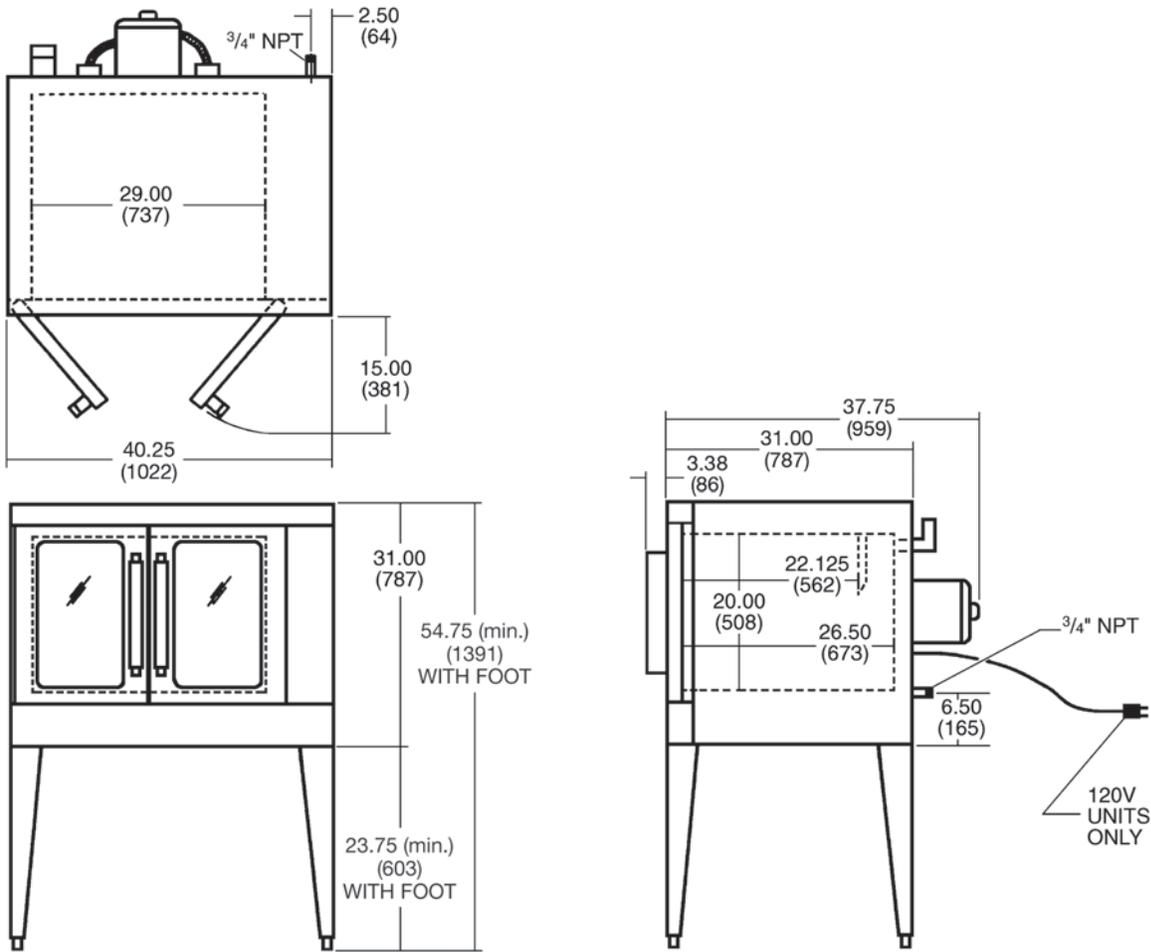


## SG4 SERIES SINGLE DECK GAS CONVECTION OVENS

### INSTALLATION INSTRUCTIONS

1. A combination gas pressure regulator and safety solenoid system is included in this unit. Natural gas is 5.0" W.C., Propane gas is 10.0" W.C.
2. An adequate ventilation system is required for commercial cooking equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02289. When writing, refer to NFPA No. 96.
3. These units are manufactured for installation in accordance with ANSZ223.1 (latest edition), National Fuel Gas Code. Copies may be obtained from American Gas Association Inc., Accredited Standards Committee Z223, 400 N. Capitol St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471.
4. Clearances:
 

	Combustible	Non-combustible
Rear	0"	0"
Right Side	2"	0"
Left Side	1"	0"
5. This appliance is manufactured for commercial installation only and is not intended for home use.
6. The installation location should not experience temperatures below -20°C (-4°F).



MODEL NO.	WIDTH	DEPTH (INCLUDES HANDLES)	HEIGHT	BTU/HR. PER OVEN	TOTAL BTU/HR.	ELECTRICAL	WEIGHT			
							WITH SKID & PACKAGING		WITHOUT SKID & PACKAGING	
							LBS.	KG	LBS.	KG
SG4	40 1/4"	41 1/8"	54 3/4"	60,000	60,000	120/60/1	464	211	410	186



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**NOTE:** In line with its policy to continually improve its products, Vulcan reserves the right to change materials and specifications without notice.

## OVENS

**VULCAN****SG44 SERIES  
DOUBLE DECK GAS CONVECTION OVEN**

**Model SG44**  
shown with optional casters

**SPECIFICATIONS**

Double section gas convection oven, Vulcan-Hart Model No. SG44. Stainless steel front, sides, top and legs. Independently operated stainless steel doors with double pane windows. Non-sag insulation applied to the top, rear, sides, bottom and doors. Porcelain enamel on steel oven interiors measures 29" w x 22 $\frac{1}{8}$ " d x 20" h. Two interior oven lights per section. Five nickel plated oven racks per section measure 28 $\frac{1}{4}$ " x 20 $\frac{1}{2}$ ". Eleven position nickel plated rack guides with positive rack stops. One 60,000 BTU/hr. burner per section. 120,000 total BTU/hr. Gentle bake selector switch. Electronic spark igniters. Furnished with a two speed  $\frac{1}{2}$  H.P. oven blower-motor per section. Oven cool switch for rapid cool down. Each section equipped with 6' cord and plug. Each section requires 120 volt, 60 Hz, 1 ph power supply providing 7.7 amps draw per section.

**Exterior Dimensions:**

40 $\frac{1}{4}$ " w x 41 $\frac{1}{8}$ " d (includes motor & door handles) 37 $\frac{3}{4}$ " d (includes motor only) x 70" h on 8" legs.

CSA design certified. NSF listed.

**SPECIFY TYPE OF GAS WHEN ORDERING.**  
**SPECIFY ALTITUDE WHEN ABOVE 2,500 FT.**

- SG44D** Solid state temperature controls adjust from 150° to 500°F. 60 minute timer with audible alarm.
- SG44C** Computer controls with digital time and temperature readouts. 99-hour timer with audible alarm. Roast and Hold cycle. One hundred programmable menu selections. Shelf I.D. programming.

Double deck ovens are supplied as separate units with a stacking kit.

**STANDARD FEATURES**

- 60,000 BTU/hr. burner per section.
- Gentle bake mode selector switch.
- Solid state temperature controls adjust from 150° to 500°F.
- 60 minute timer with audible alarm.
- Oven cool switch for rapid cool down.
- Electronic spark igniters.
- Independently operated stainless steel doors with double pane windows.
- Stainless steel front, sides, top and legs.
- $\frac{1}{2}$  H.P. two speed oven blower-motor. 120/60/1 with 6' cord and plug. 7.7 amps per section. 15.4 amps total draw.
- Porcelain coated enamelled steel.
- Five nickel plated oven racks with eleven rack positions per section.
- $\frac{3}{4}$ " rear gas connection with combination gas pressure regulator and safety solenoid system.
- One year limited parts and labor warranty.

**OPTIONS**

- Casters.
- 208V or 240V, 60 Hz, 1 ph, two speed,  $\frac{1}{2}$  H.P. blower motor. 208V, 4.2 amps; 240V, 3.6 amps.
- Second year extended limited parts and labor warranty.

**ACCESSORIES**

- Extra oven rack(s).
- Rack hanger(s).
- Stainless steel drip pan.
- Flexible gas hose with quick disconnect and restraining device. Consult price book for available sizes.
- Down draft flue diverter for direct vent connection.
- Stainless steel rear enclosure.

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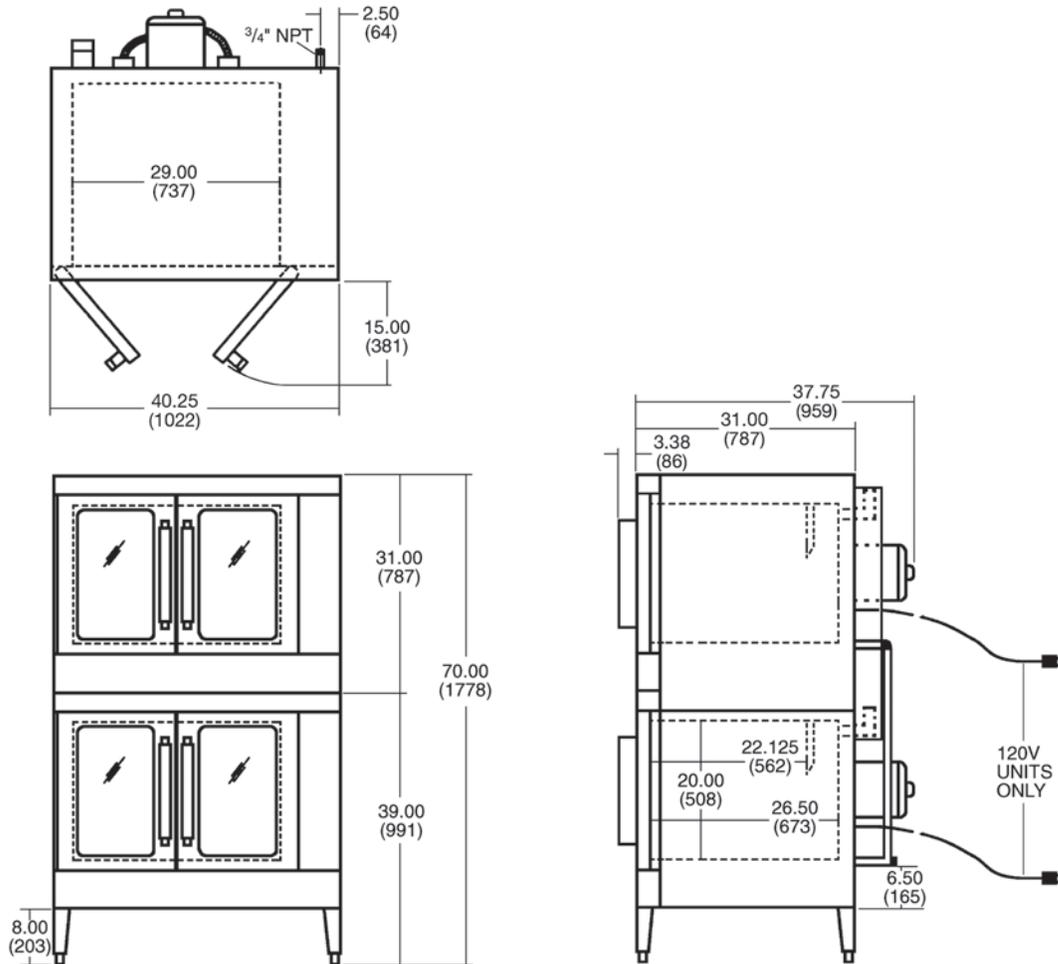


## SG44 SERIES DOUBLE DECK GAS CONVECTION OVENS

### INSTALLATION INSTRUCTIONS

1. A combination gas pressure regulator and safety solenoid system is included in this unit. Natural gas is 5.0" W.C., Propane gas is 10.0" W.C.
2. An adequate ventilation system is required for commercial cooking equipment. Information may be obtained by writing to the National Fire Protection Association, Batterymarch Park, Quincy, MA 02289. When writing, refer to NFPA No. 96.
3. These units are manufactured for installation in accordance with ANSZ223.1 (latest edition), National Fuel Gas Code. Copies may be obtained from American Gas Association Inc., Accredited Standards Committee Z223, 400 N. Capitol St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471.
4. Clearances:
 

	Combustible	Non-combustible
Rear	0"	0"
Right Side	2"	0"
Left Side	1"	0"
5. This appliance is manufactured for commercial installation only and is not intended for home use.
6. The installation location should not experience temperatures below -20°C (-4°F).



MODEL NO.	WIDTH	DEPTH (INCLUDES HANDLES)	HEIGHT	BTU/HR. PER OVEN	TOTAL BTU/HR.	ELECTRICAL	WEIGHT			
							WITH SKIDS & PACKAGING		WITHOUT SKIDS & PACKAGING	
							LBS.	KG	LBS.	KG
<b>SG44</b>	40¼"	41⅞"	70"	60,000	120,000	120/60/1	928	422	820	372



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# VULCAN

## INSTALLATION & OPERATION MANUAL

### SG SERIES GAS CONVECTION OVENS

#### MODELS

SG4  
SG6

#### STACKED MODELS

SG44  
SG66



For additional information on Vulcan-Hart or to locate an authorized parts and service provider in your area, visit our website at [www.vulcanequipment.com](http://www.vulcanequipment.com)

VULCAN-HART  
ITW FOOD EQUIPMENT GROUP, LLC

P.O. BOX 696 DIVISION OF  
LOUISVILLE, KY 40201-0696

[WWW.VULCANEQUIPMENT.COM](http://WWW.VULCANEQUIPMENT.COM)

FORM 45392 (JAN 2013)

# IMPORTANT FOR YOUR SAFETY

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

## IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

## FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

**⚠ WARNING** Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

# Installation, Operation and Care of SG SERIES GAS CONVECTION OVENS

**KEEP THIS MANUAL FOR FUTURE REFERENCE**

## GENERAL

Models SG4 and SG6 feature a solid state temperature control bake mode selector switch. One hour dial timer is standard. Two -speed 1/2 HP (0.37 kw) electric motor is standard equipment. Each oven is furnished with 5 racks; additional oven racks are available. The burner input rating for each oven is 60,000 BTU/hr.

Porcelain interior is standard on all models.

Model SG6 has a 4 inches (102 mm) deeper oven cavity.

Standard ovens are 120 V, 60 Hz, 1 PH and include cord and plug. Optional electrical specifications of 208/240 V are available and require hard wire connection.

Independently opening doors are standard; simultaneous door opening is optional.

Other options include: an open stand with lower storage rack and a stacking kit for mounting one oven on top of another.

Vulcan SG Series Gas Convection Ovens are produced with quality workmanship and material. Proper installation, usage and maintenance of your oven will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

## FEATURES AND OPTIONS

Model	Thermostat	Timer	Oven Lights	Legs	Stand with Storage Rack	Voltage
SG4 SG6	Solid State	1 HR. Std.	Std.	25 3/4" (654mm)	Opt	120/60/1 Std. 208/60/1 Opt. 240/60/1 Opt. 240/50/1 Opt.
Stacked Ovens				8" (203mm)		

# INSTALLATION

Before installing, verify that the electrical service and type of gas supply (natural or L.P.) agree with the specifications on the rating plate, located behind the top trim panel on the front of the oven. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or Vulcan-Hart Company immediately.

## UNPACKING

This oven was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking, check for possible shipping damage. If the oven is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Carefully unpack the oven and place it in a work-accessible area near to its final installed position.

Do not use the doors or their handles to lift the oven.

## LOCATION

The equipment area must be kept free and clear of combustible substances.

When installed, minimum clearance from combustible construction must be 1 inch (25 mm) at the left side, 4 inches (102 mm) at the right side and 2 inches (51 mm) at the rear. Minimum clearance from noncombustible construction must be 0 inch (0 mm) at the left side, 4 inches (102 mm) at the right side and 2 inches (51 mm) at the rear. The oven may be installed on combustible floors.

The installation location must allow adequate clearances for servicing and proper operation.

The oven must be installed so that the flow of combustion and ventilation air will not be obstructed. Adequate clearance for air openings into the combustion chamber must be provided. Make sure there is an adequate supply of air in the room to allow for combustion of gas at the oven burners.

Do not permit fans to blow directly at the oven. Wherever possible, avoid open windows next to the oven. Avoid wall-type fans which create air cross currents within the room.

## INSTALLATION CODES AND STANDARDS

### In the United States of America:

1. State and local codes.
2. National Fuel Gas Code, ANSI/Z223.1/NFPA #54 (latest edition). Copies may be obtained from The American Gas Association, Inc., Accredited Standards Committee Z223 @ 400 N. Capital St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471.

### **NOTE: In the Commonwealth of Massachusetts,**

All gas appliances vented through a ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.

3. Vapor Removal From Cooking Equipment, NFPA-96 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02169-7471.
4. National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02169-7471.

**In Canada:**

1. Local codes.
2. CSA B149.1 Natural Gas and Propane Installation Code.
3. CSA C22.1 Canadian Electric Code (latest edition).

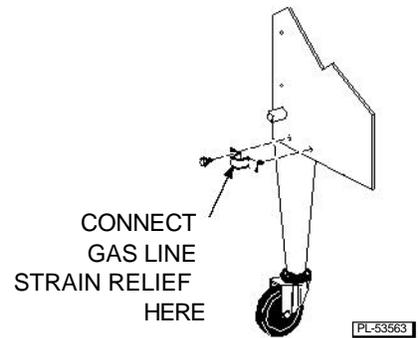
The above are available from the Canadian Standard Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.

**INSTALLING OVEN**

The oven must be installed on legs or be mounted on a modular stand. Installations on concrete bases or other supports restricting air circulation underneath the oven is not advisable and may void the warranty.

**Ovens Mounted on Casters**

Ovens mounted on casters must use a flexible connector (not supplied by Vulcan) that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI-Z21.41 • CSA 6.9. In addition, adequate means must be provided to limit movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit appliance movement. Attach the restraining device at the rear of the oven as shown in Fig. 1.



**Fig. 1**

Remove two screws from the rear of the oven and install the tie-down strap shipped with the casters using these screws (Fig. 1). Attach the gas line strain relief to the tie-down strap at the rear of the oven (Fig. 1).

If disconnection of the restraint is necessary, turn off the gas supply before disconnection. Reconnect this restraint prior to turning the gas supply on and returning the oven to its installation position.

Separate instructions for installing casters to the oven are included with the casters.

Note: If the oven is installed on casters and is moved for any reason, it is recommended that the oven be leveled front to back and side to side.

## Assembling the Legs to the Oven

The legs must be installed on the bottom of the oven. Gently position the oven on its side, taking care not to scratch or damage it.

Attach each of the four leg assemblies to the bottom of the oven with the 24 bolts and lockwashers (six per leg). Carefully raise the oven to its normal position.

## ASSEMBLING THE STAND TO THE OVEN

Attach each of the four leg assemblies to the bottom of the oven with the 24 bolts and lockwashers (six per leg). Carefully raise the oven to its normal position.

Attach the undershelf to the legs with eight bolts and lockwashers (two per leg).

Install the rack guides into the undershelf at desired locations (for pan or flat rack), then attach the rack supports to the top end of the rack guides. Attach rack supports to the leg assembly by removing one middle bolt and reattaching back through the end holes in the rack support (Fig. 2).

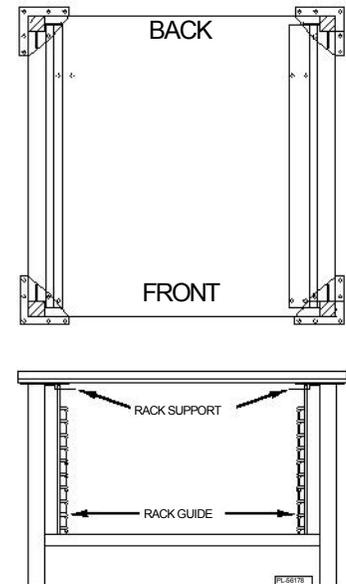


Fig. 2

## ASSEMBLING STACKED OVENS

Unpack the ovens and stack kit. Position the oven to be used as the bottom oven on its back for access to the oven bottom, taking care not to scratch or damage it. The gas pipe protrudes beyond the back; provide for this when the oven is tipped back by resting it on suitable spacers (2 x 4" [51 x 102 mm], etc.). Attach the four leg assemblies with the 24 bolts and lockwashers (six per leg).

Place the lower oven (with legs) on the floor and remove two  $\frac{7}{16}$  inch (11 mm) diameter knockouts on each side of the top cover. Remove vent guard and discard it.

Move the oven with legs to the installed position and place upper oven on top of lower oven using the locating studs.

Install the stacking flue (Fig. 3) with the four screws provided.

Connect the piping between the top oven and bottom oven. For all gas supply connections, pipe joint compound must be resistant to the action of propane gases.

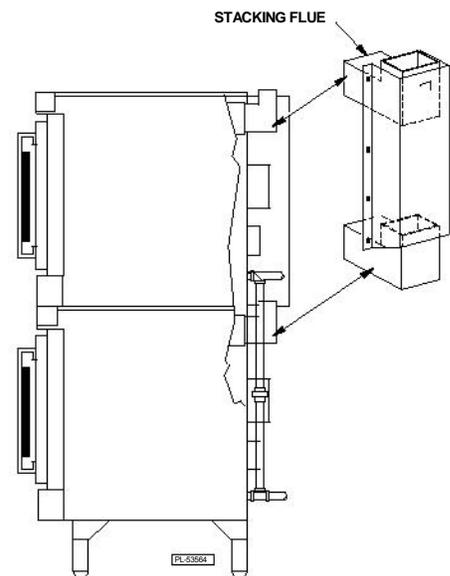


Fig. 3

## LEVELING

Make sure that the oven racks are level in the final installed position. If the oven is installed on legs, turn the adjustable feet in or out to level the oven front-to-back and side-to-side. If the oven is installed on casters, loosen set screws and turn casters in or out to level the oven front-to-back and side-to-side. Retighten set screws after leveling.

MODEL	INPUT RATING		MANIFOLD PRESSURE	
	Natural	L.P. Gasses	Natural	LP Gasses
SG4	60,000 BTU/hr	60,000 BTU/hr	5.0" WC (0.9 kPa)	10" WC (2.5 kPa)
SG6				

Gas supply connections and any pipe joint compound must be resistant to the action of natural and LP gasses.

Location of the gas inlet is at the rear of the oven. Codes require that a gas shutoff valve must be installed in the gas line ahead of the oven.

Connect gas supply after leveling the oven. The gas supply line must be at least the equivalent of  $\frac{3}{4}$  inch (19 mm) iron pipe. Make sure the pipes are clean and free of obstructions, dirt or pipe joint compound.

The ovens are equipped with fixed burner orifices which coincide with installation elevation.

Standard oven with electronic ignition is provided with a regulator integral to the gas solenoid valve and requires no external regulator.

**NOTICE** The gas supply must not exceed  $\frac{1}{2}$ " psig (14" WC / 3.45 kPa). Damage to the gas valves may occur voiding warranty.

**⚠ WARNING** Prior to lighting, check all joints in the gas supply for leaks. Use soap and water solution. Do not use an open flame.

**A. Check all joints prior to the gas valve (solenoid) before lighting unit.**

**B. Check all joints beyond gas valve (solenoid) after unit is lit.**

After piping has been checked for leaks, all piping receiving gas should be fully purged to remove air.

### TESTING THE GAS SUPPLY SYSTEM

When gas supply pressure exceeds  $\frac{1}{2}$  psig (3.45 kPa), the oven and its individual shutoff valve must be disconnected from the gas supply piping system.

A step down regulator must be installed to obtain line pressure of 8.0" WC (natural) or 11.0" WC (L.P).

When gas supply pressure is  $\frac{1}{2}$  psig (3.45 kPa) or less, the oven should be isolated from the gas supply system by closing its individual manual shutoff valve.

### BURNER AIR ADJUSTMENT

Although main burner air is adjusted before shipment, it should be checked at the time of installation. Excessive air will cause flames to lift off a burner when cold or may cause flash-back during normal cycling of oven, particularly when propane gas is used.

Insufficient air will cause flames to burn with a yellow tip and result in carbon accumulation in the flame chamber.

Contact your local Vulcan-Hart servicer if required.

## VENT SYSTEM

**DO NOT** obstruct the flow of flue gases from the flue located on the rear of the oven. It is recommended that the flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel.

Ovens may use an optional down-draft diverter flue method. This optional down-draft diverter must be purchased from the oven manufacturer and vented to the outside; otherwise, the installation of any such device will void all oven certifications and warranties. This oven is suitable for connection to Type B Gas Vent when used with the draft hood provided.

From the termination of the flue to the filters of the hood venting system, a minimum clearance of 18 inches (457 mm) must be maintained.

Information on the construction and installation of ventilating hoods may be obtained from Vapor Removal from Cooking Equipment, NFPA Standard No. 96 (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

## ELECTRICAL CONNECTIONS

**⚠ WARNING** Electrical and grounding connections must comply with the applicable portions of the National Electrical Code and/or other local electrical codes.

**⚠ WARNING** Appliances equipped with a flexible electric supply cord are provided with a three-prong grounding plug. It is imperative that this plug be connected into a properly grounded three-prong receptacle. If the receptacle is not the proper grounding type, contact an electrician. Do not remove the grounding prong from this plug.

SG series ovens with 120 V/60 Hz/1 PH electrical specification are equipped with a cord and plug as standard equipment.

A wiring diagram is located on the inside of the control housing.

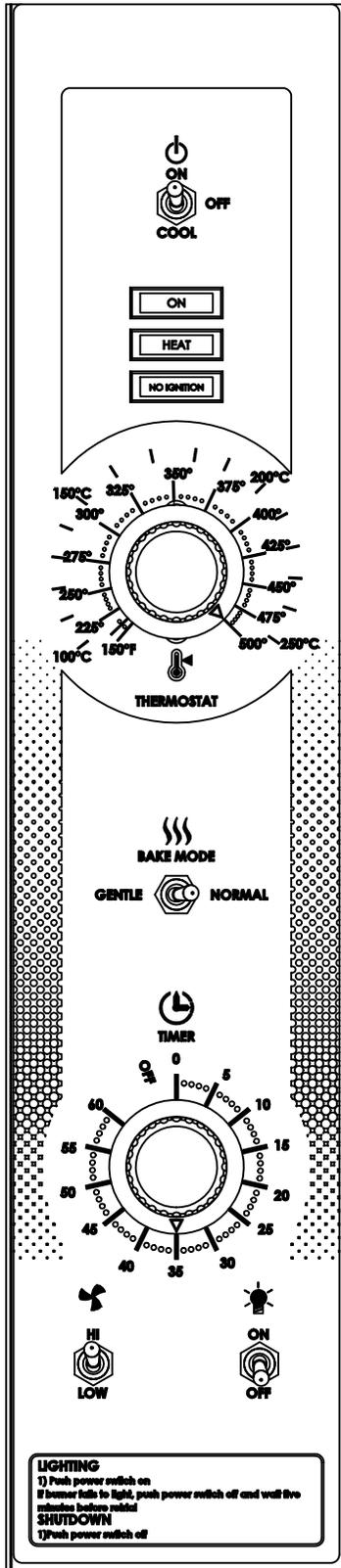
### ELECTRICAL DATA

Models	V/Hz/PH	Minimum Circuit Ampacity Maximum Protective Device AMPS
SG4 SG6	120/60/1	15
	208/60/1	15
	240/60/1	15
	240/50/1	15

Compiled in accordance with the National Electrical Code, NFPA-70 (latest edition).

# OPERATION

The oven and its parts are hot. Use care when operating, cleaning or servicing the oven.



- Main Switch** ON — Turns oven control circuits on.  
OFF — Turns oven control circuits off.
- OVEN COOL** — Allows the fan motor to run with the doors ajar to speed ovencooling.
- On Light (Amber)** — Lit when main switch is ON.
- Heat Light (White)** — Comes on and goes off when the burner cycles on and off.
- Ignition Light (Red)** — Comes on if burner fails to ignite. When lighting the oven, the IGNITION light flashes.
- Thermostat** — Controls oven temperature during cooking operation.
- Bake Mode** — Select "Normal" for 100% Power or "Gentle" for 75% Power.
- Timer (1 Hr. or 5 Hr.)** — Sets the bake time. Buzzer sounds continuously after timer counts down to 0. Oven does not turn off. Turn Timer to OFF to stop buzzer. When oven is not in use, keep Timer at OFF position.
- Fan Speed Switch** — Selects HI or LO Fan Speed.
- Lights Switch** — Turns the lights in the oven ON or OFF.

CONTROLS (SG4 and SG6)

## **BEFORE FIRST USE**

Before using the oven for the first time, it must be "burned in" to release any odors that might result from heating the new surfaces in the chamber.

1. Using a clean, damp cloth, wipe the inside of the oven including the racks.
2. Close the oven doors.
3. Push the main switch to ON.
4. Turn the Thermostat to 300°F (149°C) and allow the oven to cycle for 2 hours or until no odor is detected before pushing the main switch to OFF.

## **LIGHTING MODEL SG4 AND SG6 OVENS**

1. Turn the main gas supply ON.
2. Push the main switch to ON.
3. If the burner fails to light, push main switch OFF. Wait 5 minutes for retrieval.

If the oven does not light after three trials, turn off the main gas valve and call a qualified servicer.

## **SHUTDOWN INSTRUCTIONS**

1. Turn main switch to OFF.

## **EXTENDED SHUTDOWN**

1. Push main switch to OFF.
2. Turn gas and electrical power supplies OFF.

## **USING MODEL SG4 AND SG6 OVENS**

### **Preheating**

1. Select the proper rack arrangement for the product to be cooked. Refer to RACK ARRANGEMENTS, page 13.
2. Make sure the doors are closed.
3. Push main switch to ON. The amber ON light will come on, indicating that power to the oven is on.
4. Set the two-speed FAN SWITCH to the desired setting.
5. Set thermostat as desired. The HEAT light will come on and remain on until the oven reaches set temperature (approximately 10 to 15 minutes for settings from 300 to 400°F (149 to 204°C)). Refer to SUGGESTED COOKING GUIDELINES for temperatures and times for various products.  
If the burner fails to light, the red IGNITION light will come on and remain on.
6. Prepare product and place in suitable pans. When the white HEAT light goes off, the oven has reached the desired preheat temperature.

### **Bake Mode - Gentle**

With Bake Mode switched to Gentle, heat light will cycle at 22 seconds on, 8 seconds off until temperature is reached. Heat light will be off for greater than 8 seconds when set temperature has been reached.

## **Cooking**

1. Open doors and load the product into the oven. Place pans in the center of the racks. Close doors.
2. Set the Timer. After the preset time lapses, turn Timer to OFF position to stop alarm.
3. When product is done, open doors and carefully remove cooked product from the oven. Care should be taken when wiping up spills, as oven is still hot.

## **End of Day**

1. Turn Thermostat to OFF setting.
2. Push main switch to OVEN COOL. Leave door ajar while the fan is on to cool the oven. 3. When oven has cooled sufficiently, flip main switch to OFF. 4. Turn gas valve to OFF and clean oven.

## **Extended Shutdown**

Repeat Steps 1 through 3 of End of Day. Unplug oven and shut off manual gas valve.

## **CONSERVING ENERGY— ALL MODELS**

- Turn off unused equipment.
- Adjust menu patterns and cooking/baking schedules for optimum equipment use.
- Reduce thermostat settings in slack periods since gas equipment heats up and recovers quickly. • Preheat only to required cooking temperature for specific food — not higher. • Do not open the oven door unless absolutely necessary.
- Keep area around the oven door clean and free of food particles.
- Any obstruction that prevents the door from closing completely will adversely affect oven efficiency.

## PROPER UTENSILS

The use of proper utensils can enhance oven operation. Medium and light weight pans allow the product to warm faster. Roast meats in shallow pans deep enough to hold all juices yet allow free air circulation.

## OPERATING HINTS

When using the convection oven for the first time with a particular food, check the degree of doneness periodically before the suggested time has elapsed. This will ensure the desired doneness is achieved.

Record your temperature and time settings for various products. The convection oven can provide consistent and repeatable results.

The convection oven is faster than conventional deck-type ovens; temperature settings are lower and cook times are shorter. Since recipes and foods are subject to many variations and tastes, the guidelines regarding times and temperatures in this manual are SUGGESTIONS ONLY. Experiment with your food products to determine the cooking temperatures and times that give you the best results.

## RACK ARRANGEMENTS

All models are supplied with five racks and have a maximum operating capacity of six racks per oven. The 11-position rack supports provide for maximum flexibility and proper rack spacing.

The following arrangements are recommended. The position numbers are in numerical sequence starting at the bottom (Fig. 4).

Arrangement #1 — Five racks in positions #2, #4, #6, #8 and #10 for cookies or reconstitution of frozen lunches at maximum capacity. Also recommended position for general baking in sheet pans with products not over 2½ inches (64 mm) high.

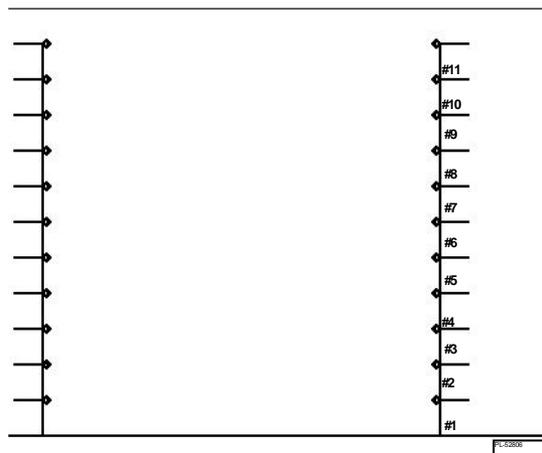
Arrangement #2 — Four racks in positions #1, #4, #7 and #10 for general baking in sheet pans, muffin pans, pie or cake tins and pudding pans 3½ inches (89 mm) high with products not over 4 inches (102 mm) high. This arrangement can also be used for casseroles or meat dishes in #200 series food service pans 12 x 20 x 2½" (305 x 508 x 64 mm).

Arrangement #3 — Three racks in positions #1, #5 and #9 for baking breads or cakes in loaf or tube pans and high meringue pies. This arrangement can also be used for casseroles, meat dishes or roasting in pans up to 5½ inches (140 mm) deep with products up to 6 inches (152 mm) high.

Arrangement #4 — Two racks in positions #1 and #6 for roasting turkeys and other roasts up to 7 inches (178 mm) high.

With the rack in position #1, there is limited space for a water pan (see cooking chart in this manual).

When mixed loads or partial loading is regular practice, some users have developed other rack arrangements to suit their particular needs.



RACK POSITION

Fig. 4

## **SPECIAL PROCEDURES FOR BAKING**

When baking yeast breads, cooking starts immediately in the convection oven. Yeast breads do not usually rise as much in a convection oven as in a conventional oven. Therefore it is usually necessary to allow furtherer proof, 2<sup>1</sup>/<sub>2</sub> to 3 times increase in volume, for best results.

When baking pies in your convection oven, three or four pies should be put on an 18 x 26" (457 x 660 mm) sheet or bun pan. This procedure helps the bottom crust to bake, makes handling easier and reduces the possibility of boilover spoiling the appearance of the pies on the lower racks.

## **HIGH LIMIT SWITCH**

All ovens are equipped with a high limit switch, which senses the temperature of the oven to prevent overheating. The high limit switch operates independently and will automatically shut the oven down should the primary control fail. If this situation occurs, DO NOT attempt to bypass the high limit. Shut the oven down and contact your local Vulcan authorized service agency.

## RECOMMENDED TEMPERATURES AND TIMES FOR ROASTING

Meat roasting is most satisfactory at temperatures of 225 to 325°F (107 to 163°C) for beef, lamb, poultry and ham; 325°F (163°C) for fresh pork as recommended by USDA and American Meat Institute.

A pan, approximately 12 x 20 x 1" (305 x 508 x 25 mm) full of water, may be placed in the oven bottom. This water supplies humidity to reduce shrinkage. Water should be added if necessary during roasting.

Roasting pans should be no deeper than necessary to hold drippings (usually 2 to 2½" (51 to 64 mm).

Cooking time and shrinkage may vary with roasting temperature, cut, grade of meat and degree of doneness. Smaller cuts will generally show greater time savings than larger cuts at a given temperature.

### ROASTING TEMPERATURE CHART

PRODUCT	TEMP		APPROXIMATE TIMES
	°F	(°C)	
<b>Standing Rib Roast</b> — Oven Ready	250	(121)	3 to 4 Hrs. — Rare 4 to 4½ Hrs. — Med.
<b>Rolled Rib Roasts</b> — 20 to 22 lb (9.1 to 10 kg)	275	(135)	Hrs. — Med.
<b>Veal Roast</b> — 15 lb (6.8 kg)	300	(149)	3 Hrs. — Med. Well
<b>Turkeys</b> — 15 to 20 lb (6.8 to 9.1 kg)	300	(149)	Hrs.
<b>Meat Loaf</b> — 8 to 10 lb (3.6 to 4.5 kg)	350	(177)	45 to 60 Minutes

## COOKING HINTS

Forced air convection cooking is faster than conventional oven cooking, and therefore overcooking is more common. Do not cook products faster than is practical for the best results. Since forced air convection supplies heat to the surface of the product, the thicker or more massive a product is for its type, the longer it will take to absorb enough heat to cook.

The oven will cook or bake full or partial loads at standard recipe temperatures. As with any oven, you may wish to use a temperature of up to 25 F° (-4 C°) higher or lower than the recipe for the particular product result that you prefer.

When established, convection oven times and control settings should be noted on your recipe.

## SUGGESTED COOKING GUIDELINES

Recommended temperatures, times and number of racks are intended as a guide only. Adjustments must be made to compensate for variations in recipes, ingredients, preparation and personal preference in product appearance.

The oven does not require special recipes. Excellent results can be obtained from any good commercial recipe with reduced cooking times.

**RECOMMENDED TEMPERATURES, TIMES AND NUMBER OF RACKS FOR BAKING**

PRODUCT	TEMPERATURE		TIME IN MINUTES	NO. OF RACKS
	°F	(°C)		
<b>Cakes</b>				
Sheet Cakes				
18 x 26 x 1" (457 x 660 x 25 mm) pan	325-360	(163-182)	20 to 23 5	4
Scaled 4½ to 6 lb (2 to 2.7 kg)/pan				
Scaled 6 to 7½ lb (2.7 to 3.4 kg)/pan	335-350	(168-177)	22 to 25	
Sheet Cakes				
18 x 26 x 2" (457 x 660 x 51 mm) pan	300-325	(149-163)	25 to 35	3
4 Scaled 10 to 12 lb (4.5 to 5.4 kg)/pan	300-325	(149-163)	25 to 35	
Or, two 12 x 18 x 2" (305 x 457 x 51 mm) pans				
Scaled 5 to 6 lb (2.3 to 2.7 kg)/pan				
<b>Angel or Sponge Cakes</b>				
Sheet Pans 18 x 26 x 1" (457 x 660 x 25 mm)				
Scaled 5 to 6 lb (2.3 to 2.7 kg)/pan	300-325	(149-163)	15 to 20	4
<b>Loaf or Tube Pans</b>				
	315-340	(157-171)	20 to 30	3-4
<b>Cupcakes</b>				
	350-400	(177-204)	6 to 12	4
<b>Frozen Fruit Pies</b>				
	350-375	(177-191)	30 to 45	3-4
<b>Pumpkin or Custard Pies</b>				
	300-350	(149-177)	30 to 45	3-4
<b>Cobblers</b>				
12 x 18 x 2" (305 x 457 x 51 mm) or	350-400	(177-204)	30 to 45	3-4
12 x 20 x 2½" (305 x 508 x 64 mm)				
<b>Meringue Pies</b>				
	350-425	(177-218)	6 to 10	2-4
<b>Fruit Turnovers</b>				
18 x 26 x 1" (457 x 660 x 25 mm) pans	350-375	(177-191)	15 to 25	3-5
<b>NOTE:</b> Pies and cobblers; fruit, custard and pumpkin pies in pie pans should be placed on 18 x 26 x 1" (457 x 660 x 25 mm) pans for baking.				
<b>Cookies</b>				
Rolled or Pressed	350-400	(177-204)	6 to 12	3-5
Drop	350-400	(177-204)	6 to 15	3-5
<b>Brownies</b>				
	350	(177)	12 to 20	4-5
<b>Yeast Breads NOTE:</b> Yeast breads should be fully proofed for best results.				
<b>Rolls</b> — 1 oz (28 g)	350-400	(177-204)	5 to 10	3-4
1½ to 2½ oz (43 to 71 g)	350-400	(177-204)	8 to 15	3-4
<b>Loaf Bread</b> — 1 lb (453.4 g)	325-375	(163-191)	20 to 40	3(30) Pans 2(20) Pans
<b>Sweet Rolls &amp; Danish Pastry</b>				
	325-375	(163-191)	5 to 15	3-4
<b>Biscuits</b> — Rolled ½" (13 mm) Thick				
	350-400	(177-204)	5 to 15	3-4
<b>Muffins</b>				
18 x 26 x 1" (457 x 660 x 25 mm) pan,	325-375	(163-191)	6 to 18	3-4
5 to 7 lb (2.3 to 3.2 kg)/pan				
18 x 26 x 2" (457 x 660 x 51 mm) pan,	335-400	(168-204)	10 to 20	4
8 to 20 lb (3.6 to 9 kg) per pan				
	335-400	(168-204)	15 to 25	4
<b>Corn Muffins</b>				
	335-385	(168-196)	10 to 20	3-4

**REHEATING PREPARED FOODS**

<b>PRODUCT</b>	<b>TEMPERATURE °F            (°C)</b>	<b>TIME IN MINUTES</b>	<b>NO. OF RACKS</b>
<b>Frozen French Fries</b>	400-450 (204-232)	6 to 8 2 to 3	4
<b>Frozen TV Dinners</b>	350-400 (177-204)	10 to 12	2-5
<b>Frozen Entrees</b> 3/4 to 1" (19 to 25 mm) thick	300-350 (149-177)	10 to 20	2-5
<b>Frozen Meals</b> , 8 oz (226 g) Foil Pkg.	350-400 (177-204)	20 to 30	2-5
<b>Fish Sticks &amp; Portions</b>			
Frozen Breaded, 1 oz (28 g)	350-400 (177-204)	6 to 10	2-4
2 1/2 to 3 oz (71 to 85 g)	350-375 (177-191)	8 to 15	2-4
<b>Chicken Pieces</b>			
Broiled or Oven Fried			
2 to 2 1/2 lb (0.9 to 1.1 kg)/bird	375-425 (191-218)	8 to 15	2-5-2-
2 1/2 to 3 lb (1.1 to 1.4 kg)/bird	350-400 (177-204)	15 to 25	4
<b>Lobsters</b> — 1 to 1 1/2 lb (0.45 to 0.7 kg)	400-450 (204-232)	8 to 14	2-4
<b>Lobster Tails</b> — Frozen			
1/2 to 3/4 lb (0.2 to 0.3 kg)	350-400 (177-204)	10 to 15	2-4
<b>Hamburger Patties</b>			
8 per lb (0.45 kg), med. to well done	400-450 (204-232)	5 to 6	2-6
6 per lb (0.45 kg)	400-450 (204-232)	7 to 10	2-6
4 per lb (0.45 kg)	375-450 (191-232)	8 to 12	2-6
<b>CASSEROLES</b>			
<b>Food Service Pans</b>			
2 to 3" (51 to 76 mm) deep	325-375 (162-191)	15 to 25	
3 to 4" (76 to 102 mm) deep	325-375 (162-191)	20 to 35	2-4
<b>Ramekins or Foil Pans</b>	350-400 (177-204)	5 to 6	4-5
Up to 1 1/2" (38 mm) deep			2-4
Frozen		10 to 15	
<b>MISCELLANEOUS PRODUCTS</b>			
<b>Baked Potatoes</b>			
120 count per 50 lb (22.7 kg)	400-450 (204-232)	20 to 25	2-5-2-
100 count per 50 lb (22.7 kg)	400-450 (204-232)	25 to 40	5-2-5
80 count per 50 lb (22.7 kg)	400-425 (204-218)	30 to 45	
<b>Pizzas</b> — Frozen or With Prebaked Crust	425-475 (218-247)	5 to 10	2-4
<b>Grilled Cheese Sandwiches</b>	400-425 (204-218)	8 to 10	2-4

## CLEANING

**⚠ WARNING** Disconnect the electrical power to the machine and follow lockout / tagout procedures.

Allow the oven to cool before cleaning.

### Snorkel

The snorkel (heat circulation tube), located in the back of oven cavity, should never be blocked. The snorkel should be kept clean at all times for proper operation of the oven. Clean with standard oven cleaner at least once a week. Be sure to thoroughly clean all cleansing solution off before using the oven again. It is also recommended that the oven be run at 400°F (204°C) for 20 minutes before using to burn off any cleaning solution that was not thoroughly rinsed from the snorkel.

### Fan

Clean the fan with oven cleaner weekly. Use a stiff bristle brush to clean the blades. Take care not to damage or bend the fan blades. Be certain to remove all debris.

### Daily

Exterior stainless steel oven panels should be cleaned with a damp cloth. Stubborn soil may be removed with detergent. (DO NOT USE DAWN®.) Rinse thoroughly and wipe dry with a soft, clean cloth.

Clean porcelain oven interior daily with soap or detergent and water. Rinse thoroughly, wipe dry with a soft, clean cloth.

Nickel-plated racks and rack supports are dishwasher-safe and may be removed for cleaning.

For exterior burned-on foods and grease which resist simple soap and water cleaning, an abrasive cleanser (scouring powder) mixed into a paste may be used. Apply with stainless steel wool or sponge, always rubbing with the "grain." This treatment is equally effective for "heat tint" (slightly darkened areas caused by oxidation). Again, remember to rub in the direction of the polish lines. Rinse with clear water and dry with a soft cloth.

Do not use scouring powder on the glass window; it will scratch and fog the glass.

After processing some foods at low temperatures, odors may linger in the oven. These odors may be cleared by setting the tstat to 500°F (260°C) and allow the oven to run unloaded for 30 to 45 minutes.

## GUIDELINES FOR MAINTAINING STAINLESS STEEL SURFACES

There are three basic things that can break down the surface layer of stainless steel and allow corrosion to develop: 1) Abrasion; 2) Deposits and water and 3) Chlorides.

Avoid abrasion from rubbing with steel pads, wire brushes or scrapers that can leave iron deposits on stainless steel; instead, use plastic scouring pads or soft cloths. For stubborn stains, use products such as Cameo, Talc or Zud First Impression. Always rub parallel to the polish lines or with the grain.

Hard water can leave deposits that promote rust on stainless steel. Treated water from softeners or certain filters can eliminate these mineral deposits. Deposits from food must be properly removed by cleaning. Use mild detergent and nonchloride cleaners. Rinse thoroughly. Wipe dry. If using chloride-containing cleaners or sanitizers, to avoid stainless steel corrosion. Where appropriate, apply a polish recommended for stainless steel (such as Benefit or Super Sheen) for extra protection and lustre.

# MAINTENANCE

**⚠ WARNING** The oven and its parts are hot. Use care when operating, cleaning or servicing the oven.

**⚠ WARNING** Disconnect the electrical power to the machine and follow lockout / tagout procedures.

## LUBRICATION

The fan motor comes with sealed bearings and requires no lubrication.

## VENTING

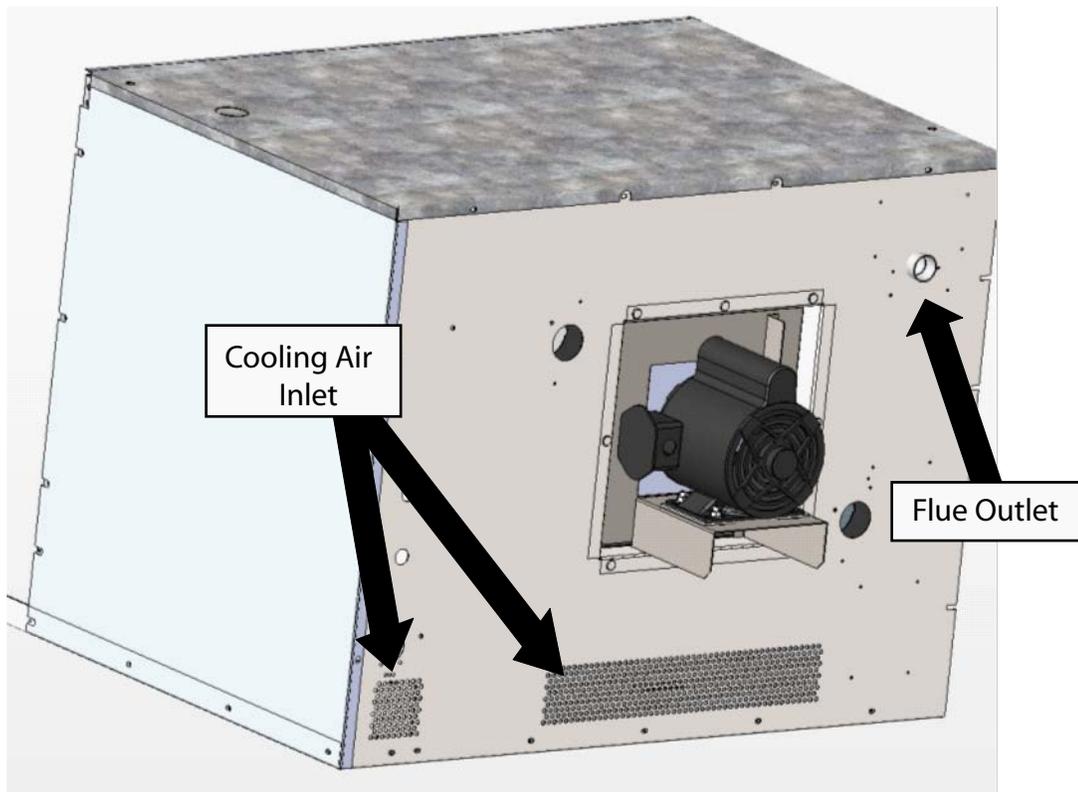
Periodically check the flue outlet when the oven is cool, to be sure it is free of obstructions.

## REPLACING LAMPS

1. Allow oven to cool.
2. Remove all racks by pulling forward, lifting up and out.
3. Unscrew glass dome from light body.
4. Replace the bulb.
5. Reassemble glass dome and racks.

## COOLING AIR INLET

Clear all dust and grease deposits from surfaces regularly. Make certain that perforations are open and clean.



# TROUBLESHOOTING

Problem	Possible Cause	Suggested Corrective Action
Uneven browning or overcooked edges.	<ol style="list-style-type: none"> <li>1. Oven is too hot.</li> <li>2. Too Many racks used.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce temperature setting (refer to cooking guidelines).</li> <li>2. Use Fewer racks to allow better circulation.</li> </ol>
Product pulling edge of pan spilling.	<ol style="list-style-type: none"> <li>1. Oven is not level.</li> <li>2. Sheet pans are warped.</li> </ol>	<ol style="list-style-type: none"> <li>1. Level oven racks - side to side and front to back. The rack should be level side to side and level to 1/8" low at the front from the back.</li> <li>2. Keep pans used for baking batter separate from general purpose pans. If any pan shows a tendency to warp, remove it from the baking group.</li> </ol>
Excessive shrinkage.	<ol style="list-style-type: none"> <li>1. Failure to maintain water in oven.</li> <li>2. Roasting temperature too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place pan of water in bottom of oven measuring 12 x 20 x 1"</li> <li>2. Reduce temperature.</li> </ol>
Ignition light remains lit for more than 20 seconds after 3 trials.	No gas supply.	Turn oven off for 5 minutes before attempting to relight. Check gas supply valves to be sure they are open.

## SERVICE AND PARTS INFORMATION

To obtain service and parts information concerning this model, contact the Vulcan-Hart Service Agency in your area (refer to our website, [www.vulcanhart.com](http://www.vulcanhart.com) for a complete listing of Authorized Service and Parts depots).

# VULCAN

## INSTALLATION & OPERATION MANUAL

### SG SERIES GAS CONVECTION OVENS

*MODEL*

<i>SG4D</i>	<i>ML-114875</i>
<i>SG4C</i>	<i>ML-114876</i>
<i>SG6D</i>	<i>ML-114877</i>
<i>SG6C</i>	<i>ML-114878</i>



## **IMPORTANT FOR YOUR SAFETY**

**THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.**

**POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.**

### **IMPORTANT**

**IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.**

### **FOR YOUR SAFETY**

**DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**

**WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.**

**IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.**

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# Installation, Operation and Care of SG4D, SG4C, SG6D & SG6C GAS CONVECTION OVENS

**KEEP THIS MANUAL FOR FUTURE USE**

## **GENERAL**

Model SG4D, SG4C, SG6D and SG6C are equipped with a two-speed  $\frac{1}{2}$  HP (0.37 kw) electric motor, porcelain interior, and two 30,000 BTU/hr burners as standard equipment. A power level control permits variable burner input from 15,000 BTU/hr to 60,000 BTU/hr. Ovens are furnished with five nickel plated oven racks and have eleven rack positions. Oven cool switch allows rapid cool down. Oven interior is porcelain enamel on steel.

Models SG4D and SG6D are equipped with solid state temperature control and 60 minute timer (5 hour timer is optional).

Models SG4C / SG6C have different controls than SG4D / SG6D. Models SG4C and SG6C built before October 1999 had electronic Roast and Hold controls and a Gentle Bake feature. Models SG4C and SG6C built after October 1999 have a programmable control with individual programmable rack times.

Models SG6D and SG6C have a 4" (10 cm) deeper oven cavity than models SG4D and SG4C.

Two single ovens can be ordered with a stacking kit for mounting one oven on top of the other.

Independently opening doors with window are standard; independently opening doors without window or simultaneously opening doors with / without window are optional.

Standard ovens are equipped for 120 volt / 60 hertz / 1 phase electrical service. Available options for models SG4D / SG4C or SG6D / SG6C include: 208 volt / 60 hertz / 1 phase; 240 volt / 60 hertz / 1 phase electrical service; additional oven racks; stainless steel drip pan; casters; and an open stand with lower storage rack and legs or casters.

A set of four legs  $25\frac{3}{4}$ " (82.5 cm) are available with feet or with casters. Legs or casters included with stacking kit are 8" (20.3 cm) high.

Vulcan Gas Convection Ovens are produced with quality workmanship and material. Proper installation, usage and maintenance will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

## **INSTALLATION**

Before installing, verify that the electrical service and type of gas supply (natural or propane) agree with the specifications on the rating plate located behind the top trim panel on the front of the oven. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or Vulcan Company immediately.

### **UNPACKING**

This oven was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking, check for possible shipping damage. If the oven is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Carefully unpack oven and place in a work-accessible area as near to its final installed position as possible.

Do not use the doors or their handles to lift the oven.

## LOCATION

The equipment area must be kept free and clear of combustible substances.

When installed, minimum clearance from combustible construction must be 1" (2.5 cm) at the left side, 4" (10 cm) at the right side, and 6" (15 cm) at the rear. Minimum clearance from non-combustible construction must be 0" (0 cm) at the left side, 4" (10 cm) at the right side, and 6" (15 cm) at the rear. The oven may be stored on combustible floors.

The installation location must allow adequate clearances for servicing and proper operation.

The oven must be installed so that the flow of combustion and ventilation air will not be obstructed. Adequate clearance for air openings into the combustion chamber must be provided. Make sure there is an adequate supply of air in the room to allow for that required for combustion of gas at the oven burners.

Do not permit fans to blow directly at the oven. Wherever possible, avoid open windows next to the oven. Avoid wall-type fans which create air cross currents within the room.

## INSTALLATION CODES AND STANDARDS

In the United States, Vulcan gas ovens must be installed in accordance with: 1) State and local codes; 2) National Fuel Gas Code, ANSI-Z223.1 (latest edition), available from American Gas Association, 1515 Wilson Boulevard, Arlington, VA 22209; 3) NFPA-96, *Vapor Removal from Cooking Equipment* (latest edition); and 4) National Electrical Code, NFPA-70 (latest edition) available from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada, Vulcan gas ovens must be installed in accordance with: 1) Local codes; 2) CAN/CGA-B149.1 *Natural Gas Installation Code* (latest edition) or CAN/CGA-B149.2 *Propane Installation Code* (latest edition), available from Canadian Standards Association, 178 Rexdale Boulevard, Etobicoke, Ontario, Canada M9W 1R3; and 3) *Canadian Electrical Code*, CSA Standard C22.2 No. 3, *Electrical Features of Fuel Burning Equipment* (latest edition).

## INSTALLING BASIC OVEN

The basic oven must be installed on legs or be mounted on a modular stand. Installations on concrete bases or other supports restricting air circulation underneath the oven is not advisable and may void the warranty.

### Ovens Mounted on Casters

When the oven is mounted on casters, it must be installed with the casters supplied, a connector complying with either ANSI-Z21.69 (latest edition) or CAN/CGA 6.16 (latest edition), and a quick-disconnect device complying with either ANSI-Z21.41 (latest edition) or CAN1-6.9 (latest edition). Provide a restraining device for the gas line to limit movement of the oven without depending on the connector and/or any quick-disconnect device or its associated piping to limit oven movement. Remove two screws from the rear of the oven and install the tie down strap shipped with the casters using these screws (Fig. 1). Attach the gas line strain relief to the tie down strap at the rear of the oven (Fig. 1).

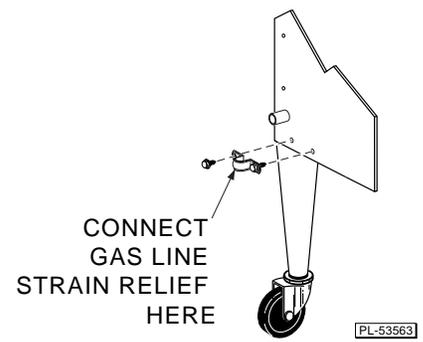


Fig. 1

If disconnection of the restraint is necessary, turn off the gas supply before disconnection. Reconnect the restraint prior to turning the gas supply back on.

Separate instructions for installing casters to the oven are included with the casters.

### Assembling the Legs to the Oven

The legs must be installed on the bottom of the oven. Position oven on its back, taking care not to scratch or damage it. The gas pipe connection protrudes beyond the back; provide for this when the oven is tipped back by resting it on suitable spacers (2 x 4's etc.).

Attach each of the four leg assemblies to the bottom of the oven with the 24 bolts and lockwashers (6 per leg). Carefully raise the oven to its normal position.

### Assembling the Stand to the Oven

Attach each of the four leg assemblies to the bottom of the oven with the 24 bolts and lockwashers (6 per leg). Carefully raise the oven to its normal position.

Attach the undershelf to the legs with 8 bolts and lockwashers (2 per leg).

Install the rack guides into the shelf at desired locations (for pan or flat rack), then attach the rack supports to the top end of the rack guides. Attach rack supports to the leg assembly by removing one middle bolt and reattaching back through the end holes in the rack support (Fig. 2).

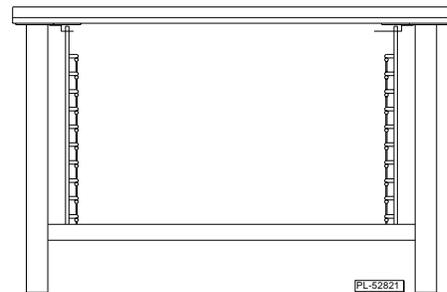
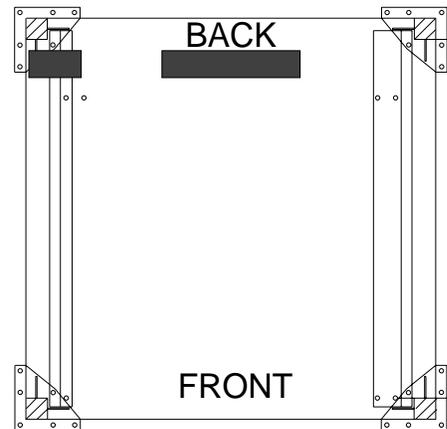


Fig. 2

### ASSEMBLING STACKED OVENS

Unpack the ovens and stack kit. Position the lower oven on its back for access to the oven bottom, taking care not to scratch or damage it. The gas pipe protrudes beyond the back; provide for this when the oven is tipped back by resting it on suitable spacers, 2 x 4's, etc. Attach the four leg assemblies with 24 bolts and lockwashers (6 per leg).

Place the lower oven (with legs or casters) on the floor and remove two  $\frac{7}{16}$ " (1.1 cm) diameter knockouts on each side of the top cover. Remove vent guard and discard it.

Move the oven to the installed position and place upper oven on top of lower oven using the locating studs.

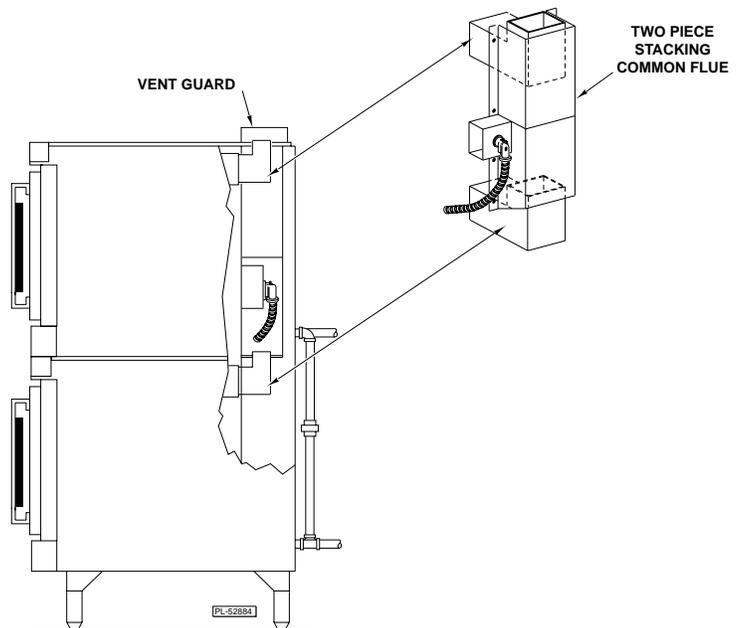


Fig. 3

Remove the rear panel from the upper oven. Install the two-piece stacking common flue (Fig. 3) with the four screws provided. Replace the upper oven's rear panel.

Connect the piping between the upper and lower oven. Pipe compound must be resistant to the action of propane gases. The manual gas valve, located behind the small door in the lower front panel, should remain off until all electrical and gas connections are made and the ovens are ready to be used.

## LEVELING

Make sure that the oven racks are level in the final installed position. If the oven is installed on legs, turn the adjustable feet in or out to level the oven front-to-back and side-to-side. If the oven is installed on casters, loosen set screws and turn casters in or out to level the oven front-to-back and side-to-side. Retighten set screws after leveling.

## ELECTRICAL CONNECTIONS

**WARNING:** ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE AND/OR OTHER LOCAL ELECTRICAL CODES.

**WARNING:** DISCONNECT THE ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE THAT YOU ARE WORKING ON THE CIRCUIT.

**WARNING:** APPLIANCES EQUIPPED WITH FLEXIBLE ELECTRICAL POWER SUPPLY CORD ARE PROVIDED WITH A THREE-PRONG GROUNDING PLUG. THIS PLUG MUST BE CONNECTED TO A PROPERLY GROUNDED THREE-PRONG RECEPTACLE. IF THE RECEPTACLE IS NOT THE PROPER GROUNDING TYPE, CONTACT AN ELECTRICIAN. DO NOT REMOVE THE GROUNDING PRONG FROM THE PLUG.

A wiring diagram is located on the inside of the right side panel.

### ELECTRICAL DATA

Model	Volts	Hertz	Phase	Maximum Protective Device AMPS
SG4D	120	60	1	15
SG4C	208	60	1	15
SG6D				
SG6C	240	60	1	15

Compiled in accordance with the National Electrical Code, NFPA-70 (latest edition).

## GAS CONNECTION

### GAS DATA

Model	Input BTU/Hr		Manifold Pressure	
	Natural	LP Gases (Propane)	Natural	LP Gases (Propane)
SG4D, SG4C, SG6D, SG6C	60,000	60,000	3.5" W.C. (0.9 kPa)	10" W.C. (2.5 kPa)

Gas supply connections and any pipe joint compound must be resistant to the action of propane gases. The oven is provided with a regulator integral to the gas solenoid valve and requires no external regulator. Location of the gas inlet is at the rear of the oven. Codes require that a gas shutoff valve must be installed in the gas line ahead of the oven.

Connect the oven(s) to the gas supply after leveling. The gas supply line must be at least the equivalent of  $\frac{3}{4}$ " (1.9 cm) iron pipe. Make sure the pipes are clean and free of obstructions, dirt, or pipe joint compound. The ovens are equipped with fixed burner orifices which match the installation elevation.

Natural gas pressure regulators are preset for 3.5" W.C. (Water Column) (0.9 kPa); propane gas pressure regulators are preset for 10" W.C. (2.5 kPa).

**WARNING:** PRIOR TO LIGHTING, CHECK ALL JOINTS IN THE GAS SUPPLY LINE FOR LEAKS. USE SOAP AND WATER SOLUTION. DO NOT USE AN OPEN FLAME.

After piping has been checked for leaks, all piping receiving gas should be fully purged to remove air.

## **TESTING THE GAS SUPPLY SYSTEM**

When gas supply pressure exceeds ½ psig (3.45 kPa), the oven and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of the system.

When gas supply pressure is ½ psig (3.45 kPa) or less, the oven should be isolated from the gas supply system by closing its individual manual shutoff valve during any pressure testing of the system.

## **ADJUSTMENTS**

### **Air Adjustment**

Although main burner air is adjusted before shipment, it should be checked at the time of installation. Excessive air will cause flames to lift off a burner when cold or may cause flash-back during normal cycling of the oven, particularly when propane gas is used.

Insufficient air will cause flames to burn with a yellow tip and result in carbon accumulation in the flame chamber and heat exchanger tubes.

Contact your local Vulcan-Hart authorized servicer if required.

## **VENT SYSTEM**

**DO NOT** obstruct the flow of flue gases from the flue located on the rear of the oven. It is recommended that the flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel.

Ovens may use an optional down draft diverter flue method. This optional down draft diverter must be purchased from the oven manufacturer and vented to the outside; otherwise, the installation of any such device will void all oven certifications and warranties. When the diverter is supplied, it may be connected to a Type "B" vent.

From the termination of the flue to the filters of the hood venting system, a minimum clearance of 18" (45.7 cm) must be maintained.

Information on the construction and installation of ventilating hoods may be obtained from *Vapor Removal from Cooking Equipment*, NFPA Standard No. 96 (latest edition), available from National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

# OPERATION

**WARNING:** THE OVEN AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING, OR PERFORMING ANY MAINTENANCE.

## CONTROLS — Models SG4D and SG6D (Fig. 4)

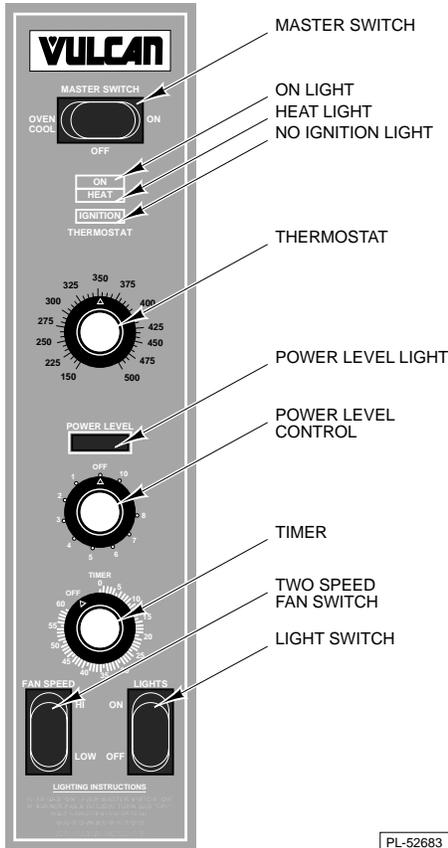


Fig. 4

PL-52683

**Master Switch** • Turns oven control circuits ON or OFF. • OVEN COOL allows the fan motor to run with the doors ajar to speed oven cooling.

**On Light (Amber)** • Lit when Master Switch is ON.

**Heat Light (White)** • Comes on and goes off when the burner cycles on and off.

**No Ignition Light (Red)** • Comes on if burner fails to ignite. When lighting the oven, the No Ignition Light flashes.

**Thermostat** • Controls oven temperature during cooking operation.

**Power Level Light** • When ON, indicates the power level control is operating in the range between the high and low settings.

**Power Level Control** • Selects the % heat input between OFF and 100%. Power Level Control must be on for oven to work.

Dial Setting	Percent of Full Input
10	100%
9	77%
8	73%
7	68%
6	60%
5	53%
4	45%
3	37%
2	28%
1	22%
OFF	0%

**Timer (1 Hr. or 5 Hr.)** • Selects the cooking cycle time. Buzzer sounds continuously when elapsed time counts down to 0; oven does not turn off. Turn timer dial OFF to silence buzzer. When oven is not in use, keep timer at OFF position.

**Two-Speed Fan Switch** • Adjusts air velocity in the oven.

**Light Switch** • Turns lights in the oven on or off.

## BEFORE FIRST USE

Before using the oven for the first time, it must be "burned in" to release any odors that might result from heating the new surfaces in the chamber.

1. Using a clean damp cloth, wipe the inside of the oven, including the racks.
2. Close the oven doors, push the Master Switch ON, turn the Thermostat to 300°F (149°C), and allow the oven to cycle for 6 to 8 hours before pushing the Master Switch OFF.

## **LIGHTING THE SG4D AND SG6D OVENS**

1. Turn the main gas supply ON.
2. Turn the gas control valve (located behind the small door on the lower front panel) ON.
3. Push the Master Switch ON and turn Thermostat to its maximum setting. Both the ON and HEAT lights should come on. If HEAT light is not on, make sure the oven door(s) are closed.
4. If the oven fails to light, the red No Ignition light will be lit and remain on. Push the Master Switch OFF. Turn gas off.
5. Wait 5 minutes before repeating Steps 1 through 4.

If the oven does not light after three trials, turn off the main gas valve and call a qualified servicer.

## **USING THE SG4D AND SG6D OVENS**

### **Preheating**

1. Select the proper rack arrangement for the product to be cooked. Refer to RACK ARRANGEMENTS, page 19.
2. Make sure the doors are closed.
3. Push the Master Switch ON. The amber ON light will come on, indicating that power to the oven is on.
4. Set the Power Level Control as desired. A power level control setting of 10 is recommended for preheating.
5. Set the two-speed Fan Switch to the desired setting.
6. Set the Thermostat as desired. The Heat light will come on and remain on until the oven reaches the set temperature (approximately 10 to 15 minutes for settings from 300°F (149°C) to 400°F (204°C). Refer to SUGGESTED COOKING GUIDELINES for temperatures and times for various products.
7. Prepare product and place in suitable pans. When the white Heat light goes off, the oven has reached the desired preheat temperature.

### **Cooking**

1. Open doors and load the product into the oven. Place pans in the center of the racks. Close the doors.
2. Set the Timer. After the preset time lapses, turn timer OFF to stop buzzer.
3. When product is done, open doors and carefully remove cooked product from the oven. Wipe up any spills.

### **End of Day**

1. Turn the Thermostat and Power Level Controls OFF.
2. Push Master Switch to OVEN COOL. Leave door ajar while the fan is on to cool the oven.
3. When oven has cooled sufficiently, push Master Switch OFF.
4. Turn gas valve (located behind panel) OFF and clean oven.

### **Extended Shutdown**

Repeat Steps 1 through 4 above. Unplug oven and shut off manual gas valve.

## CONTROLS — Models SG4C and SG6C Built before October 1999 (Fig. 5)

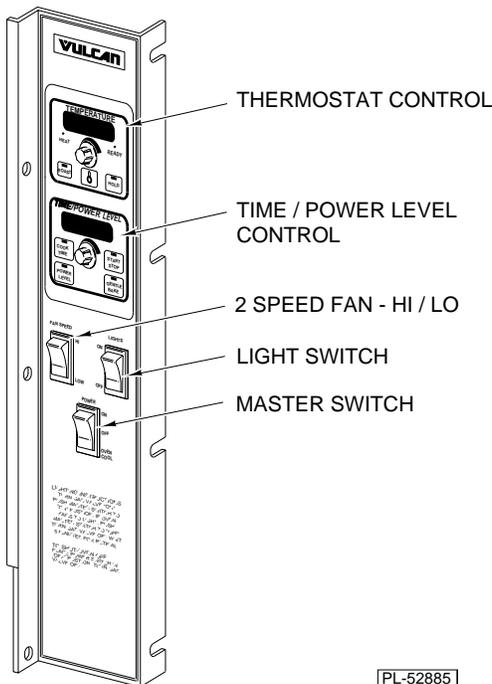


Fig. 5

### THERMOSTAT CONTROL

**Temperature Display** (When not timing product, displays set cook temperature while roast temperature LED is lit and the actual oven temperature for 10 seconds after the Thermometer Button is pushed).

1. The Time / Power Level Display will be lit while the actual temperature is being displayed.
2. The Time / Power Level Display indicator goes off when the display returns to the set temperature.

**Temperature Display** (When product is being timed, displays set hold temperature while Hold button LED is lit and the actual oven temperature for 10 seconds after the Thermometer Button is pushed).

1. The Time / Power Level Display indicator will be lit while the actual temperature is being displayed.
2. The Time / Power Level Display indicator goes off when the display returns to the set temperature.

**Temperature Knob** (When not timing product).

1. Sets the roast temperature when the roast indicator is lit. The roast indicator can be turned on by pressing the Roast Button.
2. Sets the hold temperature when the Hold indicator is lit. The hold indicator can be turned on by pressing the Hold Button.

**Temperature Knob** (When product is being timed).

1. Sets the roast temperature when the roast indicator light is lit. The roast indicator cannot be changed by pressing the Roast Button.
2. Sets the hold temperature when the hold indicator light is lit. The roast indicator cannot be changed by pressing the Roast Button.

**Roast Mode Indicator** (If On and not timing product, indicates the roast mode is selected).

1. The displayed temperature settings will be for the roast temperature except for time that the actual temperature indicator is lit.
2. Rotating the Thermostat Knob will change the roast set temperature.
3. When the power level indicator is lit, the roast power setting will be displayed and can be adjusted. Power level settings are changed using the Time / Power Level Knob.
4. Cook time can be adjusted using the Time/Power Level Knob, provided the power level indicator is not lit.
5. The time displayed is the initial set cook time.
6. It is possible to select the Hold mode using the Hold Button.

**Roast Mode Indicator** (If On and product is being timed, indicates the roast mode is selected).

1. The displayed temperature settings will be for the roast temperature except for the time that the actual temperature indicator is lit.
2. Rotating the Temperature Knob will change the roast set temperature.

3. When the power level indicator is lit, the roast power setting will be displayed and can be adjusted. Power level settings are changed using the Time / Power Level Knob.
4. Cook time cannot be adjusted using the Time / Power Level Knob, if the power level indicator is not lit.
5. It is not possible to select the Hold mode using the Hold Button.
6. The time displayed is the time counted down from the initial cook time set.

### **Roast Button**

1. Lights the roast mode indicator. Refer to Roast Mode Indicator, page 11.
2. Selects the Roast mode.
3. Has no effect if timing in the Hold mode.

**Temperature Button and Indicator Light** • Displays the actual oven temperature for about eight seconds, then returns temperature display to the set temperature.

**Heat Light** • When lit, indicates that power is being supplied to the burners.

**Ready Light** • Will be lit any time the actual temperature is within plus or minus 5 F° (3 C°) of the set temperature for the current mode.

### **TIME / POWER LEVEL CONTROL**

**Time / Power Level Display** (While not timing product).

1. Displays the set cook time if Cook Button indicator is lit.
2. Displays cook power level setting if the Power Level indicator is lit and in the roast mode (Roast Button indicator is lit).
3. Displays hold power level setting if the Power Level indicator is lit and in the hold mode (Hold button indicator is lit).

**Time / Power Level Display** (While product is being timed).

1. Displays the counted down cook time if the Cook Time indicator is lit and in the Roast mode.
2. Displays the counted up hold time if the Hold Button indicator is lit and in the Hold mode. Count-up of hold time does not begin until cavity temperature reaches the hold temperature.
3. Pressing the Power Level Button will cause the power level to be displayed and / or adjusted. If in the Roast mode, the roast power level is displayed and can be adjusted. If in the Hold mode, the hold power level is displayed and can be adjusted.

**Time / Power Level Display Colon** • Flashes if product is timing; does not flash if not timing product.

**Cook Time Button** • Switches the Time / Power Level display to display time.

**Cook Time Indicator** • Indicates that the Time / Power Level Display is displaying time.

### **Time / Power Level Knob**

1. Sets the cook time when not already timing and the Cook Time indicator is lit.
2. Sets the power level if the Power Level indicator is lit.
  - a. Sets the roast power level if the Roast Button indicator is lit.
  - b. Sets the hold power level if the Hold Button indicator is lit.

**Power Level Button** • Causes the Power Level indicator to turn on for about eight seconds, after which it will return to indicate the time display mode.

1. Roast power level can be changed if the Roast Button indicator is lit.
2. Hold power level can be changed if the Hold Button indicator is lit.
3. Press the Cook Time Button to return to time display.

**Power Level Indicator** • When lit, indicates the power level can be changed.

1. Displays roast power level when in the Roast mode (Roast Button indicator is lit).
2. Displays hold mode power level when in the hold mode (Hold Button indicator is lit).

**Gentle Bake Button** • Use when cooking delicate product, such as strudel, muffins, cupcakes, meringue pies, etc., to keep product from forming waves on the top. Toggles between the selection of gentle bake mode and no gentle bake mode.

**Gentle Bake Mode** • The Gentle Bake button is lit to indicate you are in Gentle Bake mode.

1. The fan cycles with the heat while in the roast mode and timing product at the power level selected for the roast mode. For instance, ON 15 seconds, OFF 15 seconds at 50% power; On 6 seconds, OFF 14 seconds at 20% power.
2. The fan stays on while the heat cycles in hold at the power setting selected for the hold mode.
3. The fan stays on while heat cycles at 100% power when not timing.
4. Can be switched at any time.

**Not in Gentle Bake Mode** • The Gentle Bake button is not lit.

1. Fan stays on while the heat cycles while in the Roast mode and timing product at the power level selected for roast mode.
2. Fan stays on while heat cycles in Hold at the power setting selected for the hold mode.
3. Fan stays on while heat cycles at 100% power when not timing.
4. Can be switched at any time.

**Stop / Start Button** • Press once to start the timer when cooking a product if a cook time has been set. Press a second time to stop the timer after it has been started.

**Hold Button** • Press to select Hold mode and to specify a hold temperature. The Hold button is lit to indicate you are in Hold mode. Blank temperature ---°F (---°C) indicates there is no hold mode.

1. When not timing, allows setting / enabling a hold mode setting of ---°F (---°C), meaning no hold will take effect.
2. Any other temperature means that when the actual cook time has ended, the oven will enter the Hold mode and use the hold temperature.

**Two-Speed Fan Switch** • Adjusts air velocity in the oven.

**Light Switch** • Turns lights in the oven on or off.

**Master Switch** • Turns oven control circuits ON or OFF; OVEN COOL allows the fan motor to run with the doors ajar to speed oven cooling.

## BEFORE FIRST USE

Before using the oven for the first time, it must be "burned in" to release any odors that might result from heating the new surfaces in the chamber.

1. Using a clean damp cloth, wipe the inside of the oven, including the racks.
2. Close the oven doors, push the Master Switch to the ON position, turn the Thermostat to 300°F (149°C) and allow the oven to cycle for 6 to 8 hours before pushing the Master Switch to OFF.

## **LIGHTING THE SG4C AND SG6C OVENS**

1. Turn gas supply ON (if required).
2. Turn the gas control valve (located behind the small door on the lower front panel) ON.
3. Push Master Switch to the ON position and set Thermostat to its maximum setting. The Heat light should come on. If Heat light is not on, make sure door is closed.
4. If the oven fails to light, push Master Switch to the OFF position. Wait 5 minutes before retrieval.

## **USING THE SG4C AND SG6C OVENS**

★ Refer to SUGGESTED COOKING GUIDELINES for Time, Temperature and Power Level settings.

### **Preheating**

1. Push Master Switch ON. The Heat light will come on, indicating that power is on.
2. Set Thermostat as desired.
3. Set Power Level as desired.
4. Prepare product and place in suitable pans. When Ready light comes on, oven has reached desired preheat temperature.

### **Cooking**

1. Open doors and load the product into the oven. Place pans in the center of the racks. Close doors.
2. Set Roast temperature and time. Set Hold temperature and Gentle Bake time, if desired. Gentle Bake time may not be more than Roast time. Gentle Bake will cycle the fan during the set time at the beginning of the cooking cycle.
3. Set Power Level Control as desired.
4. Press the Start/Stop button to start the cooking cycle.
5. At the end of the cooking cycle, the buzzer will sound continuously if the Hold mode is OFF. If the Hold mode is ON, there will be a short beep at the beginning of Second Stage Cooking (oven temperature will begin to decline to the Hold temperature), and a long beep (20 seconds) at the end of the cooking cycle. Refer to ROAST AND HOLD OPERATION.
6. When the product is done, open the doors and carefully remove the cooked product from the oven. Wipe up any spills.

### **End of Day**

1. Push Master Switch to OVEN COOL. Leave door ajar while the fan is on to cool the oven.
2. When oven has cooled sufficiently, push Master Switch OFF and clean the oven.

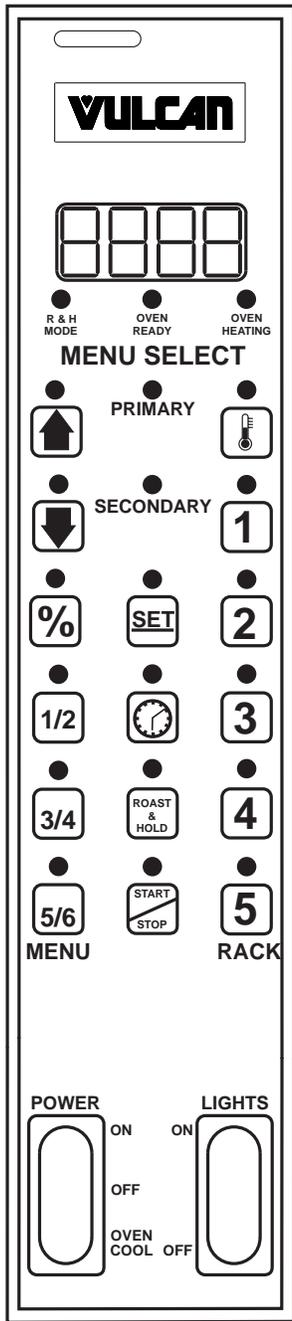
### **Extended Shutdown**

Push Master Switch OFF. Turn the gas valve OFF.

## **ERROR MESSAGES — SG4C AND SG6C OVENS**

- E-01 High limit error. Contact Vulcan authorized service.
- E-02 Low limit error. Contact Vulcan authorized service.
- E-03 High ambient temperature, 215°F (102°C). Contact Vulcan authorized service.
- E-04 Low ambient temperature, 32°F (0°C). Let control warm up after cold storage.
- E-05 Ignition failure. After trying ignition 3 times, contact Vulcan authorized service.
- E-06 Thermocouple probe open. Contact Vulcan authorized service.

**CONTROLS — Models SG4C and SG6C Built after October 1999**



PL-53504



Always displays [HR:Min] when setting the Time.  
 Displays [HR:Min] if the countdown time is more than 1 Hour.  
 Displays [Min:Sec] if the countdown time is less than 1 Hour.  
 Displays Temperature in °F.



R & H  
MODE

Indicates the oven is in the Roast and Hold Mode.



OVEN  
READY

Indicates the oven is preheated and ready for cooking.



OVEN  
HEATING

Indicates the oven is preheating.



PRIMARY

Primary indicates Menu Items 1, 3, or 5.



SECONDARY

Secondary indicates Menu Items 2, 4, or 6.



Up arrow increases; Down arrow decreases — a displayed Time or Temperature value if arrow keys are lit.



Adjusts the oven heating rate or Power Level from 20 to 100 %.



TEMPERATURE: Use with SET to set the oven Temperature.



SET: Use with Time or Temperature.



TIME: Use with SET to manually set the cooking Time.



Selects Roast and Hold mode; also selects Low Fan Speed.



Press once to start; press a second time to stop.



Select Menu Cook Times. Press once for Primary (1, 3, or 5). Press a second time for Secondary (2, 4, or 6). See next page.



Rack Buttons select individual Menu / Rack # Cook Times — once programmed.

## MANUALLY SETTING THE COOK TIME, TEMPERATURE, AND POWER LEVEL

### To Set the Cook Time

- Press the SET button. Press the TIME button. *Tine* displays to indicate TIME.
- Use the Up and Down Arrow keys to increase or decrease the displayed Cook Time (HR:min).
- Press the SET button again to save the Time setting in the computer.

### To Set the Temperature

- Press the SET button. Press the TEMPERATURE button; *StPt* displays to indicate Setpoint.
- Use the Up and Down Arrow keys to increase or decrease the displayed Temperature value.
- Press the SET button again to save the Temperature setpoint in the computer.

### To Set the Power Level

- Press the SET button. Press the % button.
- Use the Up and Down Arrow keys to increase or decrease the displayed Power Level value.
- Press the SET button again to save the desired Power Level value in the computer.

### To Start Cooking

- Press the START / STOP button.
- The manual Cook Time counts down to 00:00. Displays [HR:Min] above 1 hour; [min: sec] below.
- The buzzer will sound. To silence the buzzer, press the START / STOP button again.
- \* *The control retains the manual settings for Cook Time, Temperature, and Power Level.*

## TO PROGRAM MENU ITEM and RACK # Cook Times

Factory Preset and Programmable Cook Times are shown in the table, below:

MENU SELECTION	MENU ITEM	FACTORY PRESET MENU ITEM COOK TIME	PROGRAMMABLE VALUES					
			MENU ITEM COOK TIME	RACK 1 COOK TIME	RACK 2 COOK TIME	RACK 3 COOK TIME	RACK 4 COOK TIME	RACK 5 COOK TIME
1 / 2 Primary	1	10 min.						
1 / 2 Secondary	2	15 min.						
3 / 4 Primary	3	20 min.						
3 / 4 Secondary	4	25 min.						
5 / 6 Primary	5	30 min.						
5 / 6 Secondary	6	35 min.						

The Primary indicator light with Menu 1 / 2 selects Menu Item 1 (Factory Preset Cook Time = 10 minutes). The Secondary indicator light with Menu 1 / 2 selects Menu Item 2 (Factory Preset Cook Time = 15 minutes). Similarly, for Menu Buttons 3 / 4 or 5 / 6. Any Menu Item Cook Time can be changed using the procedure below. Rack # Cook Times may be programmed if desired but are not required.

### To Change the Time Setting for any Menu Item (1 – 6)

- To enter program mode, press and hold the Up and Down arrow buttons until PrOG displays.
- ⌘ Select the Menu Item to be programmed (1 – 6). *Tine* displays to indicate TIME. Use the Up and Down arrow buttons to increase or decrease the Menu Item's COOK TIME. Repeat this step for any other Menu Items.
- Press the START / STOP button; LOC displays. Press the START / STOP button a second time to save the Menu Item(s)' COOK TIME(s).
- Press the START / STOP button once to begin cooking (with the Menu Item's Cook Time). To exit, press the START / STOP button a second time.

### To Program Individual Rack # Cook Times for a Menu Item

- To enter program mode, press and hold the Up and Down arrow buttons until PrOG displays.
- Select the Menu Item to be programmed (1 – 6); *Tine* displays to indicate TIME.
- ⌘ Then select the Rack # (1 – 5). [*t 1*] indicates Rack #1; [*t 2*] indicates Rack #2; ... [*t 5*] indicates Rack #5. Use the Up and Down arrows to increase or decrease the COOK TIME for any Rack #.
- Press the START / STOP button; LOC displays. Press the START / STOP button a second time to save the Menu / Rack #'s COOK TIME(s).
- To exit program mode, press START / STOP twice.

## Always Set the Temperature Before Setting the Time

- Press the SET button. Press the TEMPERATURE button; *StPt* displays. Use the Up and Down Arrow keys to increase or decrease the Temperature. To save, press the SET button again.

At startup, the display will initially show a *GROWING BAR*. When the oven temperature reaches the Set Point, the set temperature displays. The READY light is lit, the HEAT light goes out, and the oven is ready for you to select the Cook Time, Menu Item Cook Time, or Menu / Rack # Cook Time.

## Starting a Timed Cycle On All Racks

- Open the door, *door* will display.
  - Place the desired product on any of the five racks.
  - Close the door. The display should return to the set temperature or the *GROWING BAR*.
  - Press the Menu Key once for Primary or twice for Secondary to select a Menu Item Cook Time.
  - Press the START / STOP button \*.
  - The timer will count down the time remaining for the Menu Item Cook Time.
  - When the time has counted down to 00:00, the buzzer will sound and all Rack Buttons will flash.
  - To silence the buzzer, press the START / STOP button.
- \* *Pressing the START / STOP button after making a menu selection will time all racks for the selected menu time.*

## Starting a Timed Cycle Using Programmed Individual Menu / Rack # Cook Time(s)

- After the set Temperature is reached, open the door; *door* displays. Place product(s) in oven.
- Close the door. The display returns to the set Temperature or the *GROWING BAR*.
- Select the Menu Item (once for Primary or twice for Secondary) and the Rack # to select the Menu / Rack # Cook Time. If using simultaneous cook times, select the other Menu / Rack #'s.
- The timer selects the Rack # with the shortest Cook Time and counts down to 00:00.
- The buzzer sounds and the Rack # flashes. To silence the buzzer, press the flashing Rack #.
- Open the door; *door* displays; remove the finished product; close the door.
- ⌘ The next shortest Cook Time displays, its Rack # flashes and the time counts down to 00:00.
- The buzzer sounds. Press the flashing Rack #. Open the door, *door* displays. Remove the product, close the door. Repeat from ⌘ until all Rack #'s are done.

## To Display the Actual Oven Temperature

- Press and hold the Temperature button for 3 seconds to display Actual Oven Temp until released.

## To End a Cooking Cycle

At the end of a cooking cycle, the alarm will sound. To silence the alarm and end a Menu Item cooking cycle, press START / STOP. To silence the alarm and end a Rack # cooking cycle, press the Rack #.

To cancel a cooking cycle which might have been started in error, press and hold the Rack button to be terminated and press START / STOP at the same time.

## Door and Timing

Opening the door while loading additional product will interrupt all timing functions until the door is closed and the timer resumes. For example, if a product time had diminished to 1 minute and the door was opened for 30 seconds and then closed, the timer would still show 1 minute.

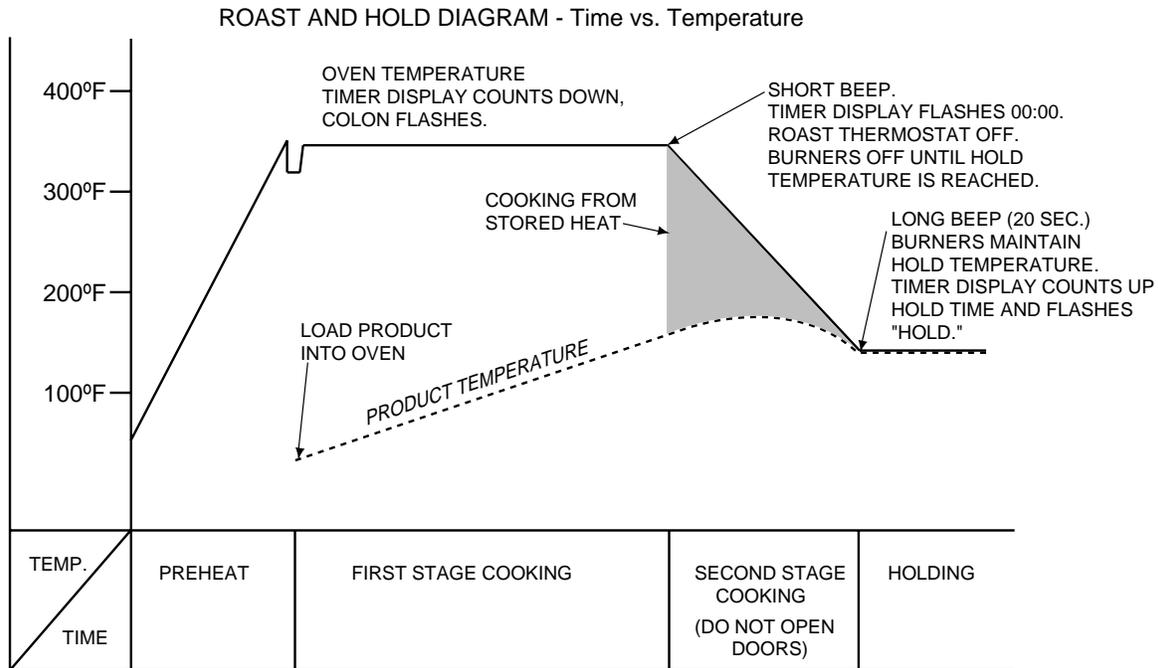
## SETTING THE OVEN FOR ROAST & HOLD

- Press the Roast & Hold button to select Roast & Hold.
- Set the first stage Temperature and the Cook Time as described in: MANUALLY SETTING THE TEMPERATURE AND COOK TIME. Press START / STOP to begin cooking.
- \* *The HOLD Temperature is preset by the computer control at 150°F (66°C).*
- \* *The LOW FAN SPEED is present during Roast & Hold. Use R&H to select LOW FAN SPEED.*

## ROAST AND HOLD OPERATION

Roast and Hold cooks the product in two stages. During First Stage Cooking, the oven temperature is regulated by the Roast thermostat for the amount of time set on the Timer. After the lapsed time counts down to 00:00, Second Stage Cooking begins. During Second Stage Cooking, the burners are off as the temperature in the oven declines to the Hold Temperature. The doors should remain closed during Second Stage Cooking.

When the Hold Temperature is reached, cooking is done. The Time Display counts up the Hold time and flashes "Hold." Temperature in the oven will be maintained at the Hold temperature until the oven is turned off.



PL-51607

## CONSERVING ENERGY

- Turn off unused equipment.
- Adjust menu patterns and cooking/baking schedules for optimum equipment use.
- Reduce thermostat settings in slack periods since gas equipment heats up and recovers quickly.
- Preheat only to required cooking temperature for specific food — not higher.
- Do not open the oven door unless absolutely necessary.
- Keep area around the oven door clean and free of food particles.
- Any obstruction that prevents the door from closing completely will adversely affect oven efficiency.

## COOKING GUIDELINES

Recommended temperatures, times, number of racks, and power level control settings are intended as a guide only. Adjustments must be made to compensate for variations in recipes, ingredients, preparation, and personal preference in product appearance.

The oven does not require special recipes. Excellent results can be obtained from any good commercial recipe with reduced cooking times.

## RACK ARRANGEMENTS

All models are supplied with five racks and have a maximum operating capacity of six racks per oven. The eleven-position rack supports provide for flexibility and proper rack spacing.

The following arrangements are recommended. The position numbers are in numerical sequence starting at the bottom (Fig. 6).

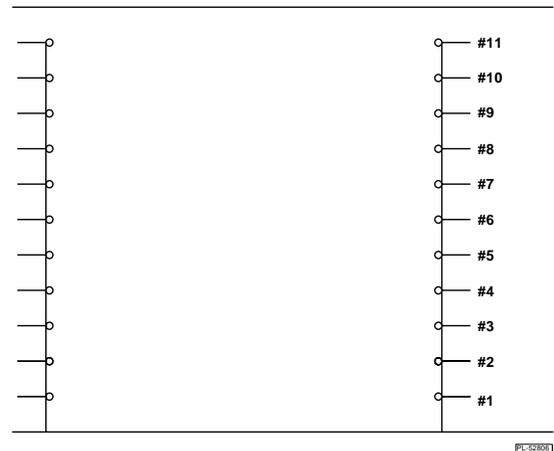
**Arrangement #1** — Five racks in Positions #2, #4, #6, #8, and #10 are for oven broiling, cookies or reconstitution of frozen lunches at maximum capacity. These are also the recommended positions for general baking in sheet pans with products not over 2½" (6.4 cm) high.

**Arrangement #2** — Four racks in Positions #1, #4, #7, and #10 are for general baking in sheet pans, muffin pans, pie or cake tins, and pudding pans 3½" (8.9 cm) high with products not over 4" (10.2 cm) high. This arrangement can also be used for casseroles or meat dishes in #200 series food service pans 12" x 20" x 2½" (30.4 x 50.8 x 6.4 cm).

**Arrangement #3** — Three racks in Positions #1, #5, and #9 are for baking breads or cakes in loaf or tube pans and high meringue pies. This arrangement can also be used for casseroles, meat dishes or roasting in pans up to 5½" (14 cm) deep with products up to 6" (15.2 cm) high.

**Arrangement #4** — Two racks in Positions #1 and #6 are for roasting turkeys and other roasts up to 7" (17.8 cm) high. With the rack in Position #1, there is a limited amount of space for a water pan.

When mixed loads or partial loading is regular practice, some users have developed other rack arrangements to suit their particular needs.



RACK POSITION

Fig. 6

## RECOMMENDED TEMPERATURE, TIME, AND POWER LEVEL SETTINGS FOR ROASTING

Meat roasting is most satisfactory at temperatures of 225°F to 325°F (107°C to 162°C) for beef, lamb, poultry, and ham; 325°F (162°C) for fresh pork as recommended by USDA and American Meat Institute.

A 12" x 20" x 1" (30.4 x 50.8 x 2.5 cm) pan with water may be placed in the oven bottom to supply humidity to reduce shrinkage. Add water during roasting as needed.

Roasting pans should be no deeper than necessary to hold drippings, usually 2" to 2½" (5.1 to 6.4 cm).

Cooking time and shrinkage may vary with roasting temperature, cut, grade of meat, and degree of doneness. Smaller cuts will generally show greater time savings than larger cuts at a given temperature.

### ROASTING TEMPERATURE CHART

PRODUCT	TEMP °F (°C)	POWER LEVEL		APPROXIMATE TIMES
		SG4D,SG6D	SG4C, SG6C	
<b>Standing Rib Roast</b> — Oven Ready	250 (121)	10	100%	3 to 4 Hrs. — Rare 4 to 4½ Hrs. — Med.
<b>Rolled Rib Roasts</b> — 20 to 22 lb. (9.1 to 10 kg)	275 (135)	10	100%	4 Hrs. — Med.
<b>Veal Roast</b> — 15 lb. (6.8 kg)	300 (148)	10	100%	3 Hrs. — Med. Well
<b>Turkeys</b> — 15 to 20 lb. (6.8 to 9.1 kg)	300 (148)	10	100%	3 Hrs.
<b>Meat Loaf</b> — 8 to 10 lb. (3.6 to 4.5 kg)	350 (176)	10	100%	45 to 60 Minutes

**RECOMMENDED TEMPERATURE, TIME, AND POWER LEVEL SETTINGS FOR BAKING**

PRODUCT	TEMP. °F (°C)	TIME IN MINUTES	NO. OF RACKS	POWER LEVEL SETTINGS	
				SG4D, SG6D	SG4C, SG6C
<b>Cakes</b>					
Sheet Cake 18x26x1" (45.7x66x2.5 cm)					
Scaled 4½ to 6 lb. (2-2.7 kg) / pan	325-360 (162-182)	20 to 23	5	7 to 4	68 to 45%
Scaled 6 to 7½ lb. (2.7-3.4 kg) / pan	335-350 (168-177)	22 to 25	4	6 to 4	60 to 45%
Sheet Cake 18x26x2" (45.7x66x5 cm)					
Scaled 10 to 12 lb. (4.5-5.4 kg) / pan	300-325 (149-162)	25 to 35	4	6 to 4	60 to 45%
Or, two 12x18x2" (30.5x45.7x5 cm)					
Scaled 5 to 6 lb. (2.3-2.7 kg) / pan	300-325 (149-162)	25 to 35	3	6 to 4	60 to 45%
<b>Angel Food or Sponge Cakes</b>					
Sheet Pans 18x26x1" (45.7x66x 2.5 cm)					
Scaled 5 to 6 lb. (2.3 to 2.7 kg) / pan	300-325 (149-162)	15 to 20	4	3	37%
<b>Loaf or Tube Pans</b>	315-340 (157-171)	20 to 30	3-4	4 to 1	45 to 22%
<b>Cupcakes</b>	350-400 (177-204)	6 to 12	4	6 to 4	60 to 45%
<b>Frozen Fruit Pies</b>	350-375 (177-190)	30 to 45	4	6 to 4	60 to 45%
			3	4	45%
<b>Pumpkin or Custard Pies</b>	300-350 (149-177)	30 to 45	4	6 to 4	60 to 45%
			3	4 to 3	45 to 37%
<b>Cobblers</b>					
12x18x2" (30.5x45.7 x 5 cm) or	350-400 (177-204)	30 to 45	4	6	60%
12x20x2½" (30.5x50x6.3 cm)			3	4	45%
<b>Meringue Pies</b>	350-425 (177-218)	6 to 10	4	6 to 4	60 to 45%
			3	6 to 4	60 to 45%
			2	6 to 4	60 to 45%
<b>Fruit Turnovers</b>					
18x26x1" (45.7x66x2.5 cm) Pans	350-375 (177-190)	15 to 25	5	6 to 4	60 to 45%
<b>NOTE:</b> Pies and cobblers; fruit, custard, and pumpkin pies in pie pans should be placed on 18x26x1" (46x66x2.5 cm) pans.			4	6 to 4	60 to 45%
			3	4 to 3	45 to 37%
<b>Cookies</b>					
Rolled or Pressed	350-400 (177-204)	6 to 12	5	6 to 3	60 to 37%
			4	4 to 3	45 to 37%
			3	3	37%
Drop	350-400 (177-204)	6 to 15	5	6 to 4	60 to 45%
			4	4 to 3	45 to 37%
			3	3	37%
<b>Brownies</b>	350 (177)	12 to 20	5	6 to 4	60 to 45%
			4	4 to 3	45 to 37%
<b>Yeast Breads (after proofing)</b>					
<b>Rolls</b> — 1 oz.	350-400 (177-204)	5 to 10	4	6 to 4	60 to 45%
			3	4	45%
1½ to 2½ oz.	350-400 (177-204)	8 to 15	4	6 to 4	60 to 45%
			3	4 to 3	45 to 37%
<b>Loaf Bread</b> — 1 lb. (453.4 g)	325-375 (162-190)	20 to 40	3(30) Pans	4	45%
			2(20) Pans	3	37%

**RECOMMENDED TEMPERATURE, TIME, AND POWER LEVEL SETTINGS FOR BAKING**

PRODUCT	TEMP. °F (°C)	TIME IN MINUTES	NO. OF RACKS	POWER LEVEL SETTINGS	
				SG4D, SG6D	SG4C, SG6C
<b>Sweet Rolls &amp; Danish Pastry</b>	325-375 (162-190)	5 to 15	4	6 to 4	60 to 45%
<b>Biscuits</b> — Rolled ½" (1.3 cm) Thick	350-400 (177-204)	5 to 15	3	4 to 3	45 to 37%
			4	6 to 4	60 to 45%
<b>Muffins</b>	325-375 (162-190)	6 to 18	3	4 to 3	45 to 37%
			4	4	45%
<b>Corn Bread</b> 18x26x1" (46 x 66 x 2.5 cm) Pan, 5-7 lb. (2.3-3.2 kg) per pan	335-400 (168-204)	10 to 20	4	6 to 4	60 to 45%
			4	6 to 4	60 to 45%
<b>Corn Muffins</b> 18x26x2" (46 x 66 x 5 cm) Pan, 8-20 lb. (3.6-9 kg) per pan	335-400 (168-204)	15 to 25	4	6 to 4	60 to 45%
			4	6 to 4	60 to 45%

**REHEATING PREPARED FOODS**

<b>Frozen French Fries</b>	400-450 (204-232)	6 to 8	4	8 to 6	73 to 60%
			2 to 3	7 to 4	68 to 45%
<b>Frozen TV Dinners</b>	350-400 (177-204)	10 to 12	4 to 5	10 to 6	100 to 60%
			2 to 3	7 to 4	68 to 45%
<b>Frozen Entrees</b> ¾" - 1" (1.9 – 2.5 cm) Thick	300-350 (149-177)	10 to 20	2 to 5	10 to 6	100 to 60%
<b>Frozen Meals</b> — 8 oz. Foil Pkg.	350-400 (177-204)	20 to 30	2 to 5	10	100%

**OVEN BROILING OR FRYING**

<b>Fish Sticks &amp; Portions</b> Frozen Breaded — 1 oz.	350-400 (177-204)	6 to 10	4	8 to 6	73 to 60%
			2 to 3	7 to 4	68 to 45%
	2½ to 3 oz.	350-375 (177-190)	8 to 15	4	7 to 6
<b>Chicken Pieces</b> Broiled or Oven Fried	350-375 (177-190)	8 to 15	4	7 to 6	68 to 60%
			2 to 3	6 to 4	60 to 45%
2 to 2½ lb. (.9 to 1.1 kg) bird	375-425 (190-218)	8 to 15	4 to 5	8 to 6	73 to 60%
			2 to 3	7 to 4	68 to 45%
2½ to 3 lb. (1.1 to 1.4 kg) bird	350-400 (177-204)	15 to 25	4	7 to 6	68 to 60%
			2 to 3	6 to 4	60 to 45%
<b>Lobsters</b> — 1 to 1½ lb. (.45 to .7 kg)	400-450 (204-232)	8 to 14	2 to 4	10 to 6	100 to 60%
<b>Lobster Tails</b> — Frozen ½ to ¾ lb. (.2 to .3 kg)	350-400 (177-204)	10 to 15	2 to 4	8 to 6	73 to 60%
<b>Hamburger Patties</b> 8 per lb., Med. to Well Done	400-450 (204-232)	5 to 6	4 to 6	8 to 7	73 to 68%
			2 to 3	7 to 6	68 to 60%
6 per lb.	400-450 (204-232)	7 to 10	4 to 6	10 to 8	100 to 73%
			2 to 3	8 to 7	73 to 68%
4 per lb.	375-450 (190-232)	8 to 12	4 to 6	10	100%
			2 to 3	8 to 7	73 to 68%

## CASSEROLES & MISCELLANEOUS PRODUCTS

PRODUCT	TEMP. °F (°C)	TIME IN MINUTES	NO. OF RACKS	POWER LEVEL SETTINGS	
				SG4D, SG6D	SG4C, SG6C
<b>Food Service Pans</b>					
2" to 3" (5.1 to 7.6 cm) deep	325-375 (162-190)	15 to 25			
3" to 4" (7.6 to 10.1 cm) deep	325-375 (162-190)	20 to 35	2 to 4	7 to 4	68 to 45%
<b>Ramekins or Foil Pans</b>	350-400 (177-204)	5 to 6	4 to 5	10 to 7	100 to 68%
Up to 1½" (3.8 cm) deep			2 to 4	7 to 6	68 to 60%
Frozen		10 to 15			
<b>Baked Potatoes</b>					
120 count per 50 lb. (22.7 kg)	400-450 (204-232)	20 to 25	2 to 5	8 to 6	73 to 60%
100 count per 50 lb. (22.7 kg)	400-450 (204-232)	25 to 40	2 to 5	7 to 6	68 to 60%
80 count per 50 lb. (22.7 kg)	400-425 (204-218)	30 to 45	2 to 5	7 to 4	68 to 45%
<b>Pizzas</b> — Frozen or With Prebaked Crust	425-475 (218-232)	5 to 10	4	8 to 6	73 to 60%
			2 to 3	6 to 4	60 to 45%
<b>"Grilled" Cheese Sandwiches</b>	400-425 (204-218)	8 to 10	4	8 to 6	73 to 60%
			2 to 3	7 to 4	68 to 45%

### SPECIAL PROCEDURES FOR BAKING

When baking yeast breads, cooking starts immediately in the convection oven. Yeast breads do not usually rise as much in a convection oven as in a conventional oven. Therefore, it is usually necessary to allow fuller proof, 2½ to 3 times increase in volume for best results.

When baking pies in your convection oven, 3 or 4 pies should be put on an 18x26" sheet or bun pan. This procedure helps the bottom crust to bake, makes handling easier, and reduces the possibility of boilover spoiling the appearance of the pies on the lower racks.

### COOKING HINTS

Forced air convection cooking is faster than conventional oven cooking, and therefore, overcooking is more common. Do not cook products faster than is practical for the best results. Since forced convection supplies heat to the surface of the product, the thicker or more massive a product is for its type, the longer it will take to absorb enough heat to cook.

If four racks of a product cook properly at 350°F (177°C) with a power level control setting of 6 in 15 minutes, one rack should also cook properly at 350°F (177°C) in 15 minutes. However, since with one rack you have only a ¼ load, not as much heat is needed. By changing the power level control to 1, the single rack load will receive a proportionally smaller amount of heat. It will take the same time at the same temperature as the four-rack load and be cooked to the same browned and finished consistency.

The oven will cook or bake full or partial loads at standard recipe temperatures when the power level control is properly set. As with any oven, you may wish to use a temperature of up to 25 F° (14 C°) higher or lower than the recipe, for the particular product result that you prefer.

When established, note convection oven times and power level control settings on your recipe.

### HIGH LIMIT SWITCH

All ovens are equipped with a high limit switch which senses the temperature of the oven to prevent overheating. The high limit switch operates independently and will automatically shut the oven down should the primary control fail. If this situation occurs, DO NOT attempt to bypass the high limit. Shut the oven down and contact your local Vulcan authorized service agency.

## **CLEANING**

**WARNING:** DISCONNECT THE ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE OVEN BEFORE CLEANING.

Allow the oven to cool before cleaning.

### **Snorkel Tube**

The Snorkel tube opening should never be blocked. If usage of aluminum foil is a common practice during the operation of this oven, be sure to periodically check the Snorkel tube for foil particles. The Snorkel tube should be kept clean at all times for proper operation of the oven. Clean this tube with standard oven cleaner at least once a week. Be sure to thoroughly clean all cleansing solution off the tube before using the oven again. It is also recommended that the oven be run at 400°F (204°C) for 20 minutes before using to burn off any cleaning solution that was not thoroughly rinsed from the tube.

### **Daily**

Exterior stainless steel oven panels should be cleaned with a damp cloth. Stubborn soil may be removed with detergent. (DO NOT USE "DAWN".) Rinse thoroughly and wipe dry with a soft clean cloth. Clean porcelain oven interior daily with soap or detergent and water. Rinse thoroughly and wipe dry with a soft clean cloth. Nickel plated racks and rack supports may be removed for cleaning.

For burned-on foods and grease which resist simple soap and water cleaning, an abrasive cleanser (scouring powder) mixed into a paste may be used. Apply with stainless steel wool or sponge, always rubbing with the "grain." This treatment is equally effective for "heat tint" (slightly darkened areas caused by oxidation). Again, remember to rub in the direction of the polish lines. Rinse with clear water and dry with a soft cloth.

Do not use scouring powder on the glass window; it will scratch and fog the glass.

After processing some foods at low temperatures, odors may linger in the oven. These odors may be cleared by setting the thermostat at 500°F (260°C) and the power level control at 10 and allowing the oven to run unloaded for 30 to 45 minutes.

## **MAINTENANCE**

**WARNING:** THE OVEN AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING, OR PERFORMING ANY MAINTENANCE.

**WARNING:** DISCONNECT THE ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH INDICATING THAT YOU ARE WORKING ON THE OVEN BEFORE PERFORMING ANY MAINTENANCE.

### **LUBRICATION**

The fan motor comes with sealed bearings and requires no lubrication.

### **VENT**

Periodically check the flue, when the oven is cool, to be sure it is free of obstructions.

### **REPLACING LAMPS**

- Allow oven to cool.
- Remove all racks by pulling forward, lifting up and out.
- Unscrew glass dome from light body.
- Replace the bulb.
- Reassemble glass dome and racks.

# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SUGGESTED CORRECTIVE
Uneven browning or overcooking at edges of pans.	<ol style="list-style-type: none"> <li>1. Power level control setting too high.</li> <li>2. Too many racks used.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce power level control setting. (Refer to Cooking Guidelines.)</li> <li>2. Reduce number of racks used.</li> </ol>
Product pulling to edge of pan or spilling.	<ol style="list-style-type: none"> <li>1. Oven out of level.</li> <li>2. Sheet pans warped.</li> </ol>	<ol style="list-style-type: none"> <li>1. Level oven, on the racks, from side to side and front to back. The rack should check dead level side to side and from level to 1/8" low at the front from front to back.</li> <li>2. Keep pans used for baking batter separate from general purpose pans. If any pan shows a tendency to warp, remove it from the baking group.</li> </ol>
Product overbrowning before done or shrinking and overbrowning at edges.	Power level control setting too high.	Reduce power level control setting. (Refer to Cooking Guidelines.)
Excessive shrinkage.	<ol style="list-style-type: none"> <li>1. Failure to maintain water in oven.</li> <li>2. Roasting temperature too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place pan of water (approx. 12"x20"x1" (30.5x51x2.5 cm) in bottom of oven.</li> <li>2. Reduce temperature.</li> </ol>
No Ignition Light remains lit for more than 20 seconds after 3 trials (Models SG4D and SG6D), or "E-05" appears in the display after 3 trials (Models SG4C and SG6C).		<ol style="list-style-type: none"> <li>1. Turn oven off for 5 minutes before attempting to re-light.</li> <li>2. Check gas supply valves to be sure they are open.</li> <li>3. Check electrical power source and connections.</li> </ol>

## SERVICE AND PARTS INFORMATION

To obtain service and parts information concerning this oven, contact the Vulcan Service Agency in your area (refer to listing supplied with the oven), or Vulcan-Hart Company Service Department at the address or phone number shown on the front cover of this manual.

Following you will find instructions on how to shut down your Vulcan cooking equipment for an extended period, and how to safely restart equipment after idle.

Always refer to the procedures as instructed in the Installation & Operation manual for your specific model. Manuals may be found by visiting the Vulcan website and clicking on RESOURCES at the top right of the home page.

Always remember that cooking equipment and its parts are hot. Use care when operating, cleaning or performing maintenance.

For additional product resources, please visit <https://www.vulcanequipment.com/>.

## CONVECTION OVENS

### EXTENDED SHUTDOWN – ALL MODELS

1. A thorough cleaning of the oven, both interior and exterior.
  - a. Clean and clear the rear air intake.
  - b. Check exhaust vent for blockage.
  - c. Wipe down the interior and door glass with a damp rag.
    - i. Cool down oven.
    - ii. Remove oven racks.
    - iii. Lift rack guides on either side of oven off of holders. Racks and guides may be run through dishwasher while oven cavity is being cleaned.
    - iv. Clean with soap and water using non-metallic scouring pad, if necessary. If dirt and grease have accumulated, a mild ammonia solution or commercial oven cleaner such as Easy-Off or Dow may be used.
  - d. Wipe down the exterior and door glass with a damp rag.
    - i. Cool down oven.
    - ii. Wipe exposed, cleanable surface when cool with a mild detergent and hot water. Dry thoroughly with a clean cloth.
    - iii. Stubborn stains may be removed by using a non-metallic abrasive pad, rubbing in the direction of the metal's grain. If necessary, for particularly heavy deposits, you may mix a thin paste of water and scouring powder and apply it with a sponge. Be careful to apply light pressure and remember to rub only in the direction of the grain in the metal.
    - iv. The control panel surface is easily cleaned with hot water, soap and a soft cloth. Do not use hard abrasives, solvent type materials or metallic scouring pads since these will scratch or cloud the surface.
    - v. Never spray the perforated areas or control panel with steam or water, as this will allow moisture into the control cavity, which could damage electrical components.
  - e. Maintain fan area.
    - i. If aluminum foil is routinely used to wrap food or cooking vessels during oven operation, the following preventative maintenance must be performed:
      1. Remove oven racks and rack guides.
      2. Check blower wheel and air baffle for particles of aluminum foil or food deposits.
2. Inspect the oven for any signs of excessive wear and tear and order replacement parts (e.g. door glass assemblies, door roller latch, burner tube and spark igniter).
3. Shut off gas supply.
4. Shut off electric supply.
5. Leave oven doors slightly open.



Model VC5G  
Shown with optional casters



## **CONVECTION OVENS** *(CONTINUED)*

### **RESTART FROM EXTENDED SHUTDOWN – ALL MODELS**

1. Schedule a qualified gas service technician to be onsite upon restart if kitchen has been down for more than 30 days.
  - a. Check all gas equipment in kitchen for gas leaks.
2. Check the entire kitchen and all gas equipment for gas leaks prior to starting any equipment.
3. Clean the unit.
4. Inspect the unit: look for rusted tubes, frayed wires, check door latches
5. Follow the Hobart Start-Up guide.



## SG4 & SG6 Series Full Size Gas Convection Ovens

SG4D

ML-114875

SG4C

ML-114876

SG6D

ML-114877

SG6C

ML-114878

### - NOTICE -

This Manual is prepared for the use of trained Hobart Service Technicians and should not be used by those not properly qualified.

This manual is not intended to be all encompassing. If you have not attended a Hobart Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Hobart Service Technician.

The reproduction, transfer, sale or other use of this manual, without the express written consent of Hobart, is prohibited.

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# SERVICE UPDATES

## SERVICE UPDATES

- BLOWER AND MOTOR Starting at Serial Number 481913936
- OVEN DOORS (INDEPENDENT DOORS) Starting at Serial Number 481907146
- INTERIOR LIGHTS (Rear Mounted, Round)
- INTERIOR LIGHTS (Side Mounted, Square)
- FLAME SENSE CURRENT TEST
- DOOR ADJUSTMENT
- WIRING DIAGRAMS
- SCHEMATICS
- COMPONENT DESCRIPTION

## TIS DOCUMENT LIST - SG4D AND SG6D

### SERVICE TAB

Document Title	Document Type
SG4D and SG6D Service Manual	Service Manual

### SERVICE TAB (Multimedia)

Document Title	Document Type
Repair Flood-Damaged Food Equipment	Service Bulletin
SG4C, SG4D, SG6C, SG6D Gas Snorkel Convection Ovens Installation and Operation	I &O Manual
Fundamentals of Gas	Service Instructions
SG4 Gas Convection Oven Sequence of Operation	Service Video
TSB 1037A Hobart to Vulcan "Common" Model Cross Reference List	Technical Service Bulletin (TSB)
SG4 and 6 Convection oven High Limit Replacement	Technical Service Bulletin (TSB)
SG4 Gas Convection Oven Sequence of Operation	Service
Rating Plate Locations on Current Vulcan-Hart/Wolf Range Equipment	Service Bulletin
SG4 & SG6 Series Full Size Gas Convection Ovens	Service Manual
TSB 1133 SG4 & SG6 Series (Vulcan) Gas Convection Ovens Infinite Switch Troubleshooting	Technical Service Bulletin (TSB)
TSB 1301 Onwatch Quicklook 72 for Gas Cooking Equipment	Technical Service Bulletin (TSB)
Vulcan SG4 & SG6 Series Infinite Switch - Part # 411503-1, -2	Technical Service Instruction (TSI)

### PARTS TAB (Multimedia)

Document Title	Document Type
Part Catalog for SG Series Gas Snorkel Convection Ovens After 8/6/04	Parts Catalog
Part Catalog for SG Series Gas Snorkel Convection Ovens Prior 8/6/04	Parts Catalog

<b>DIAGRAMS TAB</b>	
<b>Document Title</b>	<b>Document Type</b>
HGC5, DGC5, VC4G, WKGD Series	Wiring Diagram

# GENERAL

## INTRODUCTION

Procedures in this manual will apply to all models unless specified. Pictures and illustrations can be of any model unless the picture or illustration needs to be model specific. All models are equipped with a two-speed 1/2 HP electric motor, porcelain interior and two 30,000 BTU/hr burners as standard equipment. A power level control permits variable burner input from 15,000 BTU/hr to 60,000 BTU/hr.

Models SG4D and SG6D are equipped with solid state-controls and a 60-minute timer (a 5-hour timer is optional). Models SG4C and SG6C have a computer control with built-in Roast & Hold.

Models SG6D and SG6C have a 4" deeper cavity than models SG4D and SG4C.

## INSTALLATION

Generally, installations are made by the dealer or contracted by the dealer or owner. Detailed installation instructions are included in the Installation & Operation Manual which is sent with each unit.

## OPERATION

Detailed operation instructions are included with each oven.

## CLEANING

Detailed cleaning procedures are included in the Installation & Operation Manual for the appropriate model.

## LUBRICATION

Motor bearings are sealed and prelubricated.

## SPECIFICATIONS

### Electrical Data

Model	Volts	Hertz	Phase	Amps
SG4D	120	60	1	7.5
SG4C	208	60	1	3.6
SG6D	240	60	1	3.75
SG6C				

### Gas Data

Model	Input BTU/hr		Manifold Pressure	
	Natural	LP Gas	Natural	LP Gas
SG4D				
SG4C				
SG6D	60,000	60,000	3.5" W.C. (0.9 kPa)	10" W.C. (2.2 kPa)
SG6C				

## TOOLS

### Standard

- Hand tools (standard set).
- VOM with AC current tester (any quality VOM with a sensitivity of at least 20,000 ohms per volt can be used).
- Gear puller to remove blower.

### Special

- Temperature tester (thermocouple type).
- Manometer

# REMOVAL AND REPLACEMENT OF PARTS

## COMPONENT LOCATION

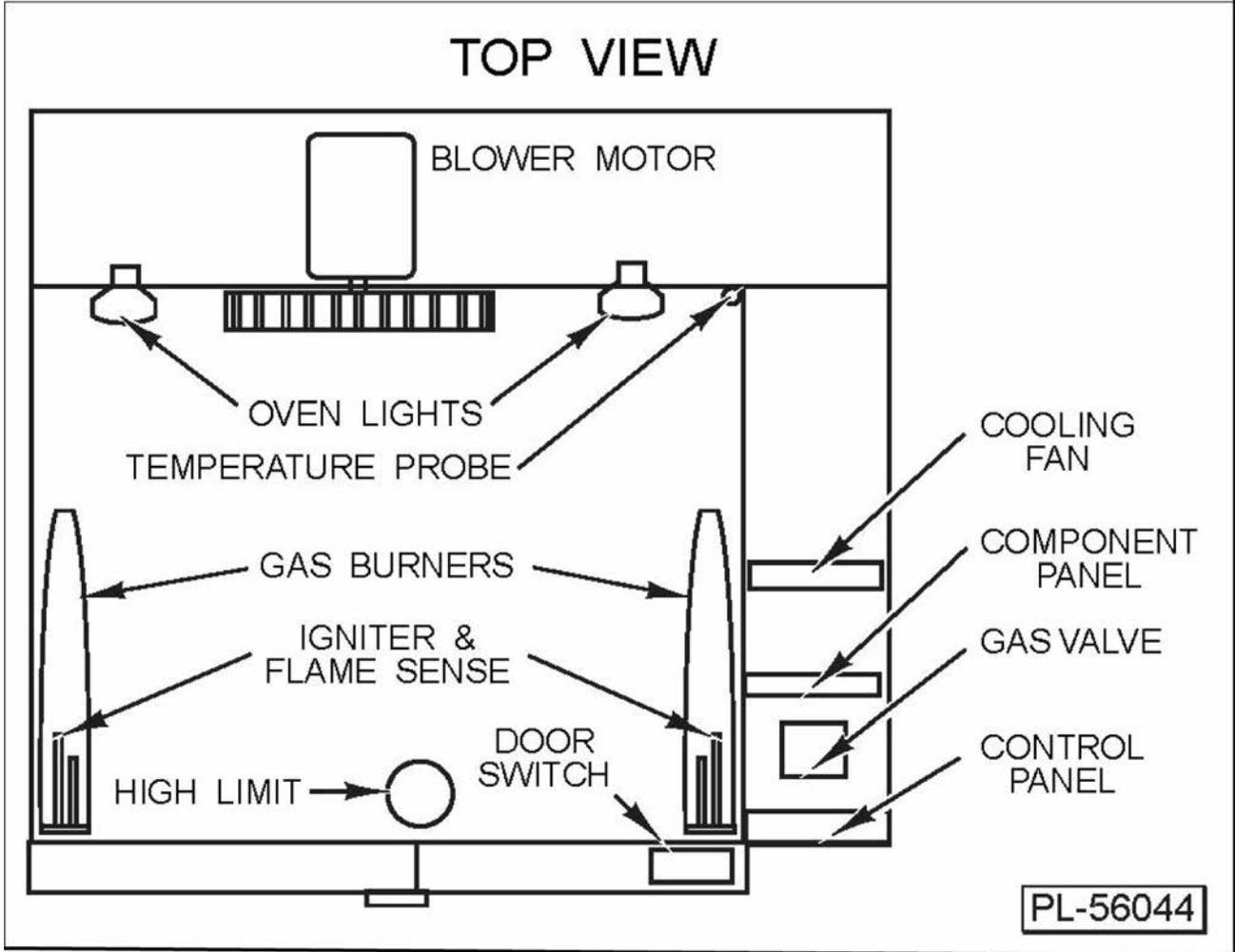


Fig. 1

## COVERS AND PANELS



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

**Top Front Cover**

1. The top front cover is secured with four screws, two on each side of cover. Remove these screws, then remove the cover from the oven.

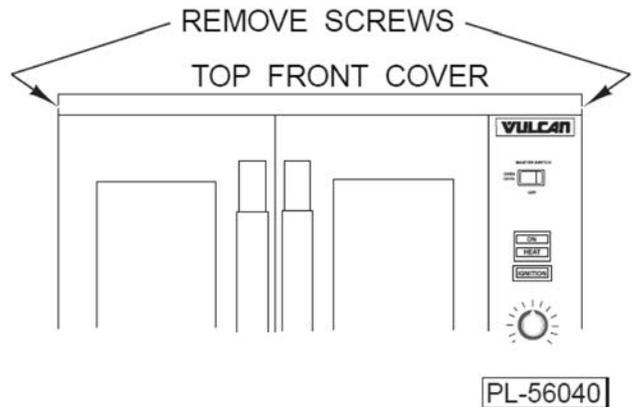
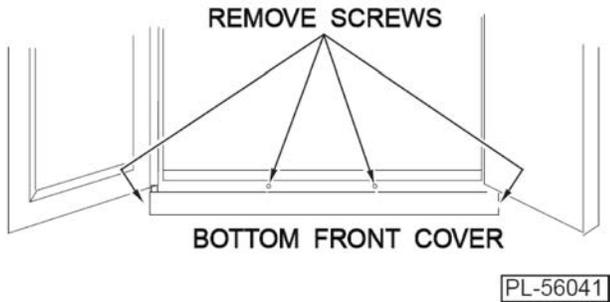


Fig. 2

- Reverse the procedure to install.

**Bottom Front Cover**

- The bottom front cover is secured with six screws, two on each side of cover and two on the top. Remove these screws then remove the cover from the oven.

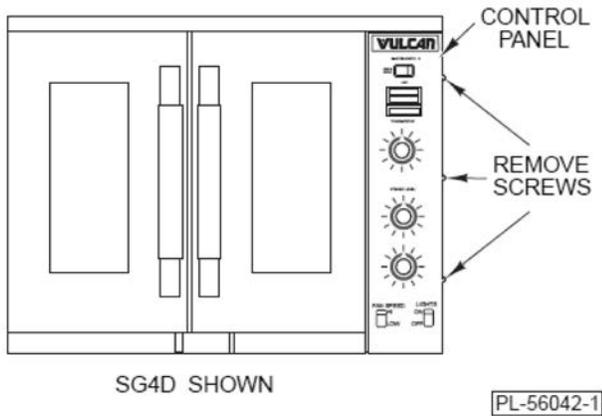


**Fig. 3**

- Reverse the procedure to install.

**Control Panel**

- Remove three screws on the right side which secure the control panel. Pull the panel away from the oven.

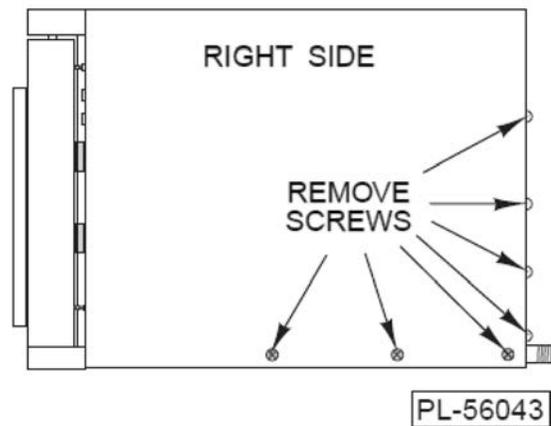


**Fig. 4**

- Disconnect the temperature probe leads from the solid state temperature controller.
- Unplug the wire harness connector to the control panel components.
- Reverse the procedure to install.

**Right Side Panel**

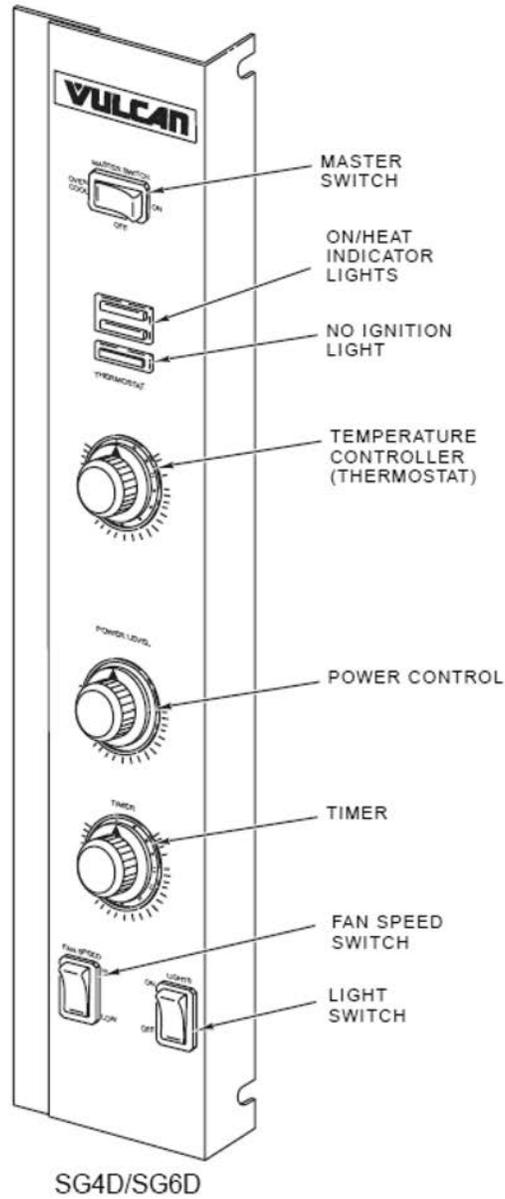
- Remove the screws that secure the right side of the control panel.
- Remove the remaining screws securing the right side panel.
- Pull the right-side panel out at the bottom then down to remove.



**Fig. 5**

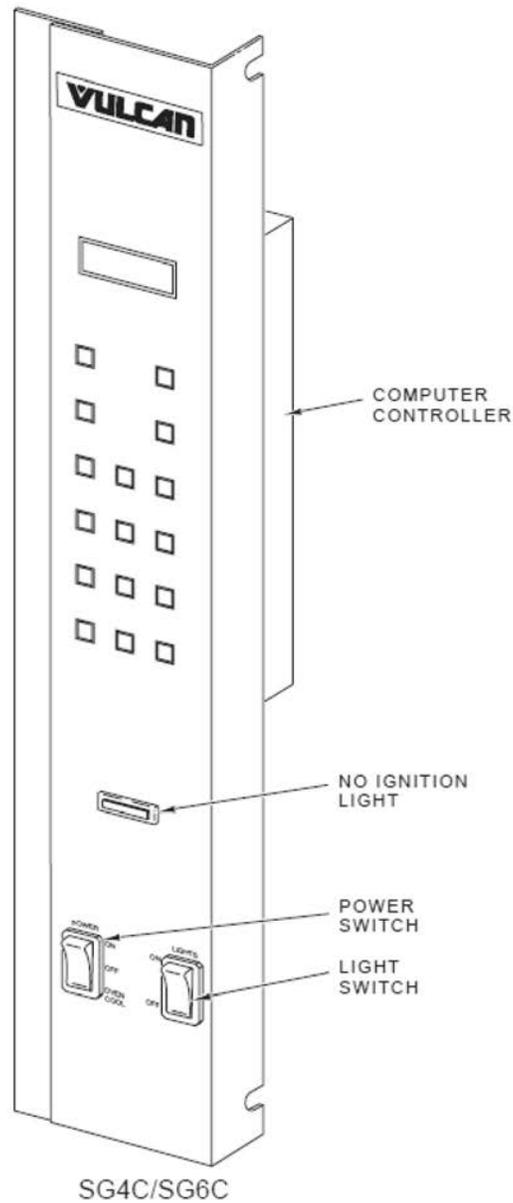
- Reverse the procedure to install.

## CONTROL PANEL COMPONENTS



PL-56045-1

Fig. 6



PL-56046

Fig. 7

### Procedure



### **WARNING**

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

1. Remove the control panel as outlined under Covers and Panels.
2. Remove the component being replaced.
3. Reverse the procedure to install the new component, then check oven for proper operation.

## COMPONENT PANEL COMPONENTS

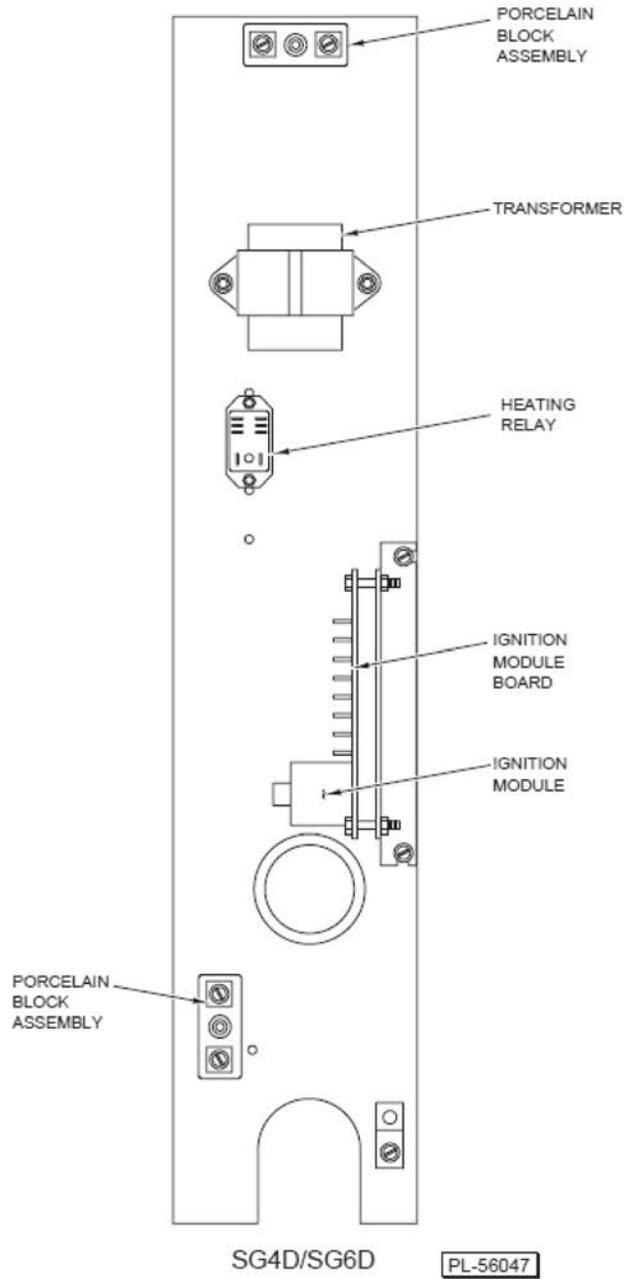
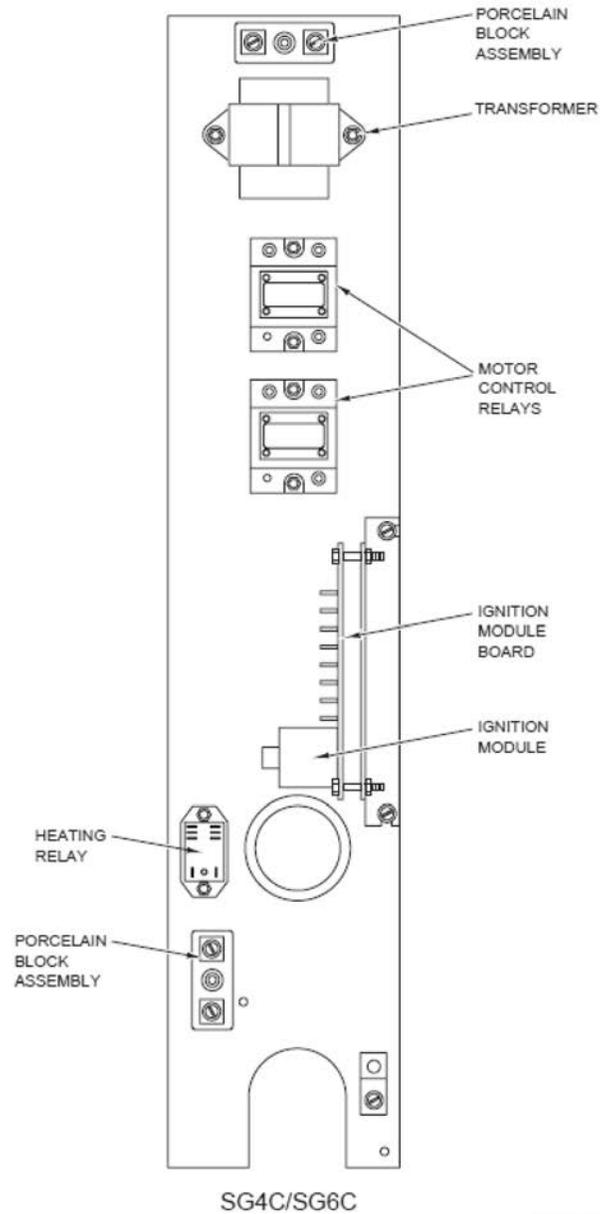


Fig. 8



PL-56048

Fig. 9

Procedure



**WARNING**

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

1. Remove the right side panel as outlined under Covers and Panels.
2. Disconnect the wire leads to the component being replaced.
3. Remove the component.
4. Reverse the procedure to install the new component and check oven for proper operation.

## TEMPERATURE PROBE



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the right-side panel as outlined under Covers and Panels.
2. Disconnect probe leads from the solid state temperature controller on the SG4D/SG6D or the computer controller on the SG4C/SG6C.
3. Remove the racks and right rack support.
4. Remove the upper and lower door seals.

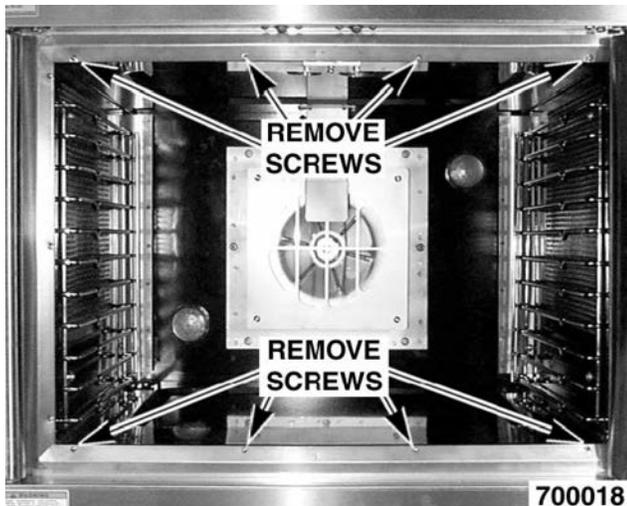


Fig. 10

5. Loosen the three screws securing the right side air scoop to the rear heat exchanger. Rotate the air scoop off of the heat exchanger tube into the oven cavity.
6. Remove the screws that secure the perforated side panel and lift out.

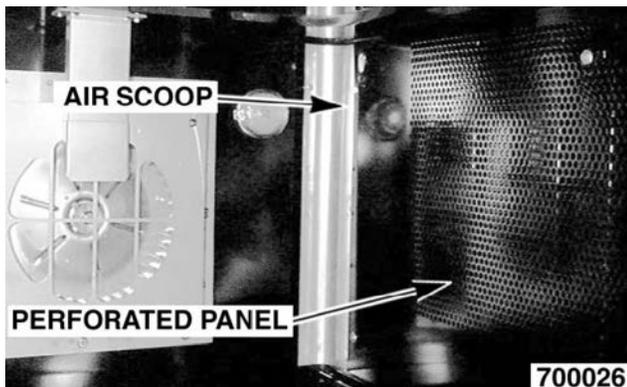


Fig. 11

7. Remove the probe from the bracket(s).

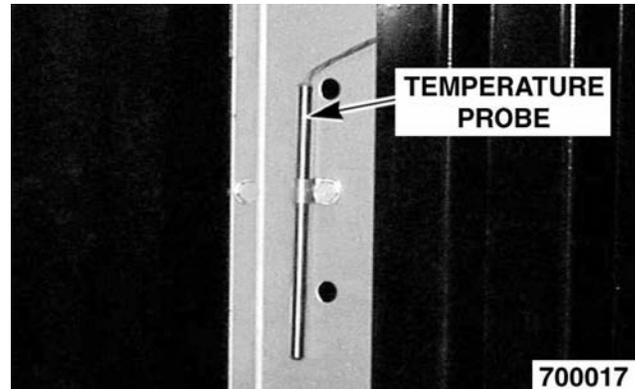


Fig. 12

### SG4C/SG6C Temperature Probe Shown

8. Push the probe through the oven wall and into the control panel area.
9. Reverse the procedure to install the new probe.
10. Calibration:
  - A. SG4D/SG6D: Adjust the temperature controller as outlined under Solid State Control Calibration.
  - B. SG4C/SG6C: Adjust the computer controller as outlined under Computer Controller and/or Computer Controller Calibration in Service Procedures and Adjustments.

## GAS BURNERS



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### ⚠ WARNING

Shut off the gas before servicing the oven.

1. Remove the lower front cover as outlined under Covers and Panels.
2. There are two burners located on the bottom left and right side of the oven. Disconnect the ignition cable and the flame sense lead from each burner.

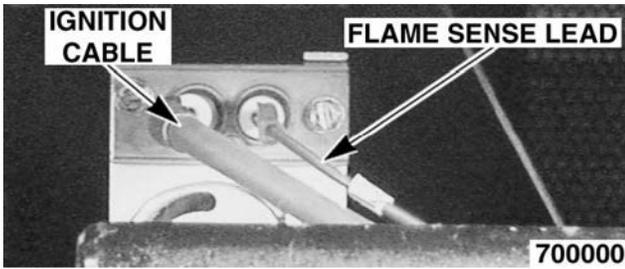


Fig. 13

3. Remove the bolts securing the gas manifold and place manifold aside.



Fig. 14

4. Grasp the burner and lift out.



Fig. 15

5. Reverse the procedure to install and check for proper operation.
  - A. Ensure the spacers are in place on the ignition wires. The spacers are intended to keep the ignition wires from laying flat on the oven chassis.
  - B. Ensure that the bracket on the back of the burner is inserted into the slot at the rear of the burner chamber.

**NOTE:** Check the flame current by following the Flame Current Measurement procedures under the Procedures and Adjustments Section of this manual.

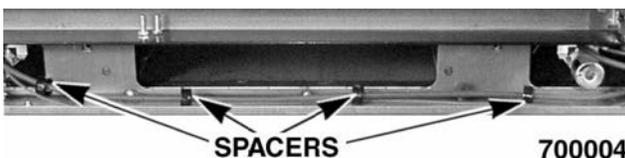


Fig. 16

## GAS ORIFICE



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### ⚠ WARNING

**Shut off the gas before servicing the oven.**

1. Remove the lower front cover as outlined under Covers and Panels.
2. Remove the bolts securing the gas manifold and place manifold aside.



Fig. 17

3. There are two gas orifices on the manifold. Remove each orifice and replace with the correct orifice for the given altitude as needed.

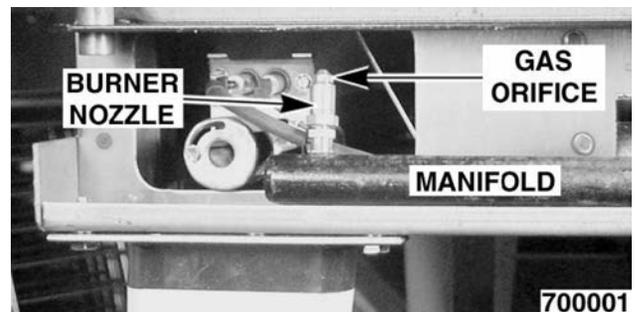


Fig. 18

4. Reverse the procedure to install manifold and check for proper operation.

## GAS SOLENOID VALVE



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### ⚠ WARNING

**Shut off the gas before servicing the oven.**

1. Remove the control panel and the right side panel as outlined under Covers and Panels.

2. Disconnect the lead wires.
3. Disconnect compression fittings from the valve.



Fig. 19

4. Loosen the bolts securing the valve and bracket assembly, then remove the screws securing the valve to the bracket.

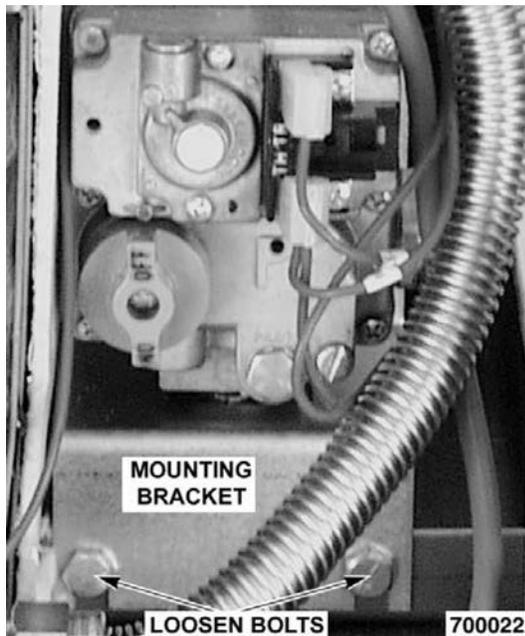


Fig. 20

5. Reverse the procedure to install the replacement gas valve.

**⚠ WARNING**

All gas joints disturbed during servicing must be checked for leaks. Check with soap and water solution (bubbles). Do not use an open flame.

6. Verify gas pressure as outlined under the Gas Pressure Adjustment in Service Procedures and Adjustments. Check for proper operation.

**IGNITION CONTROL MODULE**



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the right side cover as outlined under Covers and Panels.
2. Loosen the screws securing the mounting bracket to the component panel and remove the bracket.

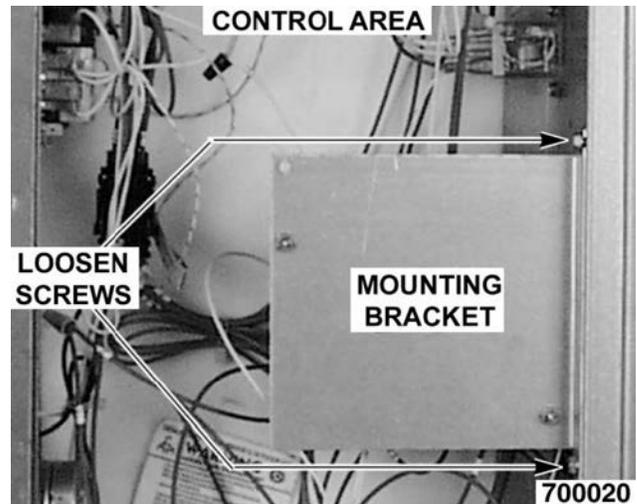


Fig. 21

3. Disconnect the lead wires and igniter cables from the ignition module board.

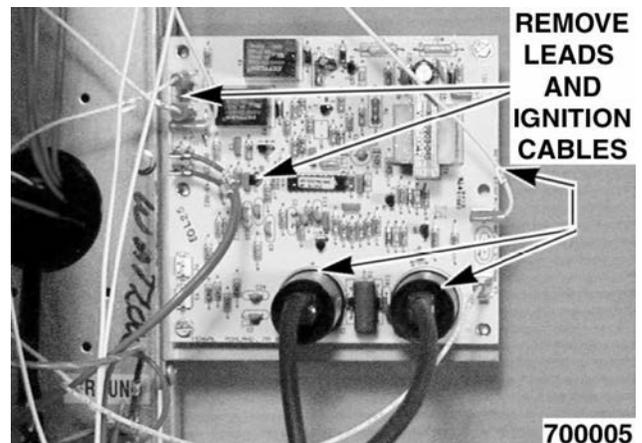


Fig. 22

4. Remove the ignition module board from the mounting bracket.

5. Reverse the procedure to install the replacement ignition module board.
6. Check for proper operation.

## SPARK IGNITER AND FLAME SENSE



### ⚠ WARNING

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

### ⚠ WARNING

**Shut off the gas before servicing the oven.**

1. Remove the two gas burners as outlined under Gas Burners.
2. Remove the screws securing the igniter and flame sense to each burner. Remove the assembly.

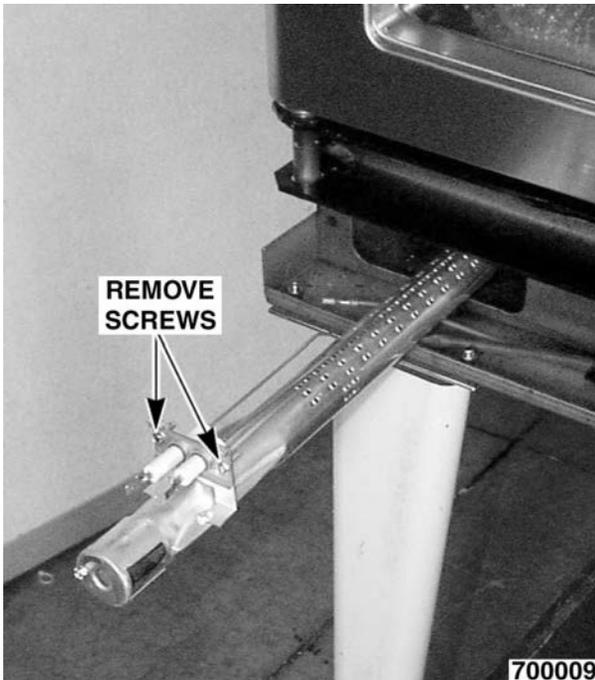


Fig. 23

3. The spark gap is 1/8" from the inside of the spark rod to the inside to the ground rod. The ground rod (the end of the spark) is 1/8" above the burner. If the gap is not correct or poor sparking is occurring, then adjust accordingly.

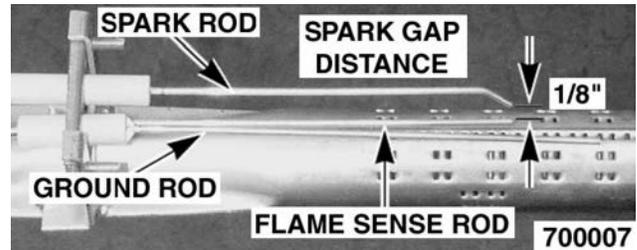


Fig. 24

4. Reverse the procedure to install the assembly and check for proper operation.

## BLOWER AND MOTOR Ending at Serial Number 481913935



### ⚠ WARNING

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

1. Remove racks.
2. Remove the screws securing the snorkel and remove the snorkel.

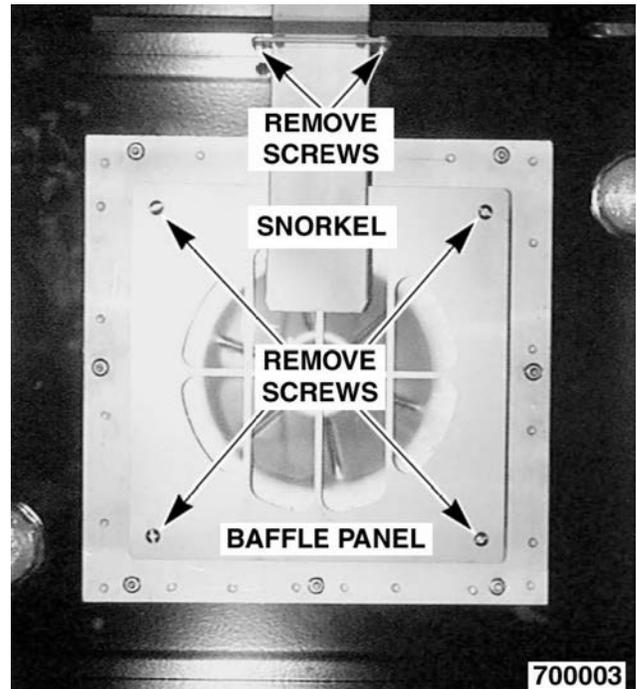


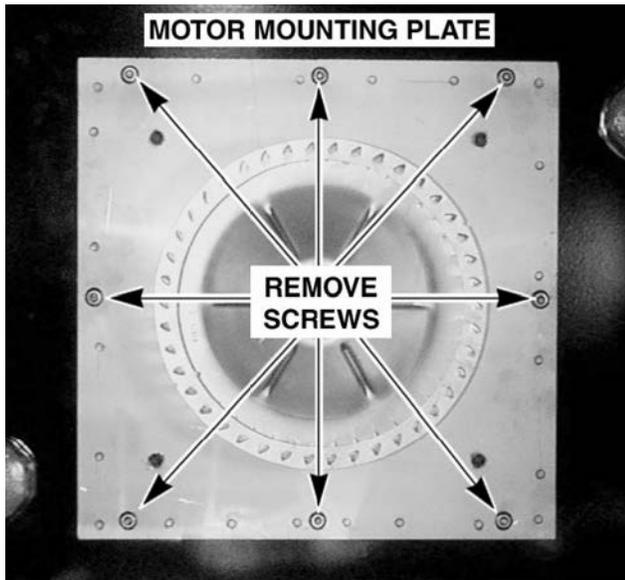
Fig. 25

3. Remove screws securing baffle panel and remove the panel.
4. If replacing:
  - A. **Blower Only** - Loosen set screws on blower hub and using a bearing puller, remove blower from motor shaft.

- 1) Reverse procedure to install and adjust blower position as outlined under the Blower Adjustment in Service Procedures and Adjustments section.

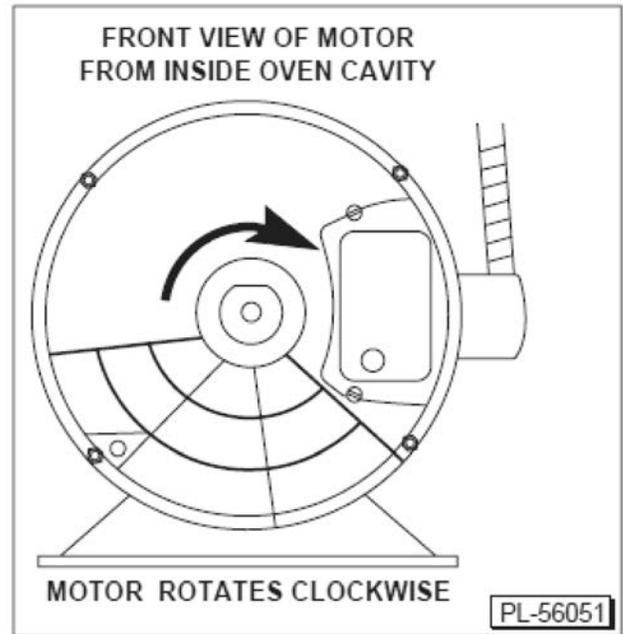
B. **Motor** - Perform step 4A and continue procedure.

5. Remove the screws that secure the motor mounting plate to the rear wall.



**Fig. 26**

6. Place a piece of cardboard on the bottom of the oven cavity to protect its surface from any damage during motor assembly removal.
7. Pull the motor assembly into the oven cavity and place it on the cardboard.
8. Remove the junction box cover from the motor, disconnect lead wires and remove the conduit.
9. Remove motor mounting bolts and flat washers, then lift the motor from the mounting plate.
10. Position the replacement motor on the motor mounting plate and install mounting bolts and washers. Hand tighten mounting bolts only.
11. Reconnect to lead wires at the motor, and replace conduit and junction box cover.



**Fig. 27**

12. Slide blower onto motor shaft until hub is flush with end of shaft, then tighten setscrews.
13. Adjust motor position until blower is parallel to motor mounting plate as outlined in Blower Adjustment under Service Procedures and Adjustments.
14. Position motor mounting plate on the rear wall and secure with nuts and washers.
15. Replace the baffle panel and snorkel.
16. Replace the air baffle on the rear wall at the lower right hand corner.
17. Remove cardboard from the bottom of the oven cavity.
18. Install racks.
19. Check oven for proper operation.

**BLOWER AND MOTOR Starting at  
Serial Number 481913936**



**⚠ WARNING**

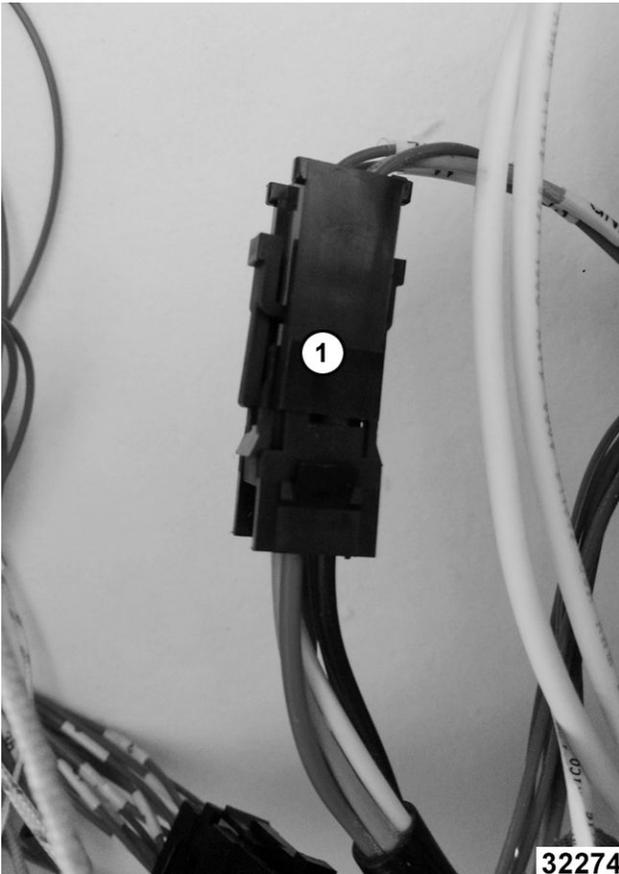
Disconnect the electrical power to the machine and follow lockout / tagout procedures.



**⚠ WARNING**

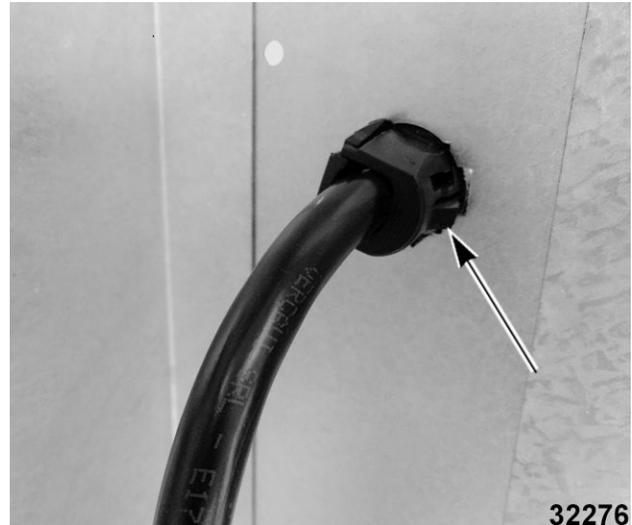
Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove RIGHT SIDE PANEL(S).
2. Disconnect motor harness (1, Fig. 28).



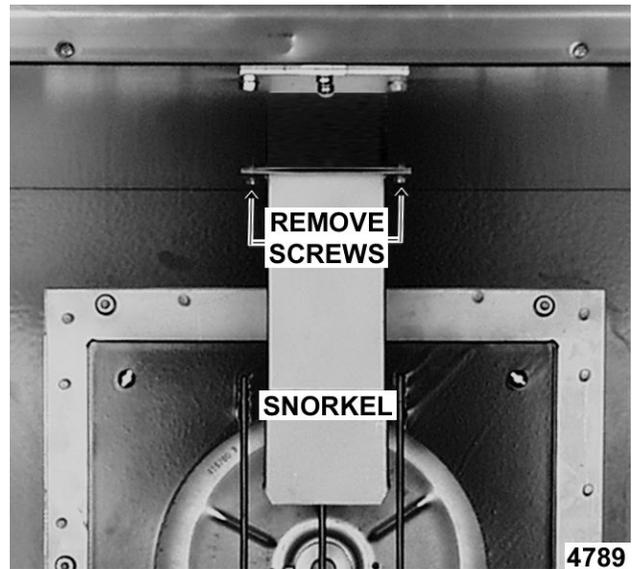
**Fig. 28**

3. Pinch cord grip together to remove from rear panel.



**Fig. 29**

4. Push motor wiring harness/cord out hole in rear panel.
5. Remove racks.
6. Remove screws securing "snorkel" and remove snorkel.



**Fig. 30**

7. Remove blower baffle screws (2, Fig. 31) if applicable.

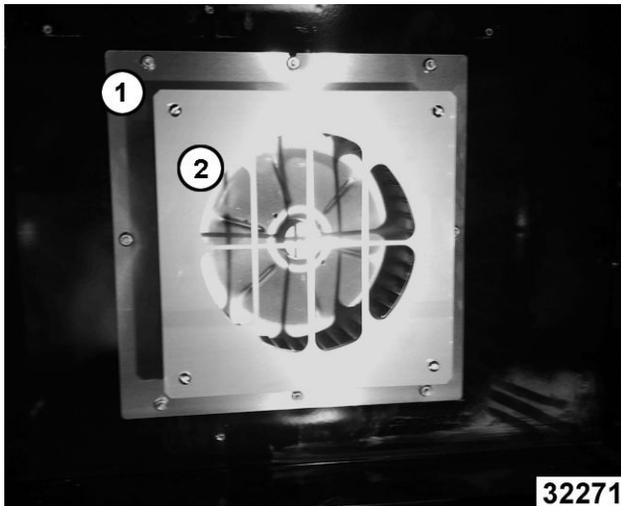


Fig. 31

8. Remove motor mounting plate nuts (1, Fig. 31).
9. Place a piece of cardboard on bottom of oven cavity to protect its surface from any damage during motor assembly removal.
10. Pull motor assembly into oven cavity and place on cardboard.
11. Remove motor mounting bolts and washers and lift motor off mounting plate.

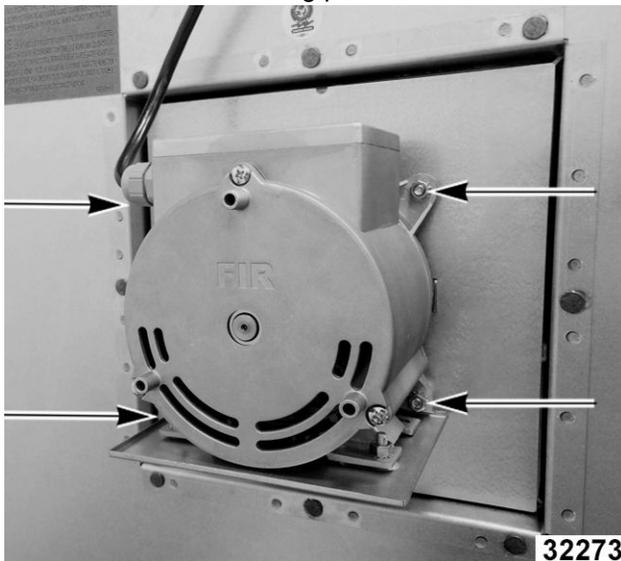


Fig. 32

**NOTE:** Motor graphics are shown with motor installed.

12. Remove drip pan from motor and install onto replacement motor.

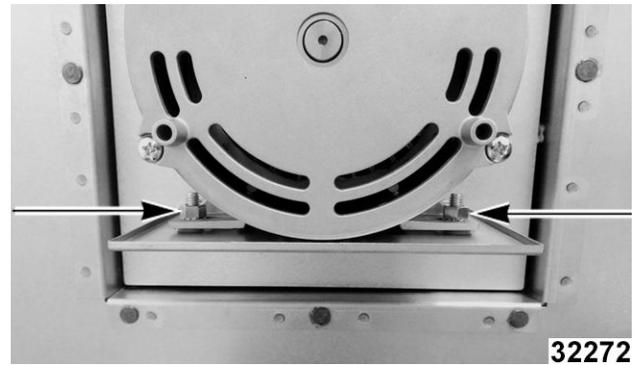


Fig. 33

13. Reverse procedure to install.
14. Verify operation.

## OVEN DOORS AND BEARINGS Ending at Serial Number 481907145



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover and bottom front cover as outlined under Covers and Panels.
2. Remove the door switch lever.

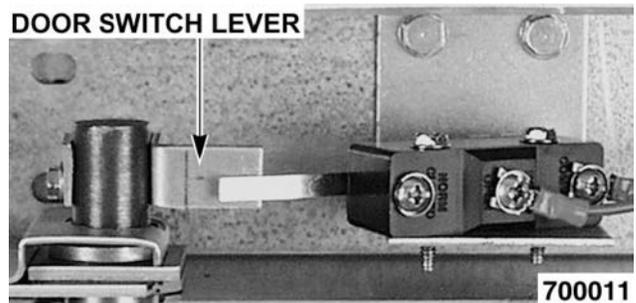


Fig. 34

3. Remove the lower door seal strip to expose the mounting screws of the door assembly.
4. Remove the two lower sill bolts by the lower door shaft and the four countersunk screws from the lower sill.



Fig. 35

- A. The door assembly is heavy and will drop down once the last screw is removed. If removing the door assembly without assistance, the ignition cable, flame sense lead and gas manifold should also be removed to avoid damage to these components.
- 5. Tilt the top of the door slightly forward and lift the door up until the bottom of the door shaft clears the opening in the sill.
- 6. Lay the door flat to prevent damage.
- 7. The top and bottom bearings are now accessible for inspection and/or replacement if needed.
  - A. If bearings are OK, proceed to step 8.
  - B. If replacing the top bearing, remove the top bearing retainer and top bearing.

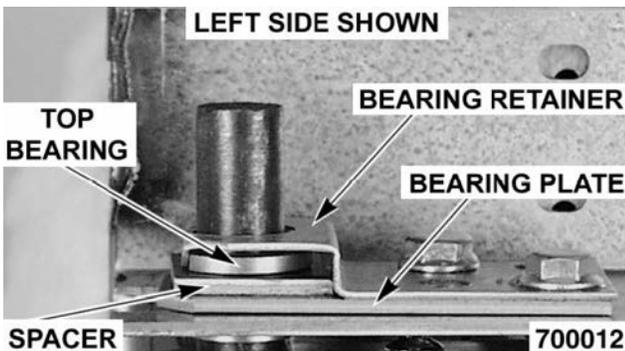


Fig. 36

- C. If replacing the bottom bearing, remove it from the door shaft or the lower sill opening.
- 8. Reverse procedure to install door assembly and check for proper operation as outlined under the Door Adjustment and Door Switch Adjustment section in Procedures and Adjustments.

**OVEN DOORS (INDEPENDENT DOORS) Starting at Serial Number 481907146**



**WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove TOP FRONT COVER.
2. If servicing right side door, remove door switch lever (1, Fig. 37).

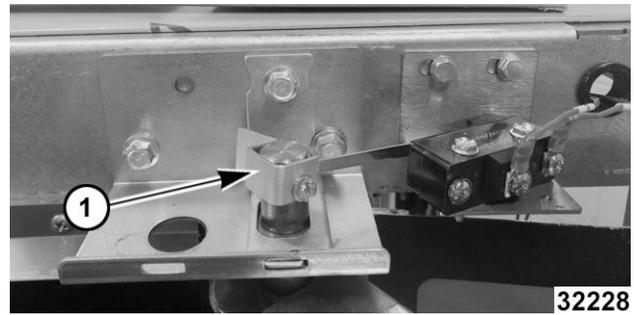


Fig. 37

3. While supporting door, remove hex bolts holding upper bearing retainer (1, Fig. 38) and upper shaft bracket (2, Fig. 38).

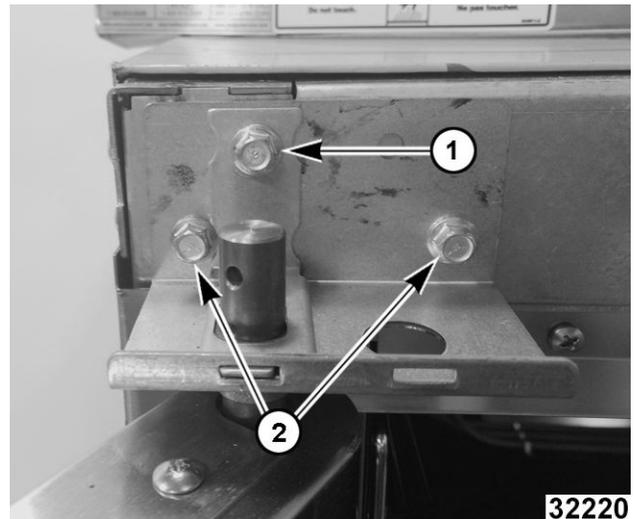


Fig. 38

4. Lift door off lower shaft bracket.

**NOTICE**

Lay door on flat protective surface to service.

5. Reverse procedure to install.
6. Perform door switch adjustment if servicing right side door.

**ROLLER LATCH ASSEMBLY (INDEPENDENT DOORS)**

**NOTE:** For units with serial number starting with 48 made after 8/12/07 and serial number starting with 54 made after 8/26/07.



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the screws that attach roller latch assembly to door.
2. Reverse procedure to install.

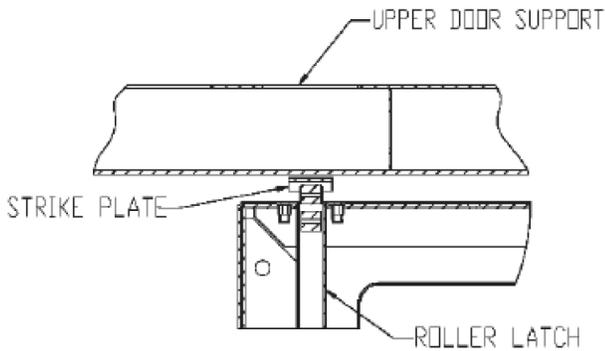


Fig. 39

**DOOR CATCH ROLLER ASSEMBLY (INDEPENDENT DOORS)**

**NOTE:** For units with serial number starting with 48 made before 8/13/07 and serial number starting with 54 made before 8/27/07.



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover as outlined under COVERS AND PANELS.
2. Remove the nuts and bolts that secure the door catch assembly.

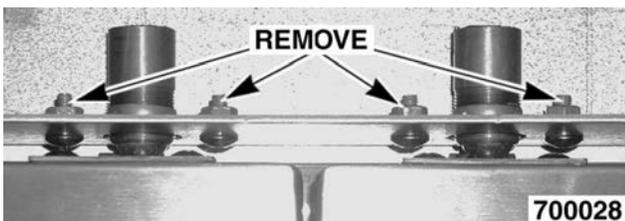


Fig. 40

3. Reverse the procedure to install.
4. Adjust the roller catch as outlined under the Door Catch Adjustment in Service Procedures and Adjustments.

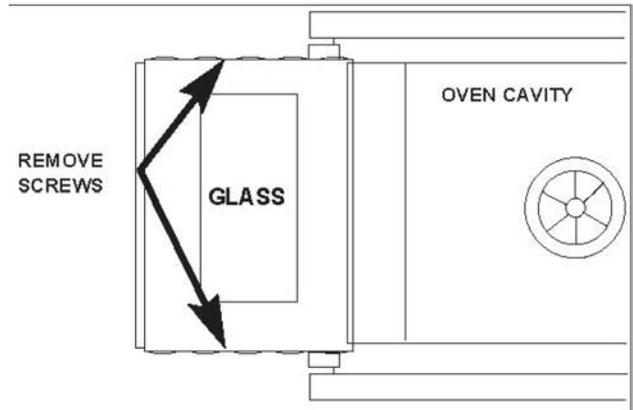
**DOOR WINDOW**



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the screws at the top and bottom of the door.



PL-56052

Fig. 41

2. Remove the door handle, then remove the outer door panel.
3. Lift out the inner door panel window assembly.
4. Remove the door seal from the inside of the left door only.
5. Remove the screws securing the window tabs to the door bracket and lift the window assembly out from the door frame.

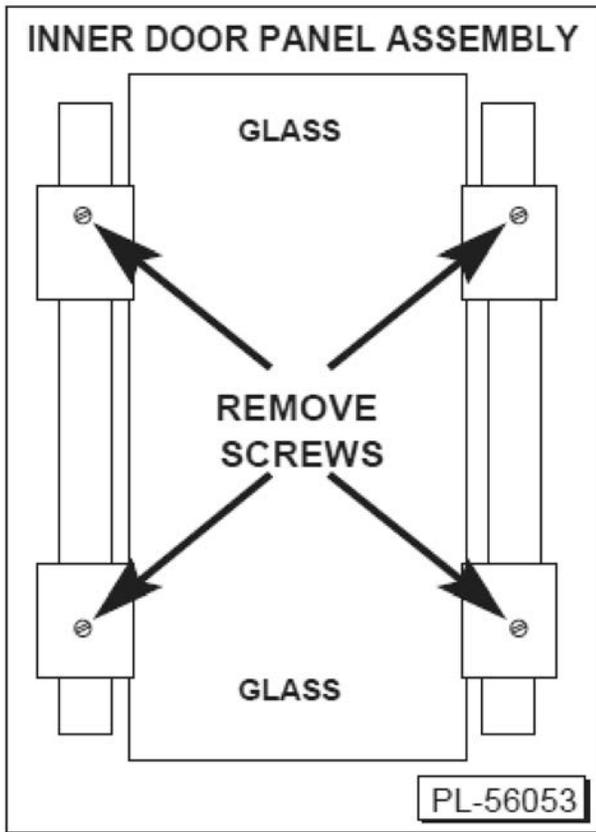


Fig. 42

- Reverse procedure to install the replacement window.

## INTERIOR LIGHTS (Rear Mounted, Round)



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### Lamp

- Remove racks.
- Unscrew glass lens for the light being replaced then unscrew bulb.

**NOTE:** Use a cloth when handling bulb so you do not leave fingerprints on bulb.

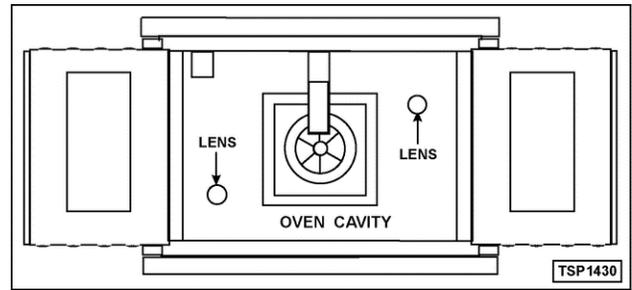


Fig. 43

- Replace bulb then reverse procedure to install.



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### Lamp Assembly

- Remove lens and bulb.
- Remove springs from retaining tabs (2 places) on the socket.

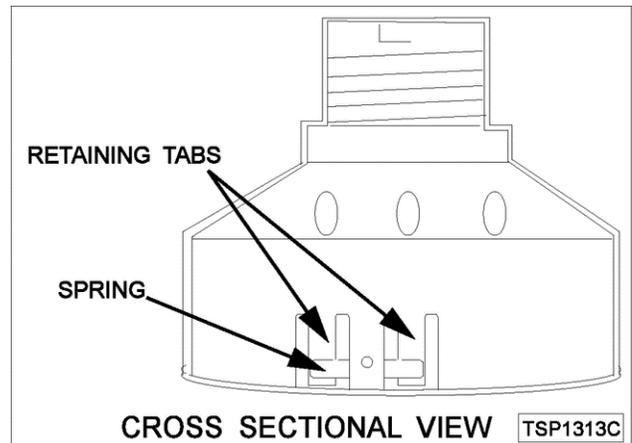


Fig. 44

- Depress retaining tabs and pull socket out from the oven, far enough to disconnect lead wires.
- Remove socket from the oven.
- Attach lead wires to the replacement socket.
- Insert socket into the hole in oven and push until socket is held in place by retaining tabs.
- Install light bulb and lens.
- Check for proper operation.

## INTERIOR LIGHTS (Side Mounted, Square)

### Bulb Replacement



**WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove racks and right-side hand rack guide.
2. Pull lamp cover off.
3. Grasp lamp using a clean cloth and remove from lamp assembly.

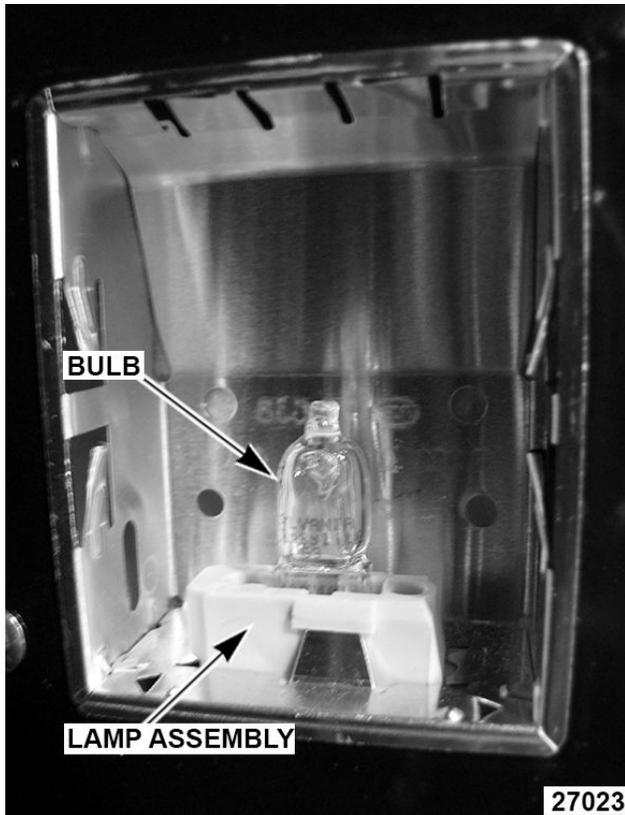


Fig. 45

4. Reverse procedure to install new bulb.

**NOTE:** Verify gasket (1, Fig. 46) is flat on lamp cover and not damaged.

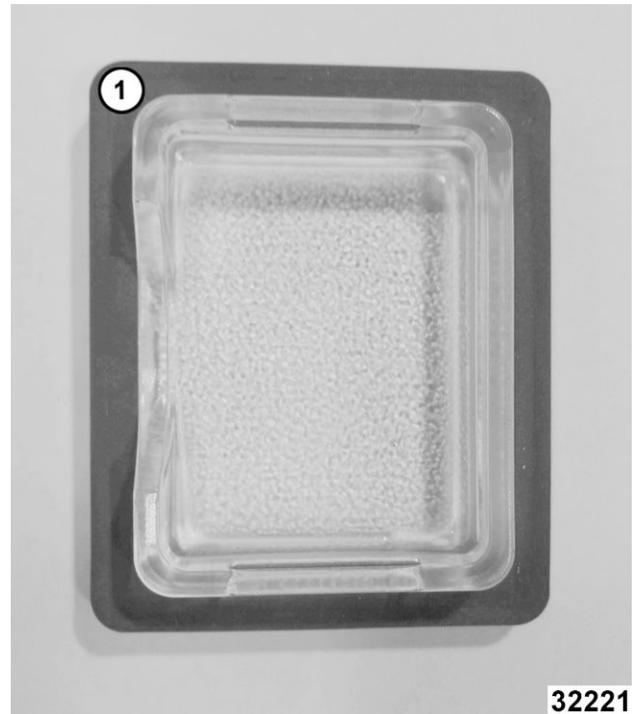


Fig. 46

**Lamp Assembly Replacement**



**WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove racks.
2. Remove BULB if reusing.
3. Lift right side rack guide off oven cavity.
4. Pull lamp cover off from the top or bottom.
5. Insert narrow blade screwdriver into tab and bend out to release. Repeat with second tab.

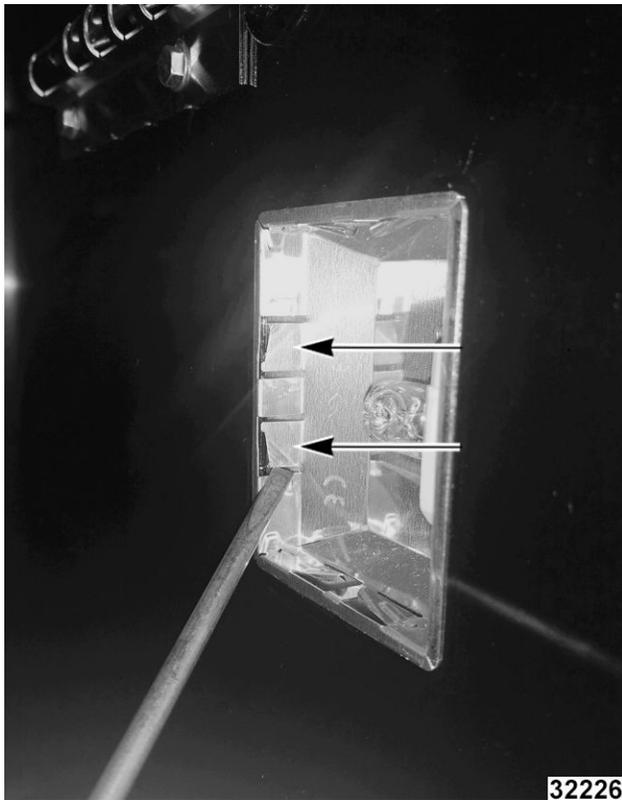


Fig. 47

6. Pull lamp housing out of oven cavity.
7. Disconnect wires.

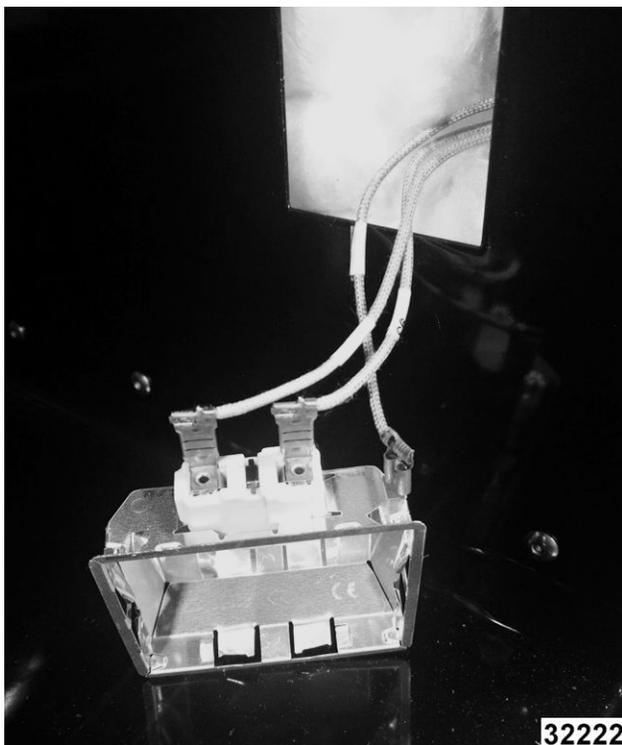


Fig. 48

8. Reverse procedure to install.

**NOTE:** Verify gasket (1, Fig. 49) is flat on lamp cover and not damaged.

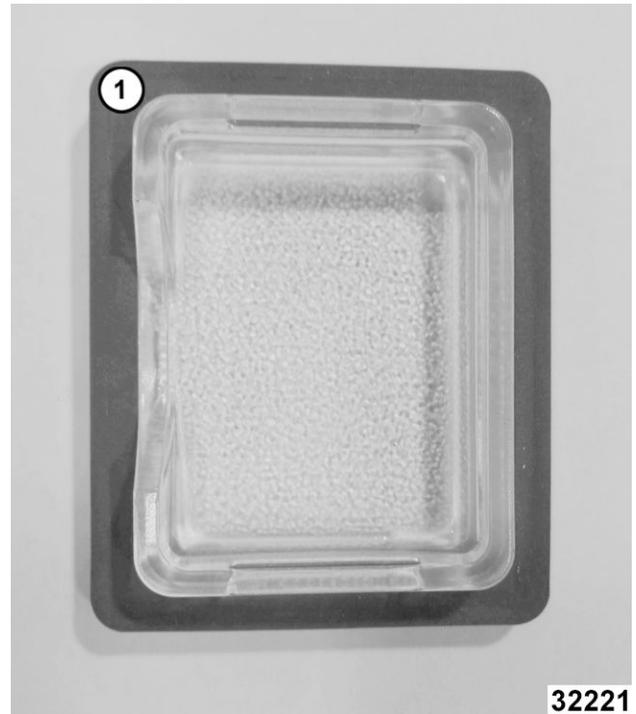


Fig. 49

## DOOR SWITCH



### **WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover as outlined under Covers and Panel.
2. Disconnect the lead wires to the door switch.

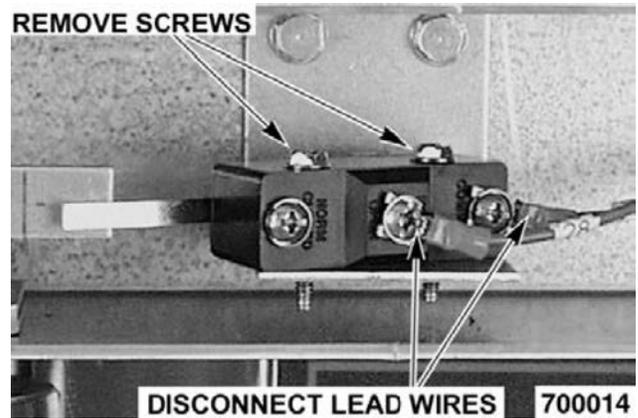


Fig. 50

3. Remove the switch.

- Reverse procedure to install the replacement switch and check for proper adjustment as outlined in Door Switch under Service Procedures and Adjustments.

## HIGH LIMIT THERMOSTAT



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

- Remove the top four racks from the oven.
- Remove the high limit thermostat cover/ mounting plate. It is located at the top of the oven cavity.

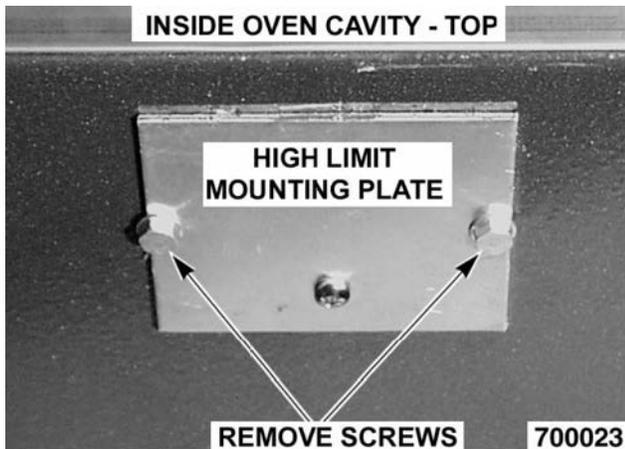


Fig. 51

- Disconnect the lead wires from the high limit thermostat. Remove the high limit thermostat from the cover mounting plate.

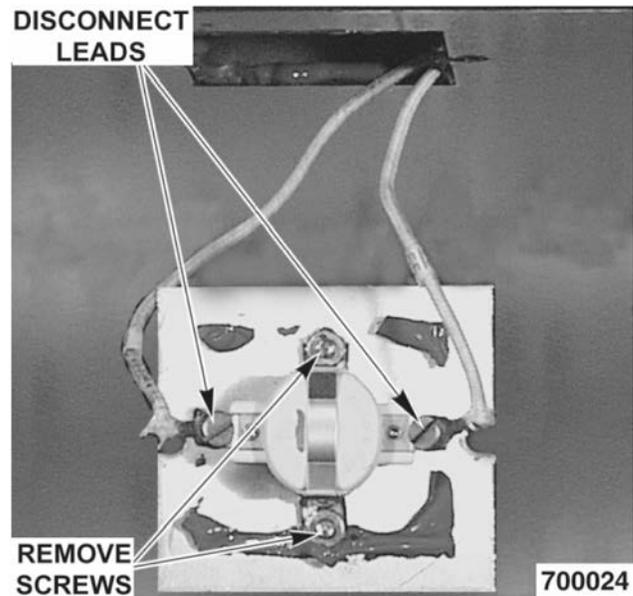


Fig. 52

- Remove the old RTV silicone from the cover and mating surfaces inside the oven cavity, and apply new RTV silicone before installing.
- Reverse procedure to install.

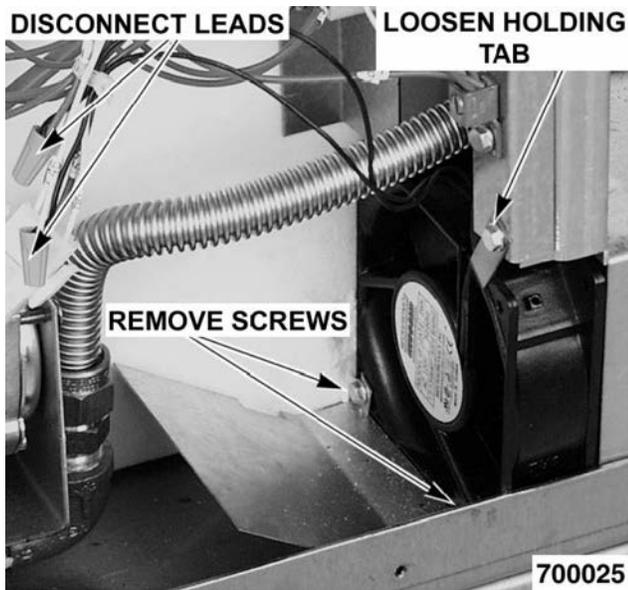
## COOLING FAN



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

- Remove the right side panel as outlined under Covers and Panels.
- Disconnect the lead wires to the fan motor by removing the wire nuts.
- Remove the screws securing the air deflector to the fan, then loosen the tab screw holding the fan to the component panel. Rotate the tab so that the fan will clear. Remove the fan.



**Fig. 53**

4. Reverse the procedure to install the replacement fan and check for proper operation.

#### **Fan Installation Tips**

- The fan must be installed so air is pulled from the rear of the oven and blown into the control area. The arrow on the fan body indicates airflow direction and should be pointing toward the controls.
- Ensure the fan is seated squarely against the air tube and the oven bottom.
- The air deflector should be angled upward at approximately 30 degrees to properly direct the airflow.

# SERVICE PROCEDURES AND ADJUSTMENTS

## SOLID STATE TEMPERATURE CONTROLLER TEST (SG4D/SG6D)

### ⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.

### Test Steps

1. Remove the right side panel as outlined under Cover and Panels in Removal and Replacement of Parts.
2. Place a thermocouple in the geometric center of the oven cavity. Oven temperature must be below 450°F.
3. Set the temperature control to the maximum setting.
4. Set the power control to 100%.
5. Check machine data plate for correct voltage to oven. Refer to diagram below for proper terminal locations and voltages before checking temperature controller. Use the correct terminals for the corresponding voltage.
6. Turn the ON-OFF-OVEN-COOL switch to ON.

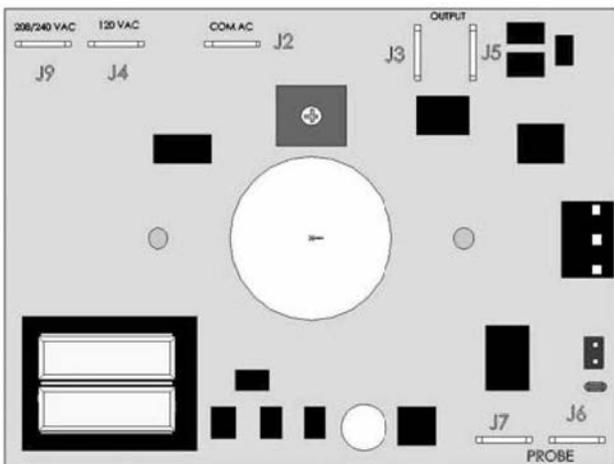


Fig. 54

7. Check for voltage across terminals J2 and J4 (120 Volt) or J2 and J9 (208/240 Volt) for power to the control.
  - A. If correct, proceed to step 8.

- B. If incorrect, the problem is not in the temperature control (see Troubleshooting).
8. Check for voltage to the switching output.
    - A. For 120 VAC controls, check across terminals J3 and J4 for input voltage and between J4 and J5 for output voltage from the internal switching device.
    - B. For 208/240 VAC controls, check across terminals J3 and J9 for input voltage and between J9 and J5 for output voltage from the internal switching device.
      - 1) If input voltage is correct, proceed to step 9. If input voltage is not present, the problem is not in the controller (See Troubleshooting).
      - 2) If output voltage is correct, proceed to step 9. If output voltage is not correct, check temperature probe, as outlined under Temperature Probe Test (SG4D/SG6D).
    - C. If the probe connected to J6 and J7 is either shorted or opened, the red LED located just above J6 (to the left of J6 when mounted) will flash. With the probe connected and the LED not flashing, slowly turn the Temperature set knob until the pointer passes through the mid point of rotation. At the mid point of rotation, the red LED will come on. If the control is set and left at the mid point, the LED will stay on. With the LED on at mid point, you have tested the entire front end of the control circuit as well as the probe and verified that the control is functioning normally.
  9. Set temperature control to minimum setting. Oven temperature must be above 300°F.
  10. Check for zero volts (0.00 Volts) across terminals J4 and J5 (120 Volt) or J9 and J5 (208/240 Volt) for no output from the internal switching device.
    - A. If correct, temperature control is functioning properly.
    - B. If incorrect, check temperature probe as outlined under Temperature Probe Test (SG4D/SG6D).

- 1) If temperature probe is functioning properly and the temperature controller failed the test in 8c above, replace the temperature control and check for calibration as outlined under Solid State Temperature Controller Calibration (SG4D/SG6D).

## SOLID STATE TEMPERATURE CONTROL CALIBRATION (SG4D/SG6D)

### **⚠ WARNING**

**Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.**

Before attempting any calibration, see Section 8C of SOLID STATE TEMPERATURE CONTROLLER TEST (SG4D/SG6D) on previous page.

#### **Calibration Steps**

1. Place a thermocouple in the geometric center of the oven cavity.
2. Set the ON/OFF/OVEN COOL switch to ON.
3. Set the temperature controller dial to 350°F. Set the power control to 100% (10).
4. Allow the oven temperature to stabilize (minimum three heating cycles).
5. Record the temperature at which the Heat lamp comes ON (heating starts) and goes OFF (heating stops). This is the control differential. Heat lamp OFF temp - Heat lamp ON temp = Control Differential.
6. The nominal control differential should be less than 20°F.
  - A. If the control differential is less than 20°F, the temperature control circuit is functioning properly. Proceed to step 7.
  - B. If the control differential is more than 20°F, check the temperature probe as outlined under Temperature Probe Test (SG4D/SG6D).
  - C. If the control differential is more than 20°F and the probe passes its' test parameters, then temperature controller is malfunctioning. Install a new temperature controller and run calibration steps again.
7. Calculate the average oven temperature by adding the actual minimum temperature to the actual maximum temperature and dividing by 2.
 

EXAMPLE:

Oven set to 350°F.

Actual minimum oven temperature = 335°F

Control cuts on at 334°F

Actual maximum oven temperature = 347°F

Control cuts off at 340°F

$$335 + 347 = 682$$

$$682 / 2 = 341 \text{ (the control is } 9^\circ\text{F out of calibration)}$$

$$340 - 334 = 6^\circ\text{F Control Differential}$$

$$347 - 335 = 12^\circ\text{F Oven Temperature Differential}$$
  - A. If the average oven temperature is within +/- 5°F from the dial setting, no calibration is necessary.
  - B. If the average oven temperature is not within +/- 5°F, calibration is recommended.
8. Loosen the set screw on the temperature controller and carefully remove the knob from the shaft, without rotating the shaft. This will expose the calibration adjustment control access hole in the front panel.
9. Monitor the internal oven temperature and determine at what temperature the control should cut on to give you the required minimum temperature (Example:  $350 - 341 = 9$ ;  $334 + 9 = 341$ . 341°F is the temperature at which you would wish the controller to cut on).
10. After allowing the oven to operate through several cycles (minimum 3 cycles), monitor the temperature as it falls to the desired "cuts on" point. Using a small screw driver, adjust the calibration adjustment until the controller cuts on at the desired "cuts on" temperature.
11. The calibration control is adjusted clockwise in order to increase the set temperature and counter clockwise to decrease the set temperature.
12. The controller has only +/- 25°F of adjustment. 1/4 turn of the calibration adjustment represents approximately 20°F shift in calibration.

## TEMPERATURE PROBE TEST (SG4D/SG6D)

**⚠ WARNING**

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

**Test Steps**

1. Remove the right side panel as outlined under Cover and Panels in Removal and Replacement of Parts.
2. Place a shielded thermocouple in the geometric center of the oven cavity and determine the temperature in the oven cavity.
3. Remove the probe lead wires from the solid state temperature controller.
4. Test the probe with an ohmmeter.
  - A. If the measured resistance values are inside the given tolerance, then the probe is functioning properly.
  - B. If the measured resistance values are outside the given tolerance, then replace the probe and make sure wires are secured to the terminals of the temperature controller. Recheck the temperature by performing step 2.
    - 1) Check the oven for proper operation.
5. Reverse Procedure to install.

TEMP (°F)	OHMS*
77	90,000
240	4,077
260	3,016
280	2,266
300	1,726
320	1,332
340	1,041
360	822
380	656
400	529
425	424
450	334
475	266
(*) Resistance in ohms ± 10%	

## COMPUTER CONTROLLER (SG4C/SG6C)

### ⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.

### Operation

Refer to the Installation & Operation Manual for specific operating instructions.

### Setup Mode

Use the setup mode to verify that the control is configured to the factory settings which result in the proper operation of the oven. If the CAL1 parameter is other than zero, see Computer Control Calibration (SG4C/SG6C).

**CAUTION:** Changing the C\_F, InP1, rL1 and rH1 parameters will default all menus.

1. Use this key sequence to access the setup mode: UP arrow, Rack 1, Temperature, Temperature, DOWN arrow, Rack 1.



Fig. 55

2. Once in the setup mode the display will alternate between the parameter and programmed data.
  - A. To change data to the factory setting, use the arrow keys.
  - B. To select the next parameter, press the Rack 1 key.
  - C. After the last parameter and data are viewed, press the Rack 1 key to exit the setup mode and return to operations mode. The current set point temperature will be displayed.
  - D. If there are no key activations after 1 minute, the control will return to operation mode.
3. Listed are the parameters and data in the setup mode.

MENU	ALTERNATING ON DISPLAY	
	PARAMETER	DATA
Celsius_Fahrenheit	C_F	F

Guard Band	gb	4000
Temperature Compensaion	tcnP	OFF
Input Type 1	InP1	J
Range Low 1	rL1	75
Range High 1	rH1	500
Hysteresis	HYS1	3
Calibration Offset	CAL1	0
Exit setup mode and return to operation mode.	Set point temperature is displayed or if calling for heat, dashes (----) are displayed.	

### Probe Test

If the oven is not heating or displaying the proper temperature, the temperature probe may be malfunctioning. Determine if the probe is good or causing the operational problem.

1. Temporarily disconnect the existing lead wires from the computer control and connect them to a good J-type thermocouple.
2. Turn the power switch to ON and set the temperature controller to 350°F.
  - A. If the oven reaches the set temperature and cycles with the temporary thermocouple, then the existing probe is malfunctioning.
3. Replace the temperature probe with the correct part and check for proper operation.

### Solid State Relay Test

1. Remove the right side panels as outlined under Covers and Panels in Removal and Replacement of Parts.
2. Turn the power switch to the ON position.
3. Check for +5 VDC on input side of SSR-1 in the normal heating mode (terminals 3 & 4) and SSR-2 in the roast and hold mode.
  - A. If +5 VDC is present, continue to step 4.
  - B. If no voltage is present, computer control is not functioning properly.
4. Check for 120 VAC at load side of SSR (terminals 1 & 2).
  - A. If no voltage is present, solid state relay is not functioning properly.
    - 1) Replace the SSR and check for proper operation.

- B. If 120 VAC is present, component is functioning properly.
5. Reassemble oven and check for proper operation.

## COMPUTER CONTROL CALIBRATION (SG4C/SG6C)

### ⚠ WARNING

**Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.**

#### Calibration Steps

1. Place a thermocouple in the geometric center of the oven cavity.
2. Set the ON-OFF-COOL DOWN switch to ON.
  - A. If the set point temperature is 350°F, proceed to step 4.
  - B. If the set point temperature is other than 350°F, proceed to step 3 to change the temperature.
3. Press the set key then temperature key to enter the temperature set mode.
  - A. The display will alternate between the term StPt (set point) and the current oven temperature setting.
  - B. Press the UP or DOWN arrows to make the proper selection.
  - C. Press the set key again to save the change, then exit the temperature set mode.
4. Allow the oven temperature to stabilize (normally three cycles).
5. Compare the controls set point temperature to the thermocouple meter reading when the heat light goes out.
  - A. A temperature variance more than 5°F indicates an adjustment is needed.
    - 1) To make the adjustment, proceed to step 6.
    - 2) If temperature variances is less than 5°F, then the computer control is functioning properly.
6. Enter the setup mode as outline in Setup Mode under Computer Control (SG4C/SG6C).
  - A. Advance through the menu until CAL1 (calibration offset) appears.
    - 1) If the thermocouple reading is higher than set point temperature, press the down arrow key and enter a negative offset value that is equal to the number of degrees above the 5°F tolerance.
    - 2) If the thermocouple reading is lower than set point temperature, press the UP arrow and enter a positive offset value that is equal to the number of degrees below the 5°F tolerance.
    - 3) Exit the setup mode.
7. Allow the oven to cycle at least two times between adjustments.
  - A. If the temperature variance still differs more than 5°F from the set point, verify the correct calibration offset value was entered and retained.
    - 1) Adjust the calibration offset value as outlined in step 6, until the cycling temperature is within tolerance.
  - B. If the above adjustment cannot be obtained, replace the computer control and check for proper operation.

## GAS PRESSURE ADJUSTMENT

### ⚠ WARNING

**Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.**



### ⚠ WARNING

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

Accurate gas pressure adjustments can only be made with the gas on and the burner lit. If the incoming line pressure to the valve is less than the minimum stated, then the manifold pressure cannot be set correctly.

1. Turn gas supply off at manual shutoff valve.
2. Remove the right side panel as outlined under Covers and Panels in Removal and Replacement of Parts.

- Remove the plug from the manifold pressure port.

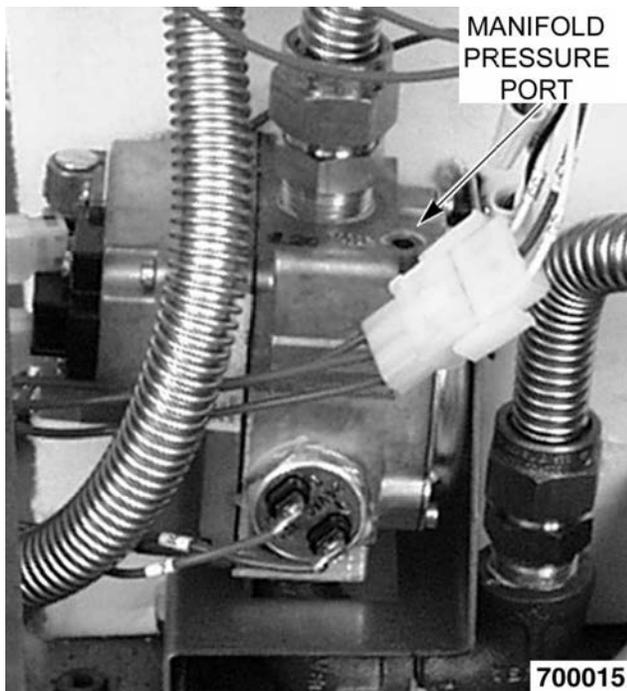


Fig. 56

- Install hose barb adapter and attach manometer tube.

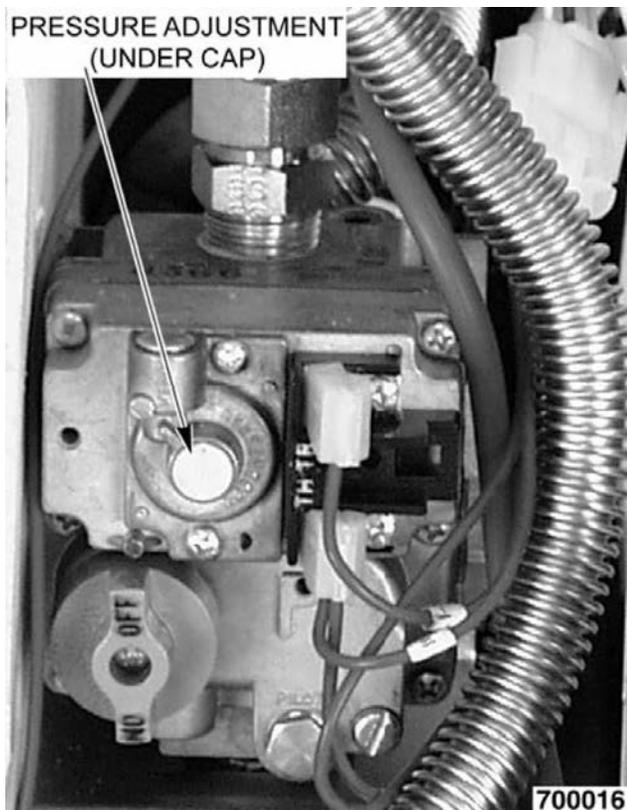


Fig. 57

- Remove adjustment screw cap from the gas valve and turn gas supply to the oven back on.

**⚠ WARNING**

The following steps require power to be applied to the unit during test. Use extreme caution at all times.

- Plug the unit in and turn the power switch ON.
- Set the temperature controller to its highest setting and allow burner to ignite. The burner must be lit during test and adjustment.
- Turn the set screw to obtain the proper gas pressure (clockwise = pressure increase; counterclockwise = pressure decrease).

GAS TYPE	PRESSURE READINGS (IN W.C.)			
	MANIFOLD	LINE		
		RECOMMENDED	MIN	MAX
Nat.	3.5	7.0	5.0	14
Prop.	10	11.0	11.0	

**NOTE:** Nat. = Natural Gas; Prop. = Propane

**VERIFICATION OF SPARK AT IGNITOR**

**⚠ WARNING**

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

**⚠ WARNING**

Shut off the gas before servicing the oven.

- Remove the bottom front cover as outlined under Covers and Panels in Removal and Replacement of Parts.
- Disconnect the high voltage ignition cable from the spark igniter.

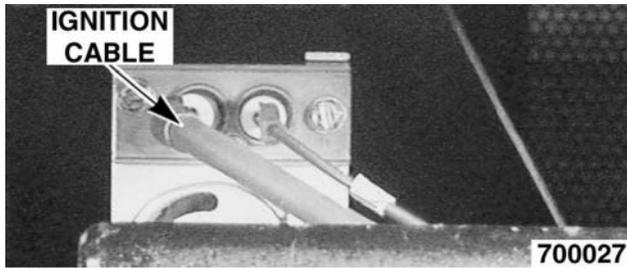


Fig. 58

**⚠ WARNING**

Do not hold the wire with your hands for this test. The manual gas valve must be closed.

3. Clamp the ignition cable in a manner that will position the end of the cable 3/16" from the oven frame (bare metal surface). It is critical that the cable be held 3/16" away from the surface of the oven frame or sparking may not occur even though the sparking circuit is functioning properly.

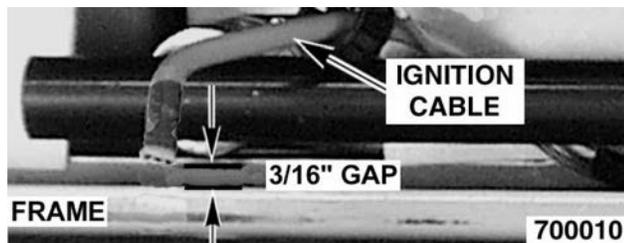


Fig. 59

**⚠ WARNING**

The following steps require power to be applied to the unit during the test. Use extreme caution at all times.

4. Plug the oven in and set the temperature controller to the maximum setting.
5. Turn the power switch ON.
6. Sparking should occur after a 4 second delay and continue for 7 seconds. The cycle will repeat twice after a 15 second purge time. Arcing from the ignition cable to the oven frame should be observed.

## DOOR SWITCH ADJUSTMENT

**⚠ WARNING**

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.

**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover as outlined under Covers and panels in Removal and Replacement of Parts.
2. Door operation:
  - A. The switch actuator is engaged by the switch lever when the right door is between 1" and 1 1/2" from being closed.
3. If adjustment is necessary, bend the switch actuator to obtain the proper setting.

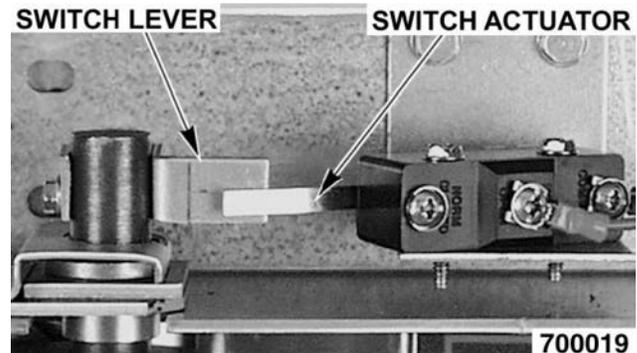


Fig. 60

4. Install the top front cover.
5. Apply power to the oven and check for proper operation.

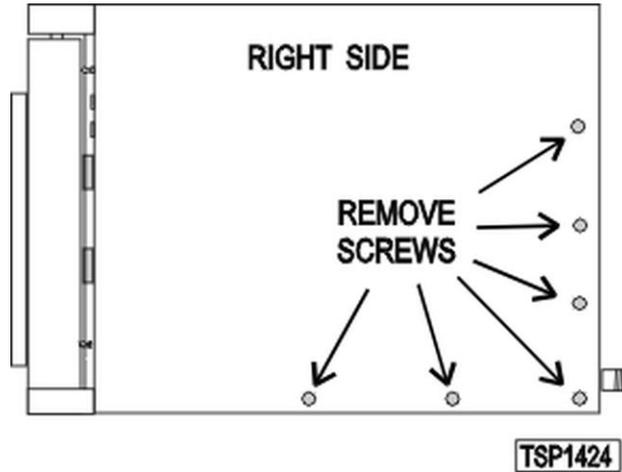
## FLAME SENSE CURRENT TEST



**⚠ WARNING**

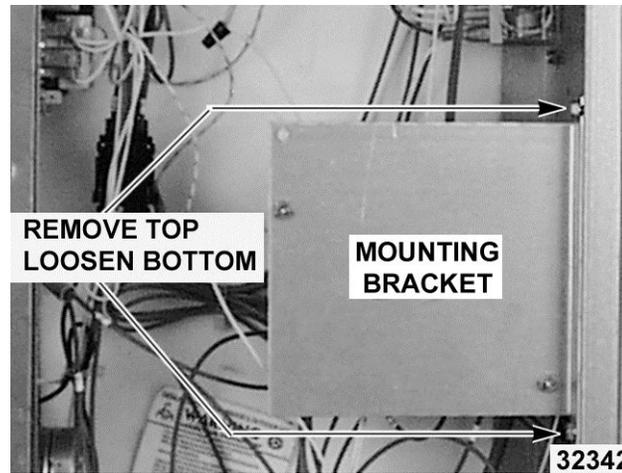
**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

1. Remove screws securing right side of the top front cover, bottom front cover and control panel.
2. Remove right side panel mounting screws.



**Fig. 61**

3. Pull right side panel out from the bottom then down to remove.
4. Remove top screw and loosen bottom screw securing the ignition control module mounting bracket.



**Fig. 62**

5. Position bracket horizontally by pulling forward 90 degrees, with ignition module facing up for accessibility.
6. Set VOM meter to read Micro Amps.
7. Place red (Positive) lead on FC+ and black (Negative) lead on FC- terminals on ignition module to test. Repeat on other Micro Amps.

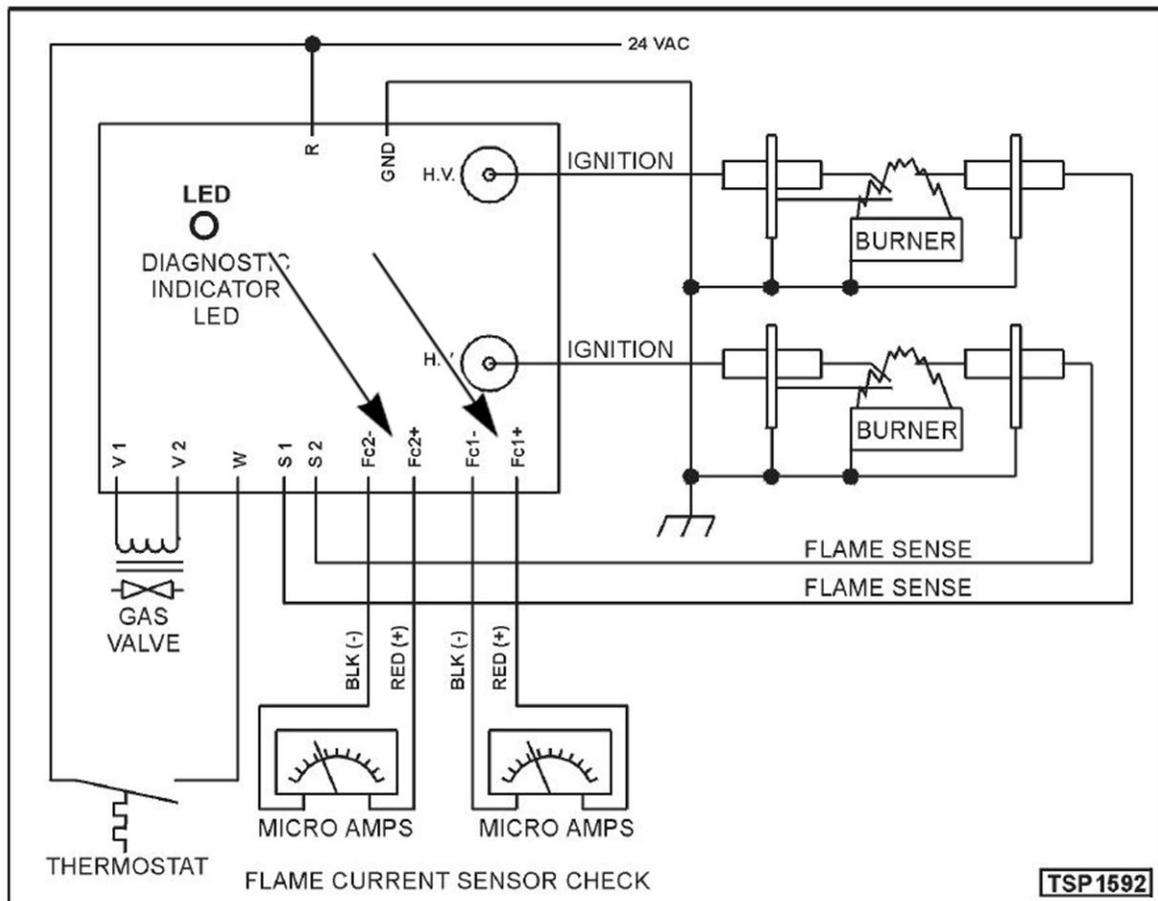


Fig. 63

8. Set the oven to call for heat and measure the Micro Amps reading.

**NOTICE**

Micro Amp reading from the flame sensor should measure a minimum of 0.7 Micro Amps to maintain burner ignition.

- If Micro Amp reading is correct and the burner does not light and maintain flame, replace ignition module.
- If Micro Amp reading is **NOT** correct, check wiring from flame sensor/igniter to the ignition module. If wiring is ok, replace flame sensor/igniter.

9. Install ignition control module mounting bracket and right panel.
10. Verify operation.

## BLOWER ADJUSTMENT

### ⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the blower motor and mounting assembly as outlined under Blower and Motor in Removal and Replacement of Parts.
2. Loosen the motor mounting bolts.
3. Adjust the motor position until the blower is parallel to and 1/4" inch away from the motor mounting plate. Check to see if the blower is square to the motor mounting plate at the top, bottom, left and right of the blower.
  - A. If the blower is square, then tighten motor mounting bolts and proceed to step 4.
  - B. If the blower is not square, continue adjusting until proper spacing is achieved then tighten motor mounting bolts. If necessary, place shims between motor and frame.

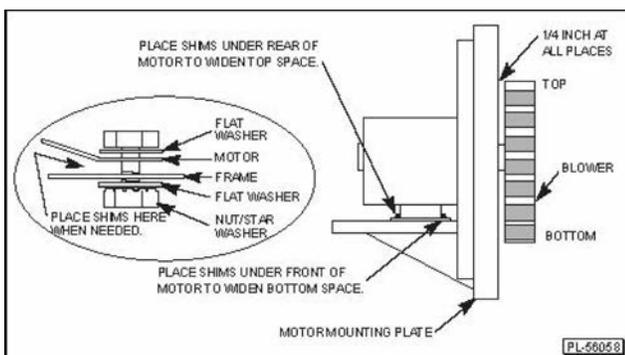


Fig. 64

4. Reverse the procedure to install. Use locktight on mounting nuts and bolts.

## DOOR STRIKE ADJUSTMENT (INDEPENDENT DOORS)

### ⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.

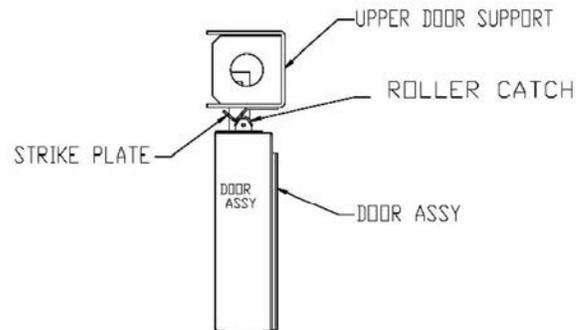
**NOTE:** For units with serial number starting with 48 made after 8/12/07 and serial number starting with 54 made after 8/26/07.



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover as outlined under COVERS AND PANELS in REMOVAL AND REPLACEMENT OF PARTS.
2. Open the doors and inspect the door strike for proper shape.
  - A. Replace if bent. Do not bend strike plate.
  - B. If adjustment is necessary, loosen fasteners, close doors and insure contact between the door inner surface and upper horizontal seal. Slide door strike plate until contact with roll latch is made. Tighten strike plate fasteners.



SIDE VIEW

Fig. 65

3. Open and close the doors several times while observing the roller latch and strike plate operation.

- A. Replace roller latch if malfunctioning as outlined under ROLLER LATCH ASSEMBLY (INDEPENDENT DOORS) and adjust as outlined in this procedure.
- 4. Each oven door should be open with a force of 8 to 25 pounds when pulled at the handle. The adjustments must allow the doors to remain closed during normal operation and allow opening without exertion by the user.

## DOOR CATCH ROLLER ADJUSTMENT

### **⚠ WARNING**

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.

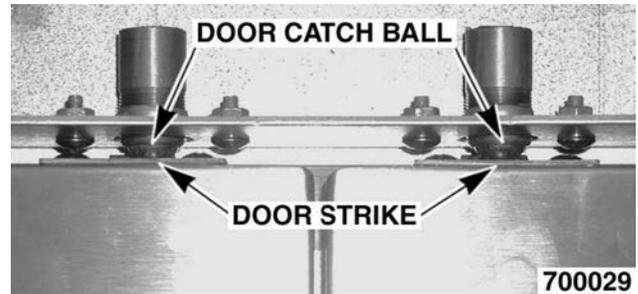
**NOTE:** For units with serial number starting with 48 made before 8/13/07 and serial number starting with 54 made before 8/27/07.



### **⚠ WARNING**

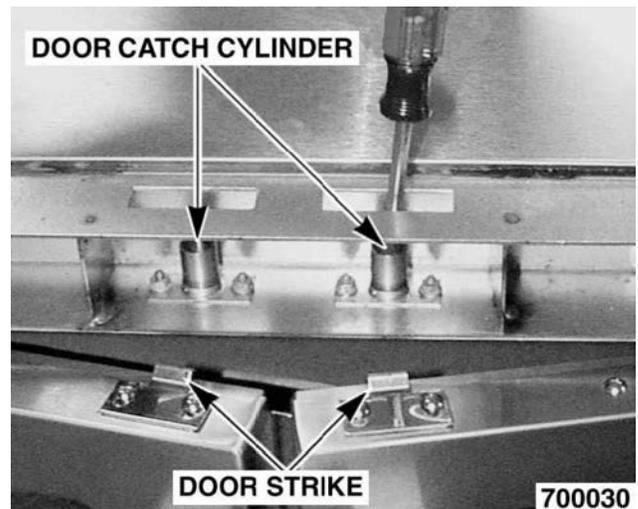
**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

1. Remove the top front cover as outlined under Cover and Panels in Removal and Replacement of Parts.
2. Inspect the door strike to make sure it is straight, and replace if bent.
3. Inspect the door catch assembly, and replace if it is damaged.
4. Check for proper door alignment.
  - A. Doors should be centered in the cavity opening and parallel to top and bottom of oven as outlined under Door Adjustment.
5. With the door in closed position, check to see that the ball of the catch is centered and touching the door strike. If not, it may be necessary to adjust and add a shim piece to the door strike.



**Fig. 66**

6. Place a standard flat screwdriver through the opening in the top channel into the slot in the cylinder of the catch assembly.



**Fig. 67**

7. Turn the screwdriver clockwise to increase the ball pressure or counterclockwise to decrease the pressure onto the door strike. The ball pressure should be tight enough to hold the door in place when the blower is engaged.
8. After the adjustment is complete, lubricate the inside of the door catch cylinder.

## DOOR ADJUSTMENT



### **⚠ WARNING**

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

1. Check the doors to make sure they have a .125 (1/8") gap between them and that the vertical edge of the door is parallel to the vertical door seal. If the doors are not positioned in this manner, adjust the doors as described.

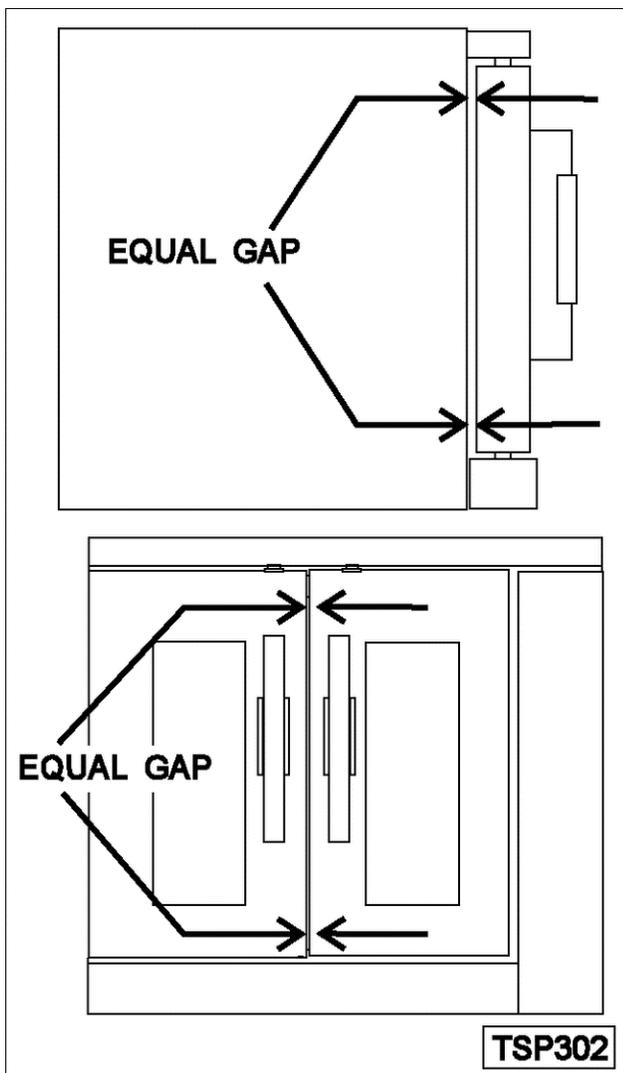


Fig. 68

2. Remove the TOP FRONT COVER.
3. Loosen the screws/bolts that secure the upper door brackets just enough to allow door movement.

Figure Shown below (Left Side) is ending at Serial Number 481907145.

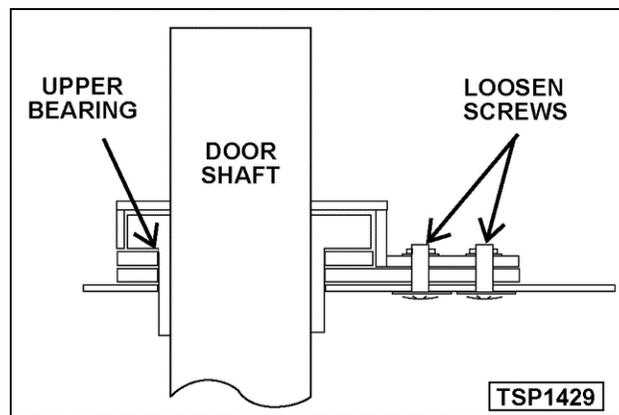


Fig. 69

Figure shown below (Left Side) is starting at Serial Number 481907146.

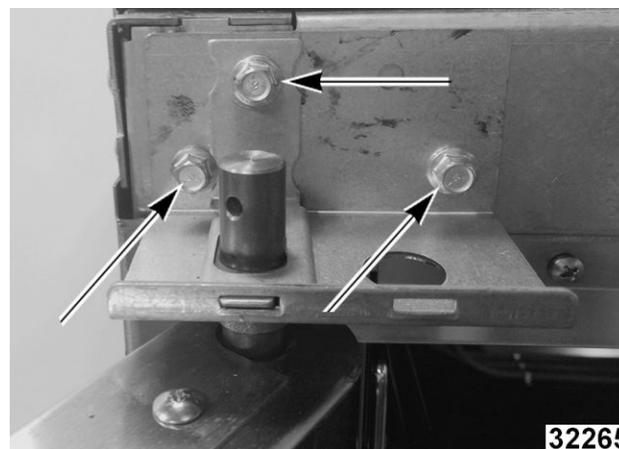


Fig. 70

4. Move the door until proper alignment is achieved then tighten the screws/bolts on the upper door bearing hardware.
5. Repeat STEP 3 and STEP 4 on the opposite door, if necessary.
6. Install TOP FRONT COVER.

# ELECTRICAL OPERATION

## COMPONENT DESCRIPTION

**Master Switch (S1)** - Determines the mode of operation; ON, OFF or OVEN COOL

**Lights Switch (S2)** - Controls the oven cavity lights.

**Fan Speed Switch Hi/Low (S3)** - Controls blower motor speed between HI and LOW settings. Available on models SG4D/SG6D.

**Alarm/Buzzer** - Signals the end of the normal cook cycle when cooking time expires.

**Timer** - Times the cooking cycle and signals the buzzer at the end of the cycle.

**Door Switch** - Allows the oven to operate when the doors are closed but stops the oven from operating when the doors are opened.

**Blower Motor** - Operates the oven cavity blower. Also, an internal centrifugal switch on the motor is utilized to allow the connection of power to the heat relay when the motor is at operating speed.

**Transformer (T1)** - Provides 24 VAC power to the ignition control module and heating circuit.

**Motor Control Relay(s) (SG4C/SG6C)** - Provides power to HI and LOW speed motor windings based on operator requirements.

**Solid State Temperature Controller (SG4D/SG6D)** - Monitors temperature sensor and regulates the oven cavity temperature by controlling the heat relay through the blower motor centrifugal switch contacts.

**Ignition Control Module** - Provide ignition spark and monitors burner(s) flame current during ignition sequence.

**Ignition Electrode and Flame Sense Device** - Ignites the gas and senses the presence of a flame. The flame presence generates a micro-amp flame sense current that is monitored by the ignition control module. A flame sense current of 1 micro amp (minimum and stable) is required to maintain burner ignition.

**Power On Light (SG4D/SG6D)** - Lit whenever the Master Switch (S1) is turned to ON or OVEN COOL mode.

**Heat Light** - Lit whenever temperature controller is calling for heat.

**No Ignition Light (SG4C/SG6C)** - Lit when power is turned ON, during ignition trial and gas purge time and when no flame is detected by flame sensor. If the oven fails to ignite after three attempts, it will remain lit until power is reset.

**Temperature Probe (SG4D/SG6D)** - This temperature probe is a thermistor device. A thermistor is a calibrated resistor which changes resistance with the temperature. As the temperature increases, the resistance of the thermistor decreases. The resistance of the probe is compared to the resistance of the temperature controller resistor in to control and maintain temperature.

**Temperature Probe (SG4C/SG6C)** - This temperature probe is a J-type thermocouple. As the temperature increases, a DC voltage is generated within this thermocouple and compared to a list of temperature values stored within the cooking computer memory to control and maintain temperature.

**High Limit Thermostat** - Protects the oven from temperatures above 550°F by removing power from the first valve (safety) on the dual solenoid gas valve which stops the flow of gas to the burner. Auto resets at 500°F.

**Gas Valve (Dual Solenoid)** - Contains two valves. The first valve is opened when the unit is turned on and the limit temperature is not exceeded. The second valve is turned by the heating system. Both valves must be open in order to get gas to the main burners.

**SSR1 and SSR2 (SG4C/SG6C)** - When SSR1 is energized, it connects power to the blower motor for HI fan speed operation. When SSR2 is energized, it connects power to blower motor for LOW speed operation.

**Cooling Fan** - Circulates cooler air from rear of oven forward to cool components in the control area.

**Computer Control (SG4C/SG6C)** - Monitors temperature sensor and regulates the oven cavity temperature by controlling the heat relay (R1) through the blower motor centrifugal switch contacts. Also, counts the time of the product and signals the electronic alarm at the end of the cook cycle.

**Power Level Control** - Selects the percent of heat input between 22% and 100%. Power level must be on for oven to work.

Plug, Socket and Components (SG4D/SG6D)

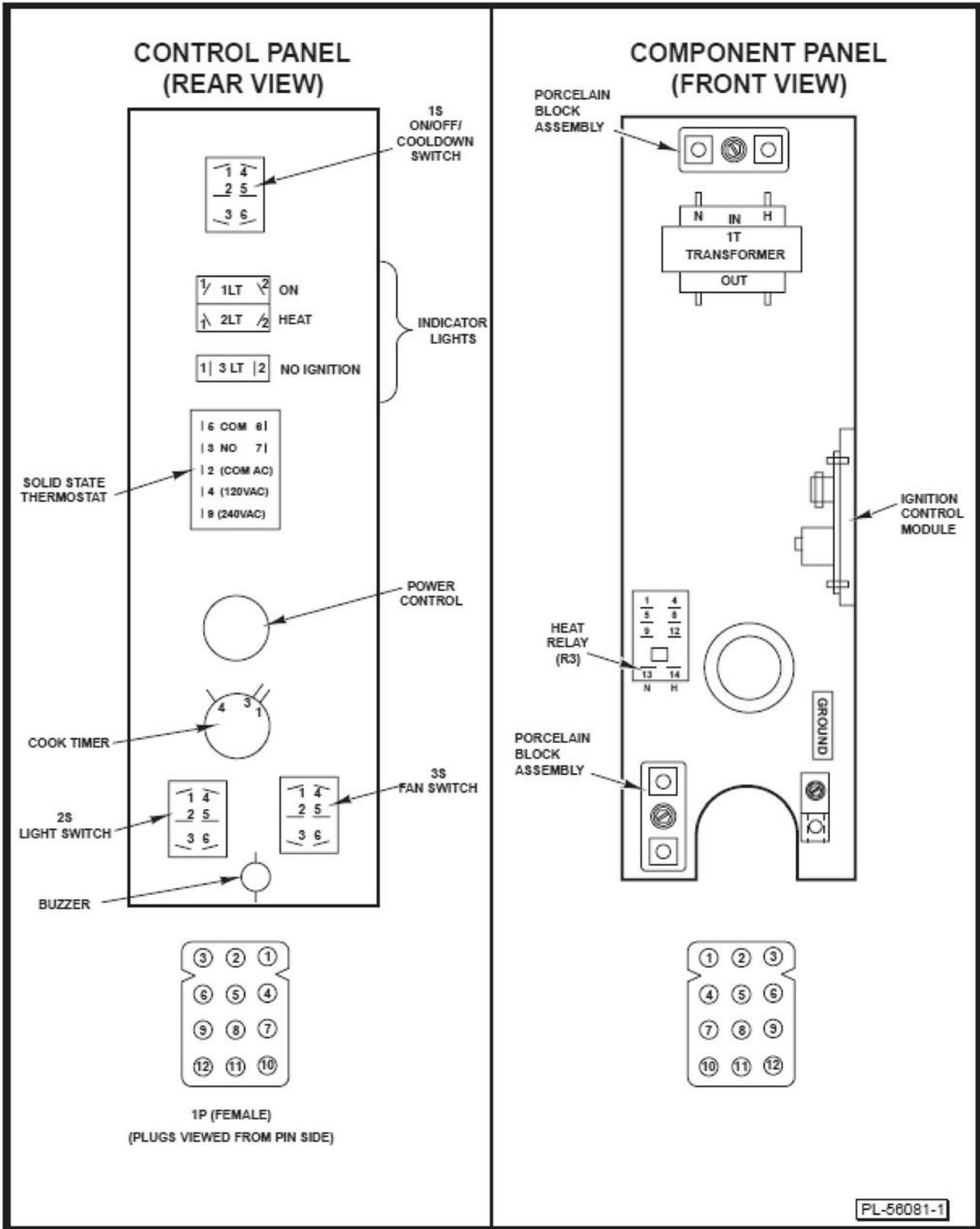


Fig. 71

Plug, Socket and Components (SG4C/SG6C)

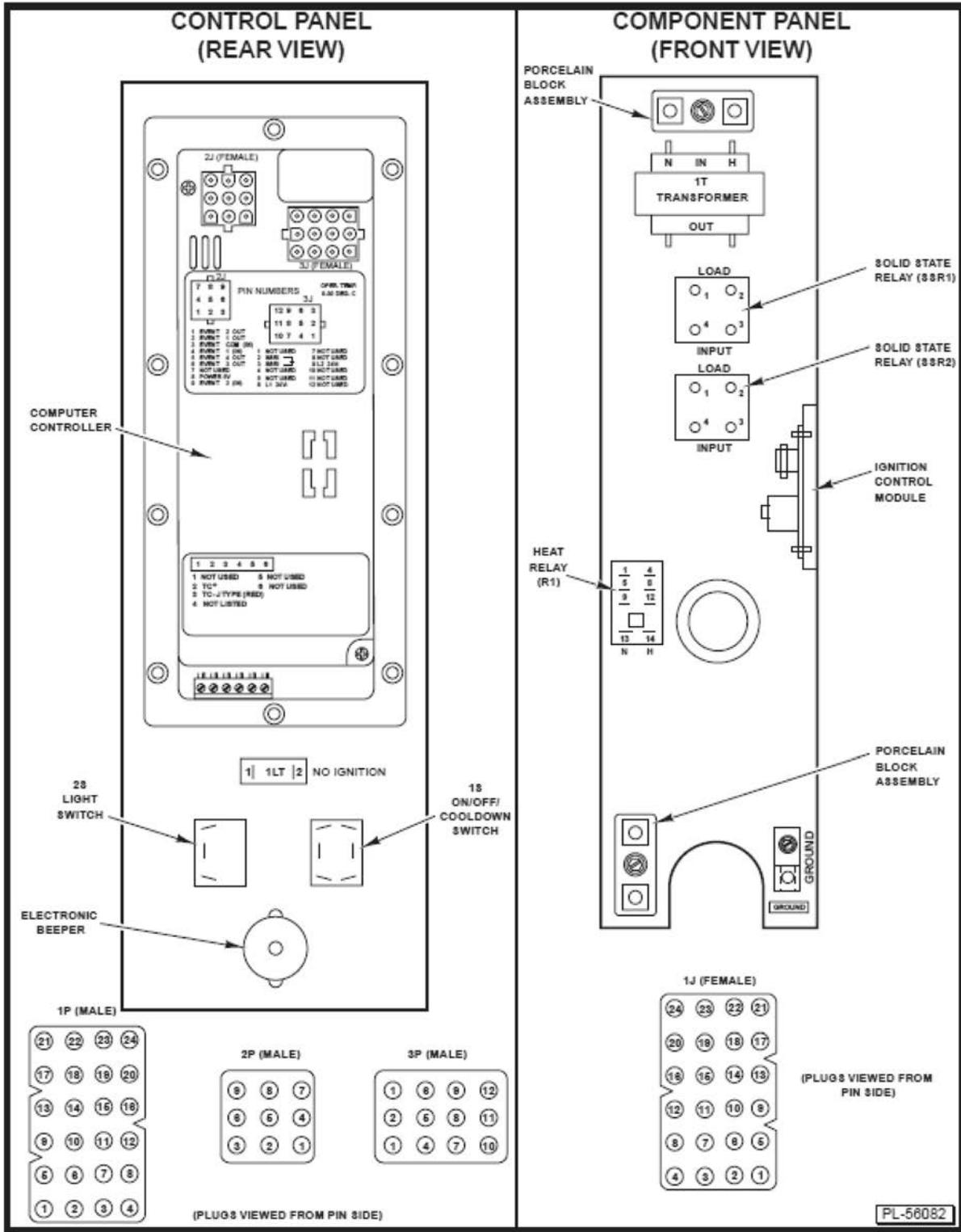
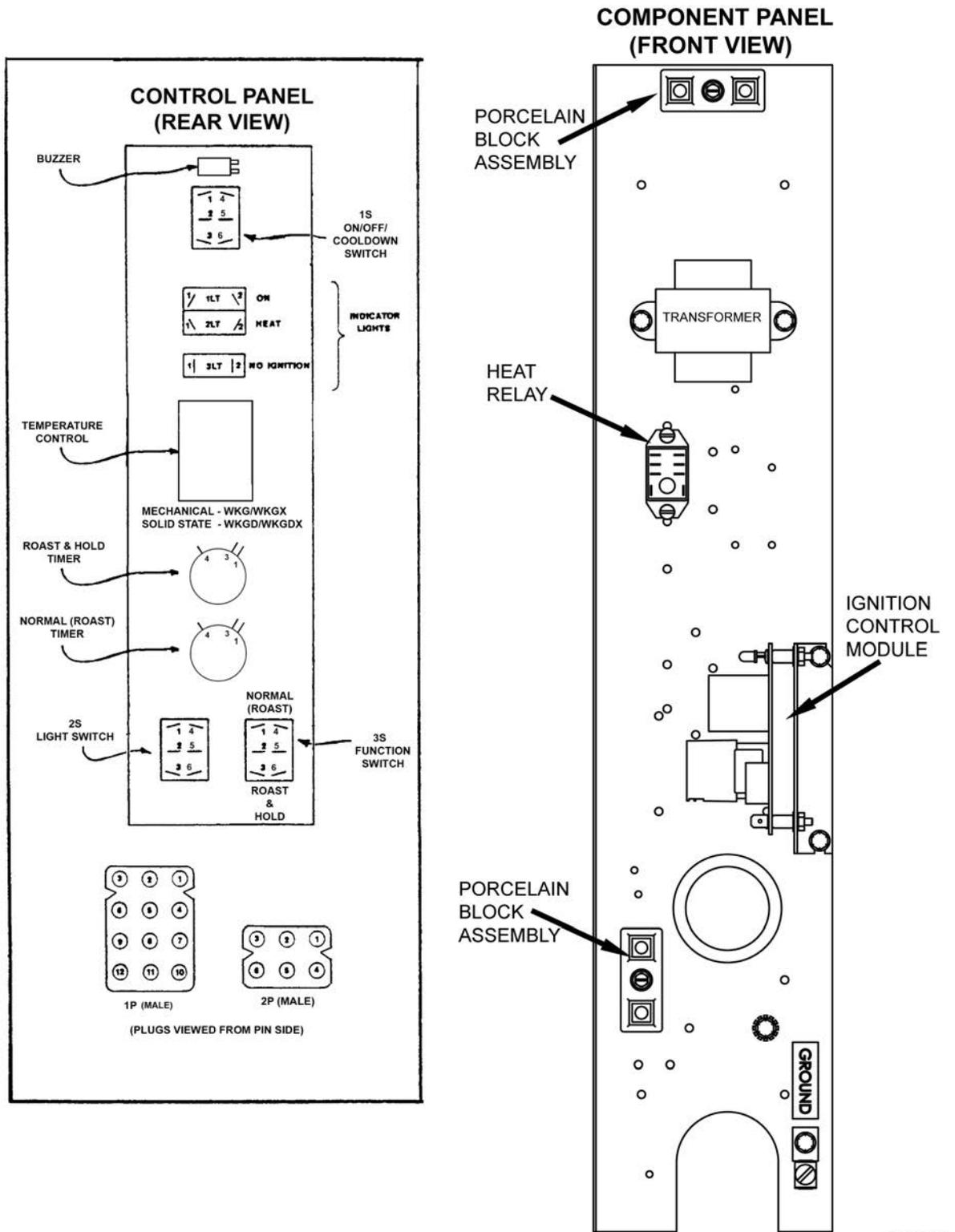


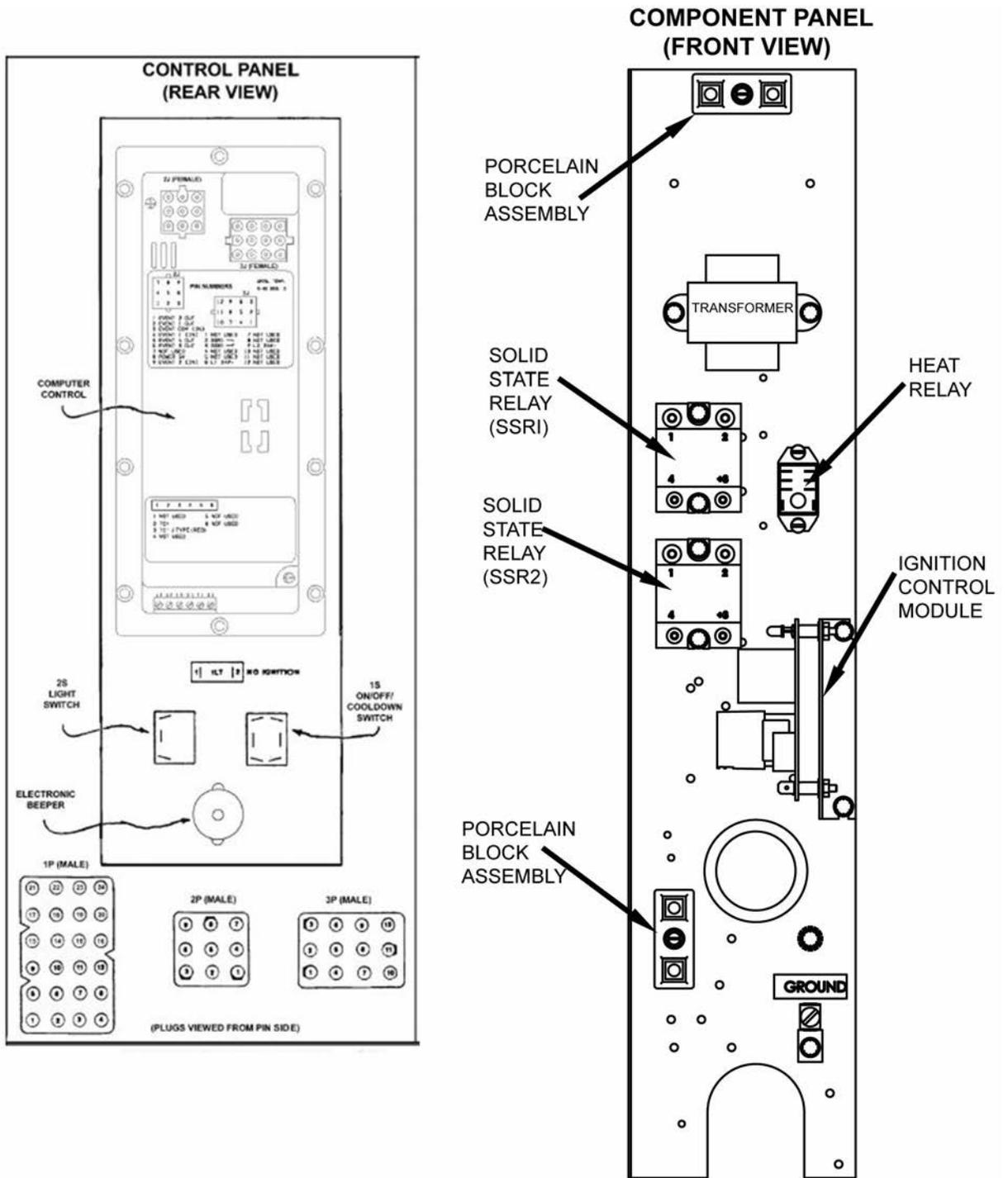
Fig. 72



DERIVED FROM 424207

AI4912

STARTING AT SERIAL NUMBER 481913936 (STANDARD)



DERIVED FROM 424826

AI4913

**STARTING AT SERIAL NUMBER 481913936 (COMPUTER)**

**SEQUENCE OF OPERATIONS**

**SG4D/SG6D with Solid State Temperature Controller**

Schematic 424373-1 will be used to explain the electrical sequence of operation.

**Cook Cycle**

1. Conditions

- A. Oven connected to correct voltage.
    - 1) L1 (HOT) to power switch (S1).
    - 2) L2 (neutral or second line) to one side of the following components: L1 of the power level control, power ON light, heat light, temperature controller board terminal 9 (120VAC) or terminal 10 (208-240 VAC), oven cavity lights, buzzer, timer motor, heat relay coil (R3), convection fan motor common (C), transformer primary T1), motor speed (Hi/Low) relay coil (R1), hold relay coil (R2) and the component cooling fan.
  - B. Oven properly grounded.
  - C. Gas supply valve ON.
  - D. Gas combination control valve ON.
  - E. Power switch (S1) OFF.
  - F. Oven light switch (S2) ON/OFF (position has no affect on the function of the normal cooking cycle).
  - G. Temperature controller dial set to lowest temperature (fully counterclockwise).
  - H. High limit switch closed (position has no affect on the function of the normal cooking cycle).
  - I. Timer in the OFF position.
  - J. Oven doors closed.
  - K. Door switch contacts closed.
  - L. Oven cavity temperature below 140°F.
  - M. Power level switch to 100%.
2. Set temperature controller dial to desired temperature.
    - A. Contacts J3 and J5 close.
  3. Power switch (S1) is turned ON.
 

**NOTE:** Power is available to the oven light switch

    - A. Component cooling fan energized.
    - B. ON light (amber) is lit.
    - C. Power to timer terminal C.
    - D. Transformer (T1) energized.
      - 1) Power (24 VAC) to one side of the following components: heat relay (R3) normally open (N.O.) contact.
      - 2) First valve (safety) on the gas valve energized. Gas does not flow to the burner until the 2nd valve (main) is energized.
      - 3) Ignition module energized.
    - E. Heating light is lit.
    - F. Power to one side of centrifugal switch.
    - G. Convection fan motor is energized through (S3) high-low.
      - 1) When the convection fan motor reaches operating speed, the centrifugal switch (N.O.) on the motor closes.
    - H. Heat relay is energized.
      - 1) N.O. contacts close.
  4. Heating circuit is powered.
    - A. No ignition light (red) comes ON.
    - B. Module performs a self diagnostic test for 4 seconds.
    - C. Second valve (main) on the gas valve is energized. Gas starts to flow to burners.
    - D. Sparking begins, the no ignition light goes out and burners light.

**NOTE:** Sparking continues for up to 7 seconds or until a flame is established on both burners. If a flame is sensed on both burners, the no ignition light stays out and burner remains lit. If a flame is not sensed on both burners after 7 seconds of sparking, the no ignition light comes back on, second valve (main) on the gas valve is de-energized and gas flow to the burner stops. Ignition trial cycle repeats after a 15 second purge between cycles for two additional tries before locking out. To reset after a lockout, turn power switch (S1) OFF then ON.
  5. Oven reaches set temperature.
    - A. Temperature controller de-energizes internal relay and the normally open (N.O.) contacts open.
      - 1) Heat light goes out.
    - B. Power removed from heat relay.
    - C. Heat relay normally open (N.O.) contacts OPEN.
    - D. Power removed from heating circuit.
      - 1) Second gas valve de-energized.

6. The oven will continue to cycle on the temperature controller until the doors are opened or master switch (S1) is turned to the OFF or OVEN COOL position.

### Timer Cycle

The timer operates independently of the heating cycle. Additional time can be set or the timer can be turned OFF throughout the cooking cycle.

1. With the master switch turned ON, power is supplied to timer.
  - A. Set the timer to desired time.
  - B. Contacts 1 & 3 close, timer motor is energized and timing down begins.
2. Time expires on timer.
  - A. Contacts 1 & 3 open, timer motor is de-energized and timing stops.
  - B. Contacts 1 & 4 close.
    - 1) Buzzer energized and sounds. The buzzer continues to sound until the timer dial is set to the OFF position or additional time is set.

### Cool Down Cycle (Solid State Temperature Controller)

1. Conditions.
  - A. Oven is ON.
  - B. Oven cavity temperature needs to be lowered.
  - C. Doors are open.
    - 1) Convection fan de-energized.
    - 2) Thermostat de-energized.
      - a. Heat light out.
      - b. Power removed from heat relay.
    - 3) 24 V transformer de-energized.
    - 4) Cooling fan de-energized.
2. Power switch (S1) turned to COOL DOWN.
  - A. Power to fan speed switch (S3). Set fan speed switch to either HI or LO.
3. If door is closed, power is supplied to one side of the following components:
  - A. Power ON light (Amber) comes ON.
  - B. Transformer (T1) energized.

- 1) Power (24 VAC) to one side of the following components: heat relay (R3) normally open (N.O.) contacts, high limit connected through the normally closed (N.C.) contacts to the first valve (safety) on the dual solenoid gas valve.
  - a. First valve (safety) on the gas valve energized. Gas does not flow to the burner until the second valve (main) is energized.
- C. Component cooling fan.
- D. Power to timer and oven cavity lights.
4. The oven will remain in this condition until the master switch (S1) is turned to the OFF or ON position.

### SG4C/SG6C with Computer Controller

Schematic 426575-1 will be used to explain the electrical sequence of operation.

### Normal Cook Cycle

1. Conditions
  - A. Oven connected to correct voltage.
    - 1) L1 (hot) to power switch (S1).
    - 2) L2 (neutral or second line) to one side of the following components: oven cavity lights, convection fan motor common (C), transformer primary (T2), component cooling fan and the heat relay coil (R1).
  - B. Oven properly grounded.
    - 1) Ground (GND) to one side of the following components: computer control case, no ignition light, transformer secondary (T2), ignition control module, the first valve (safety) and second valve (main) on the dual solenoid gas valve and computer control pin 9 (C3-9).
  - C. Gas supply valve ON.
  - D. Gas combination control valve ON.
  - E. Power switch (S1) OFF.
  - F. Computer control is set up properly and ready to use.
  - G. Oven lights switch (S2) ON or OFF (position has no affect on the function of the normal cook cycle).
  - H. High limit thermostat closed.
  - I. Oven doors closed.

- J. Oven cavity temperature below 140°F.
- 2. Power switch (S1) turned ON.
  - A. Power (120 VAC) to computer control pin 3 (C3-3). Power at pin 3 is not transferred to other components until computer control is energized and operation conditions are met.
  - B. Power is available to the oven light switch (S2).
  - C. Power to terminal 1 on solid state relay 1 SSR1-load side and solid state relay 2 SSR2-load side.
  - D. Component cooling fan energized.
  - E. Transformer (T1) is energized, 24 volt output.
    - 1) Power (24 VAC) to one side of the following components: heat relay (R1) normally open (N.O.) contacts, high limit connected through the normally closed (N.C.) contacts to the first valve (safety) on the dual solenoid gas valve.
    - 2) First valve (safety) on the gas valve energized. Gas does not flow to the burner until the second valve (main) is energized.
    - 3) Ignition module energized.
    - 4) Power (24 VAC) to the oven computer control.
- 3. Control is energized and performs a power on self test before energizing outputs. If the control passes self test, then the outputs are energized and operation sequence continues, If control does not pass self test, then the corresponding error code is displayed.

**NOTE:** Control retains last temperature set.

- A. Computer control senses oven cavity temperature.
  - 1) With the oven cavity temperature below set point, the controls 120 VAC output from pin C3-2 is activated and power is connected to the common (C) side of the blower switch contacts on the convection fan motor.
  - 2) The controls 5 VDC output from pins C2-2 (-) and C2-8 (+) is activated and SSR1 relay is energized.
    - a. Convection fan motor is energized (fan speed on HI).

- 3) When the convection fan motor reaches operating speed:
    - a. The blower switch (N.O.) on the motor closes.
  - B. Heat relay coil (R1) energized.
    - 1) (R1) contacts (N.O.) close and the heating circuit is powered.
    - 2) Oven heat light on the control comes on.
  - C. Ignition module is energized.
    - 1) Heating circuit is powered.
    - 2) No ignition light (red) comes ON.
    - 3) Module performs a self-diagnostic test for 4 seconds.
    - 4) Second valve (main) on the gas valve is energized. Gas starts to flow to burners.
    - 5) Sparking begins, the no ignition light goes out and burners light.
- NOTE:** Sparking continues for up to 7 seconds or until a flame is established on both burners. If a flame is sensed on both burners, the no ignition light stays out and burner remains lit. If a flame is not sensed on both burners after 7 seconds of sparking, the no ignition light comes back on, second valve (main) on the gas valve is de-energized and gas flow to the burner stops. Ignition trial cycle repeats after a 15 second purge between cycles for two additional tries before locking out. To reset after a lockout, turn power switch (S1) OFF then ON.
- 4. Oven reaches set point temperature.
    - A. Computer control deactivates the 120 VAC output to heat relay (R1).
      - 1) Heat relay (R1) de-energized and the normally open (N.O.) contacts open.
    - B. Power removed from ignition control module.
      - 1) The second valve (main) on the gas valve is de-energized and gas flow to the burner stops.
      - 2) Oven heat LED on the control goes out.
      - 3) Oven ready LED on the control comes ON.
      - 4) Electronic beeper sounds momentarily.

- C. The oven will continue to cycle on the computer control until the doors are opened or power switch (S1) is turned to the OFF or COOL DOWN position.

**Temperature and Time Cycle (Normal Cooking)**

The computer's internal cook timer operates independently of the heating cycle. Additional time can be set or the timer can be stopped and restarted throughout the cooking cycle.

Refer to the Installation & Operation Manual for specific operation instructions of the oven computer control.

**Function Switch SG4C/SG6C** - Selects the cooking mode of the oven between Cook or Roast and Hold. Is used in conjunction with the Roast and Hold timer during Roast and Hold cooking. The selected mode also determines the fixed blower speed: HI for Cook and LO for Roast and Hold. If Roast and Hold is selected, when the Roast (then hold) time expires, the oven heating stops and the oven enters the hold mode. Once the oven cavity temperature drops to 150°F, the heat comes back on and the oven cycles at this temperature to hold the cooked product.

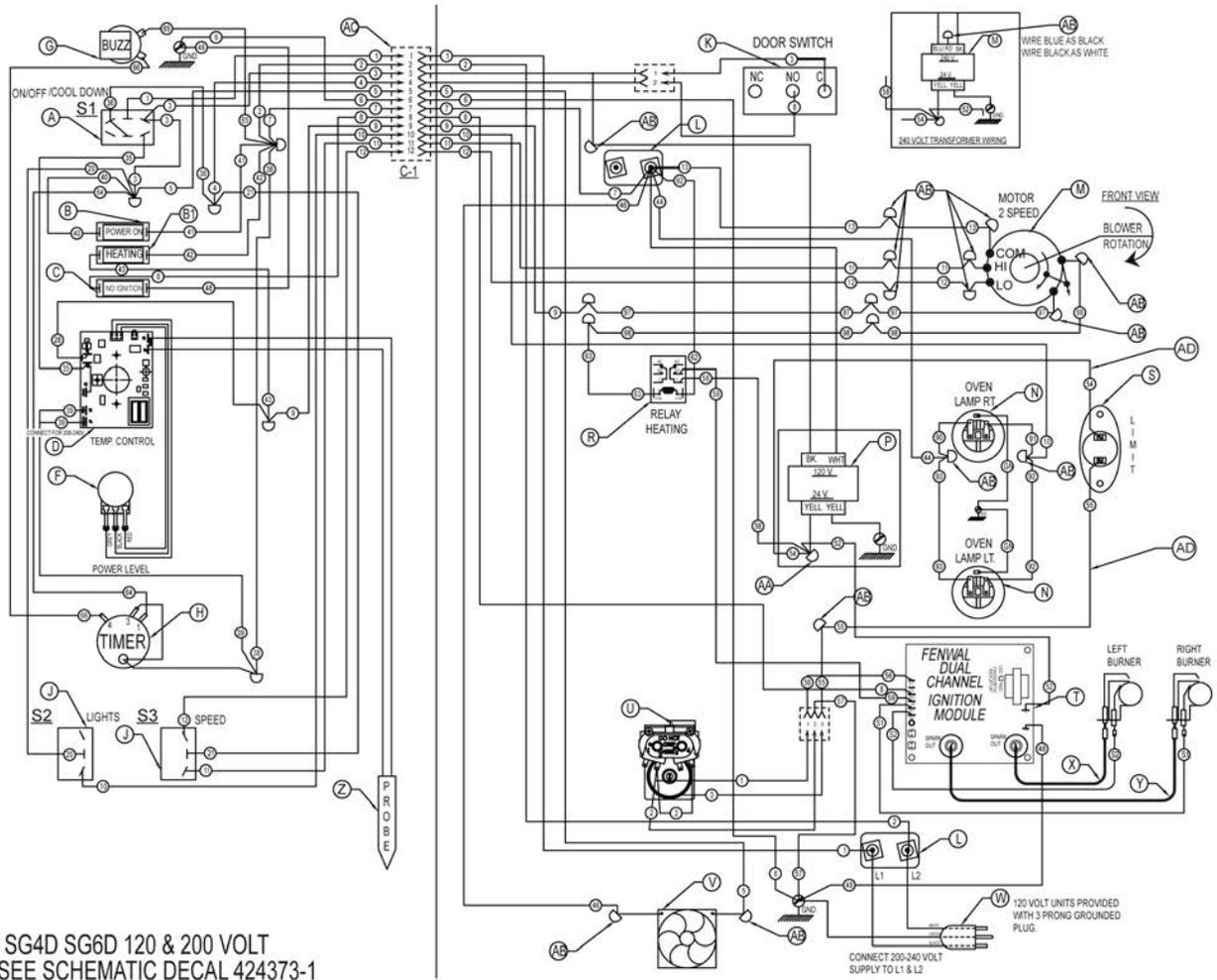
**Roast and Hold Cycle**

For a detailed explanation of the Roast and Hold mode, refer to the instructions manual.

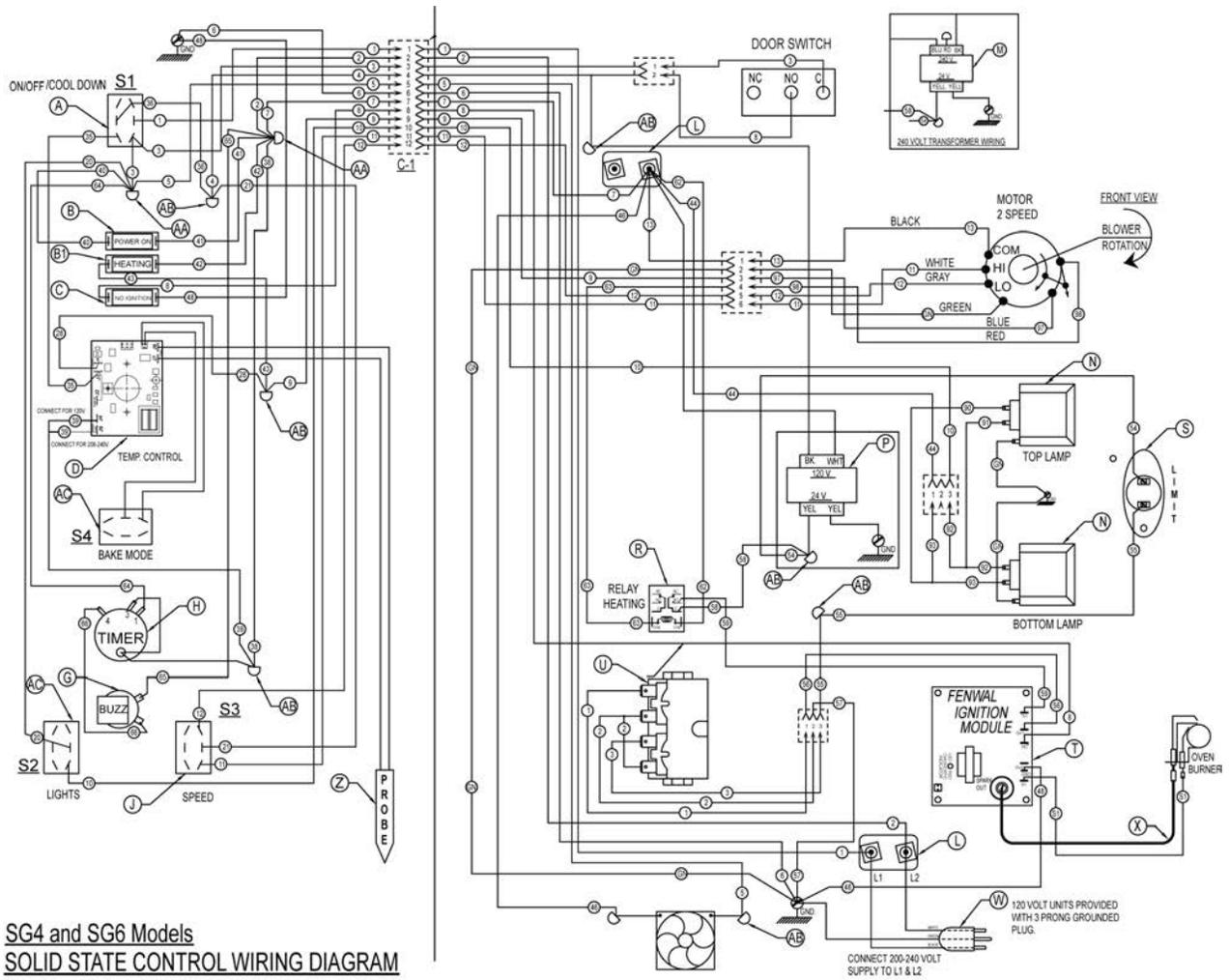
In the Roast and Hold mode, the operation of the computer control is identical to the normal cook cycle, with these exceptions:

1. Oven Roast and Hold light on the control comes ON.
2. Convection fan speed changes from HI to LO.
  - A. The computer control 5 VDC output from pins C2-2 (-) and C2-8 (=) is deactivated and SSR1 relay is de-energized.
- 1) Power (120 VAC) is removed from convection fan motor high speed terminal.
- B. The computer control 5 VDC output from pins C2-1 (-) and C2-8 (+) is activated and SSR2 relay is energized.
  - 1) Power (120 VAC) is applied to the convection fan motor low speed terminal.
3. At the end of the cook time, the electronic beeper sounds momentarily to indicate the end of the first stage cooking (oven operates normally at the temperature and time selected until time expires).
4. The display flashes HOLD as the oven enters the hold mode. This is also considered second stage cooking (oven heating stops but product continues to cook on residual heat).
  - A. Convection fan motor is de-energized.
  - B. Oven fan cycles with the output of the heating system. Anytime the system calls for heat, the fan must be running. After the oven has reached the 150°F set temperature, the heat and fan are deenergized.
5. After the oven temperature drops below 150°F, the heat comes back on and cycles as needed to maintain the hold temperature of 150°F.
  - A. Convection fan motor energized.
6. The oven continues to cycle in this manner until one of the following occurs:
  - A. A. The cook and hold mode is turned OFF.
  - B. Power switch (S1) is turned to the OFF or COOL DOWN position.

**WIRING DIAGRAMS**



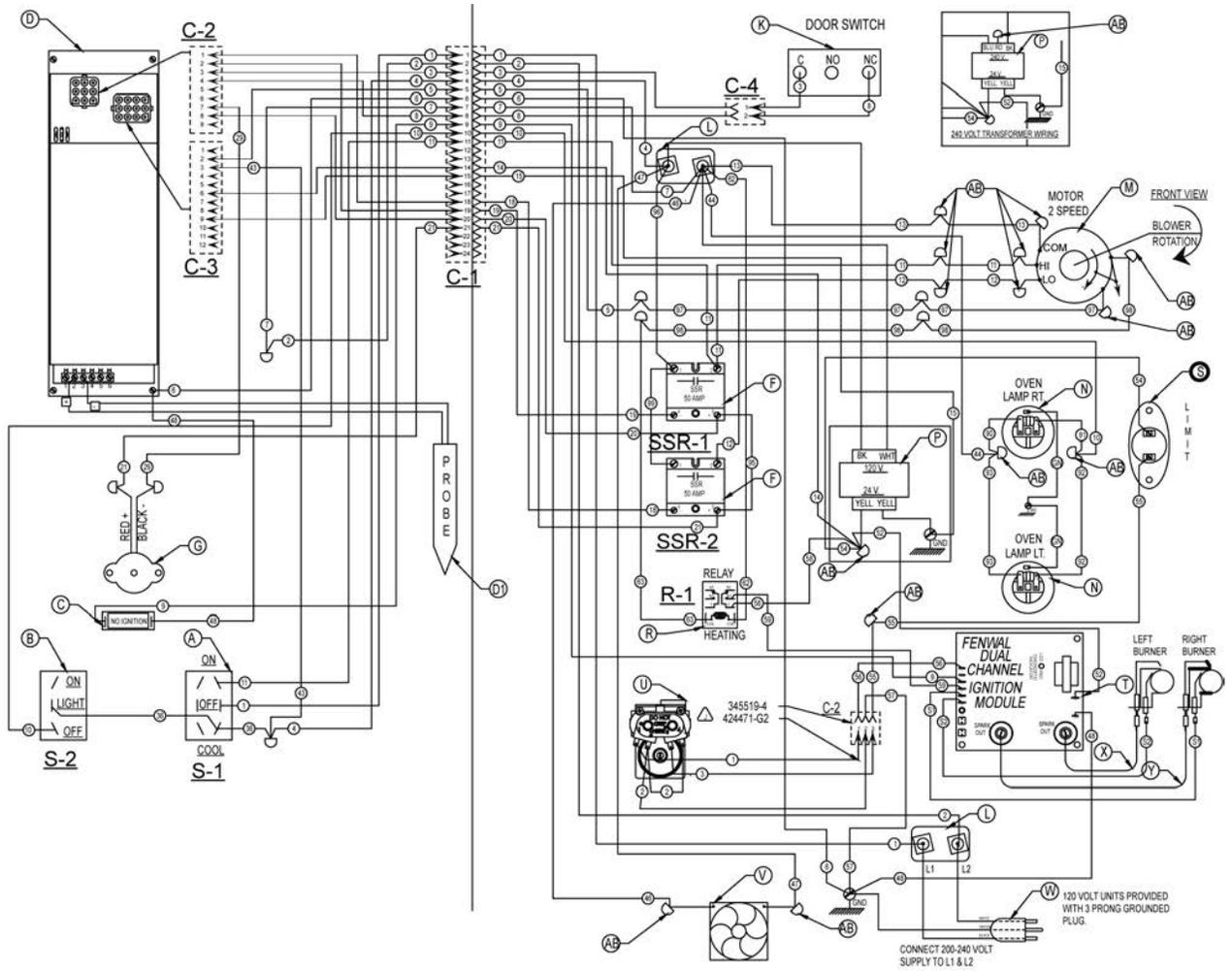
**Fig. 75**



**SG4 and SG6 Models**  
**SOLID STATE CONTROL WIRING DIAGRAM**  
**1 BURNER CONVECTION OVEN 120 & 240V (NEW SG4)**  
 DERIVED FROM 00959718

AI4891

**STARTING AT SERIAL NUMBER 481913936**

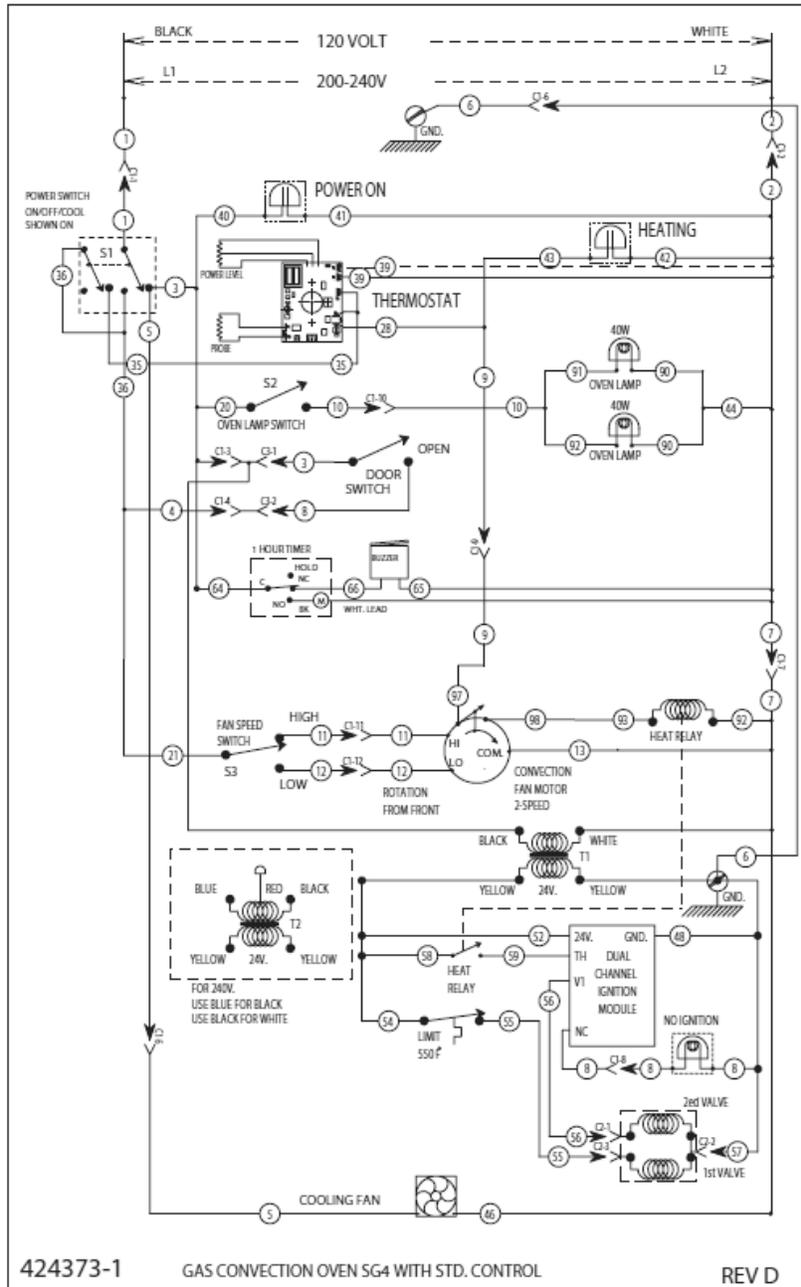


SG4 / SG6 CONVECTION OVEN DUAL BURNER - COMPUTER CONTROL 120 TO 240V.  
 REFER TO SCHEMATIC 426575 - 1  
 DERIVED FROM 426574 Rev. C

AI4903

Fig. 77

**SCHEMATICS**



**Fig. 78**

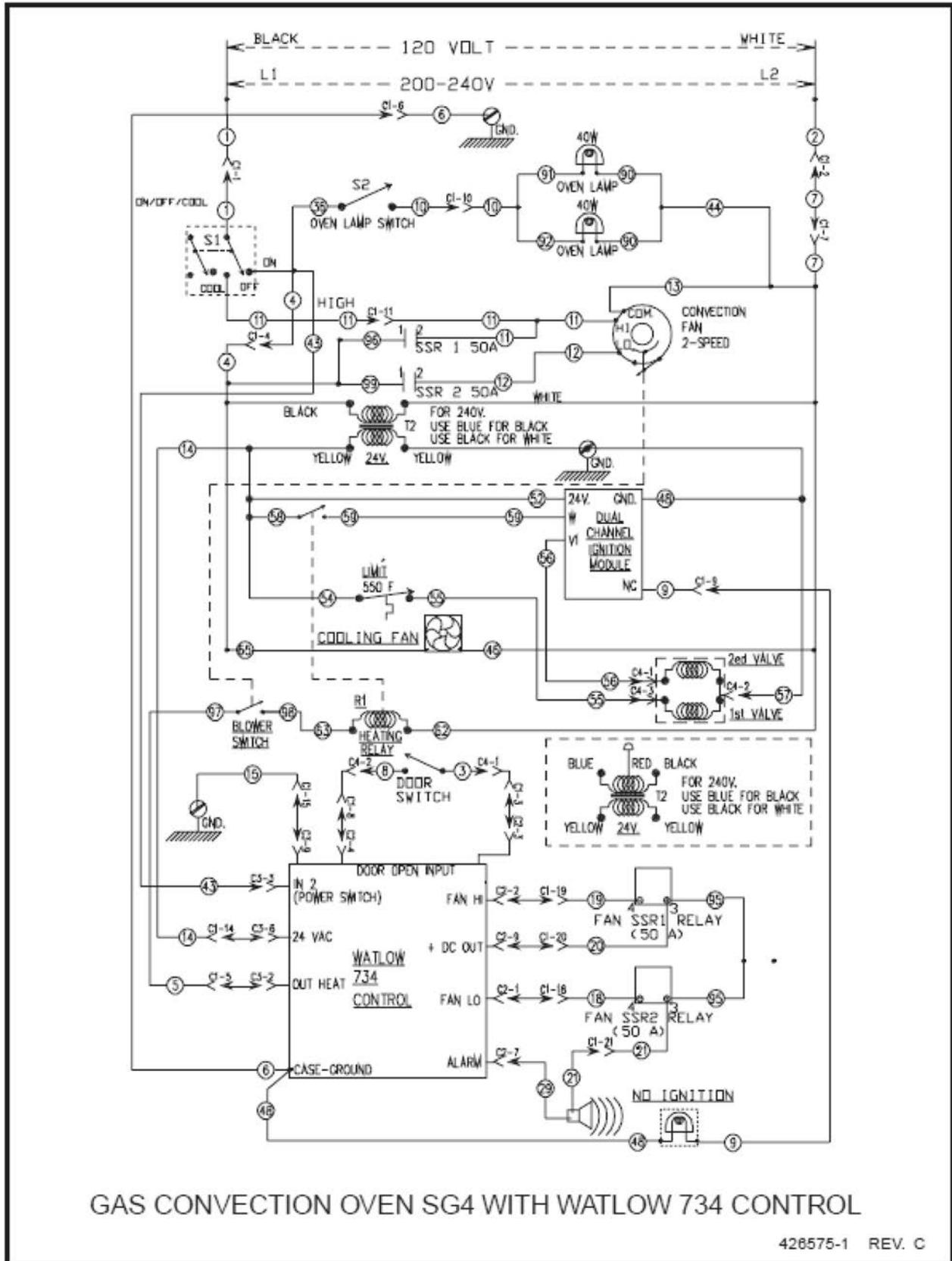


Fig. 79

# TROUBLESHOOTING

## TROUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES
Blower motor doesn't run in OVEN COOL or ON position.	Line voltage. Power/Master switch malfunction. Fan switch malfunction. Interconnection wiring malfunction.
Blower motor doesn't run in the ON position. Cool Down functions OK.	Door switch malfunction. Power/Master switch contacts inoperative. Interconnecting wiring malfunction.
Blower motor doesn't run in OVEN COOL position. Runs OK in ON position.	Power/Master switch malfunction. Interconnection wiring malfunction.
Gas does not ignite. No spark. No Ignition light is not ON.	Shorted electrode on igniter/flame sense. Igniter cable (high voltage) OPEN. Heat relay malfunction. Centrifugal switch in blower motor inoperative. Transformer inoperative. High limit thermostat open. Interconnecting wiring malfunction. Ignition module malfunction.
Sparks but gas does not ignite.	Gas solenoid valve off or inoperative. Manual gas valve closed. Gas supply OFF or insufficient gas pressure. Interconnecting wiring malfunction. Ignition module malfunction.
Gas ignites but will not maintain flame.	Igniter lead connections malfunction. Igniter ground inoperative. Igniter/flame sense malfunction or maladjusted. Insufficient gas pressure. Snorkel vent plugged, obstructed or missing. Incorrect polarity from transformer to ignition module.

SYMPTOMS	POSSIBLE CAUSES
Excessive or low heat.	Temperature probe malfunction. Temperature control board malfunction. Gas pressure insufficient. Gas orifice plugged or obstructed. Power level may be set to low.
Mechanical timer inoperative or not functioning properly.	Interconnecting wiring malfunction. Line voltage incorrect. Timer malfunction.
Component cooling fan does not run.	Motor inoperative. Interconnecting wiring malfunction.
Uneven cooking.	Convection fan motor speed/direction. Poor combustion. Gas pressure incorrect. Exhaust vent plugged or obstructed. Snorkel vent plugged or obstructed. Air flow baffles missing or damaged.
Intermittent problems.	High ambient temperatures. Wiring connections loose. Cooling fan malfunction.
No power to temperature controller.	Power/Master switch in OVEN COOL position. Door or door switch open.
No heat; LED on the controller is flashing.	Probe open or shorted.

**COMPUTER CONTROL MODELS ONLY**

SYMPTOM	POSSIBLE CAUSES
Oven does not heat.	High limit switch open. Probe malfunction. Control malfunction. Power level control set to off.
High limit thermostat shutting off gas burner.	Probe malfunction. Control malfunction.
Oven not hot enough.	Probe malfunction. Control range high (rH1) setting to low. See Setup Mode under Computer Controller (SG4C/SG6C).

**ERROR CODES**

CODE AND PROBLEM	PROBABLE CAUSE	SOLUTION
Er01 - ROM check sum error	Internal ROM malfunction	Cycle power.

CODE AND PROBLEM	PROBABLE CAUSE	SOLUTION
Er02 - RAM check sum error	Internal RAM malfunction	Cycle power.
Er03 - Ambient sensor error	Ambient temperature is below 32°F	Check ambient temperature at the control.
Er04 - Configuration error	Microprocessor malfunction	Cycle power.
Er05 - EEPROM error	Power loss while storing data	Cycle power.
Er06 - Zone 1 A/D under flow error	<ul style="list-style-type: none"> <li>• Incorrect sensor type</li> <li>• Measuring temperature outside the sensor range</li> </ul>	<ul style="list-style-type: none"> <li>• Check the InP1 setup parameter. Verify that it matches the sensor.</li> <li>• Check sensor and connections for a reversed or open sensor. If the condition causing the error is resolved, the error will clear.</li> </ul>
Er07 - Zone 1 A/D overflow error	Open sensor	<ul style="list-style-type: none"> <li>• Check the InP1 setup parameter. Verify that it matches the sensor.</li> <li>• Check sensor and connections for a reversed or open sensor. If the condition causing the error is resolved, the error will clear.</li> </ul>
Er10 - Stack overflow error	Microprocessor malfunction	<ul style="list-style-type: none"> <li>• Cycle Power.</li> <li>• Check sensor and connections for a reversed or open sensor.</li> </ul>
Er11 - Open sensor error	Open sensor	<ul style="list-style-type: none"> <li>• Check the InP1 setup parameter. Verify that it matches the sensor.</li> <li>• Check sensor and connections for a reversed or open sensor.</li> </ul>
Er12 - Shorted sensor	<ul style="list-style-type: none"> <li>• Incorrect sensor type</li> <li>• Measuring temperature outside the sensor range</li> </ul>	<ul style="list-style-type: none"> <li>• Check the InP1 setup parameter. Verify that it matches the sensor.</li> <li>• Check sensor and connections for a reversed or open sensor.</li> </ul>

### IGNITION MODULE DIAGNOSTICS

NUMBER OF LED FLASHES	INDICATES	POSSIBLE CAUSE
2 Flashes	Burner flame with no call for heat.	<ol style="list-style-type: none"> <li>1. Main gas valve stuck open, burner on with no call for heat from the temperature control system. Replace main gas valve.</li> <li>2. Check flame sensor and sensor wire.</li> <li>3. Ignition module malfunction.</li> </ol>

NUMBER OF LED FLASHES	INDICATES	POSSIBLE CAUSE
3 Flashes	Ignition system has locked out.	1. Ignition module could not "Prove" flame after three tries for ignition within the lockout time timing provided. <ul style="list-style-type: none"> <li>A. Check for gas supply to burner.</li> <li>B. Check for spark to ignition electrode.                             <ul style="list-style-type: none"> <li>1) Check spark gap (gap should be 1/8").</li> </ul> </li> <li>C. Check for flame current in flame sense wire (0.000001 Amp Min. DC) using FC designated terminals.                             <ul style="list-style-type: none"> <li>1) Check burner adjustment (air/gas).</li> </ul> </li> </ul> <p><b>NOTE:</b> If A thru C check out, replace ignition module.</p>
4 Flashes	Internal board problem.	1. Ignition module malfunction. Remove power from "R" terminal for five seconds then reconnect. If fault remains, replace ignition module.



## SG4 & SG6 Series Full Size Gas Convection Ovens

SG4D

ML-114875

SG4C

ML-114876

SG6D

ML-114877

SG6C

ML-114878

### - NOTICE -

This Manual is prepared for the use of trained Hobart Service Technicians and should not be used by those not properly qualified.

This manual is not intended to be all encompassing. If you have not attended a Hobart Service School for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained Hobart Service Technician.

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# SERVICE UPDATES

## SERVICE UPDATES

- BLOWER AND MOTOR Starting at Serial Number 481913936
- OVEN DOORS (INDEPENDENT DOORS) Starting at Serial Number 481907146
- INTERIOR LIGHTS (Rear Mounted, Round)
- INTERIOR LIGHTS (Side Mounted, Square)
- FLAME SENSE CURRENT TEST
- DOOR ADJUSTMENT
- WIRING DIAGRAMS
- SCHEMATICS
- COMPONENT DESCRIPTION

## TIS DOCUMENT LIST - SG4D AND SG6D

### SERVICE TAB

Document Title	Document Type
SG4D and SG6D Service Manual	Service Manual

### SERVICE TAB (Multimedia)

Document Title	Document Type
Repair Flood-Damaged Food Equipment	Service Bulletin
SG4C, SG4D, SG6C, SG6D Gas Snorkel Convection Ovens Installation and Operation	I &O Manual
Fundamentals of Gas	Service Instructions
SG4 Gas Convection Oven Sequence of Operation	Service Video
TSB 1037A Hobart to Vulcan "Common" Model Cross Reference List	Technical Service Bulletin (TSB)
SG4 and 6 Convection oven High Limit Replacement	Technical Service Bulletin (TSB)
SG4 Gas Convection Oven Sequence of Operation	Service
Rating Plate Locations on Current Vulcan-Hart/Wolf Range Equipment	Service Bulletin
SG4 & SG6 Series Full Size Gas Convection Ovens	Service Manual
TSB 1133 SG4 & SG6 Series (Vulcan) Gas Convection Ovens Infinite Switch Troubleshooting	Technical Service Bulletin (TSB)
TSB 1301 Onwatch Quicklook 72 for Gas Cooking Equipment	Technical Service Bulletin (TSB)
Vulcan SG4 & SG6 Series Infinite Switch - Part # 411503-1, -2	Technical Service Instruction (TSI)

### PARTS TAB (Multimedia)

Document Title	Document Type
Part Catalog for SG Series Gas Snorkel Convection Ovens After 8/6/04	Parts Catalog
Part Catalog for SG Series Gas Snorkel Convection Ovens Prior 8/6/04	Parts Catalog

<b>DIAGRAMS TAB</b>	
<b>Document Title</b>	<b>Document Type</b>
HGC5, DGC5, VC4G, WKGD Series	Wiring Diagram

# GENERAL

## INTRODUCTION

Procedures in this manual will apply to all models unless specified. Pictures and illustrations can be of any model unless the picture or illustration needs to be model specific. All models are equipped with a two-speed 1/2 HP electric motor, porcelain interior and two 30,000 BTU/hr burners as standard equipment. A power level control permits variable burner input from 15,000 BTU/hr to 60,000 BTU/hr.

Models SG4D and SG6D are equipped with solid state-controls and a 60-minute timer (a 5-hour timer is optional). Models SG4C and SG6C have a computer control with built-in Roast & Hold.

Models SG6D and SG6C have a 4" deeper cavity than models SG4D and SG4C.

## INSTALLATION

Generally, installations are made by the dealer or contracted by the dealer or owner. Detailed installation instructions are included in the Installation & Operation Manual which is sent with each unit.

## OPERATION

Detailed operation instructions are included with each oven.

## CLEANING

Detailed cleaning procedures are included in the Installation & Operation Manual for the appropriate model.

## LUBRICATION

Motor bearings are sealed and prelubricated.

## SPECIFICATIONS

### Electrical Data

Model	Volts	Hertz	Phase	Amps
SG4D	120	60	1	7.5
SG4C	208	60	1	3.6
SG6D	240	60	1	3.75
SG6C				

### Gas Data

Model	Input BTU/hr		Manifold Pressure	
	Natural	LP Gas	Natural	LP Gas
SG4D				
SG4C				
SG6D	60,000	60,000	3.5" W.C. (0.9 kPa)	10" W.C. (2.2 kPa)
SG6C				

## TOOLS

### Standard

- Hand tools (standard set).
- VOM with AC current tester (any quality VOM with a sensitivity of at least 20,000 ohms per volt can be used).
- Gear puller to remove blower.

### Special

- Temperature tester (thermocouple type).
- Manometer

# REMOVAL AND REPLACEMENT OF PARTS

## COMPONENT LOCATION

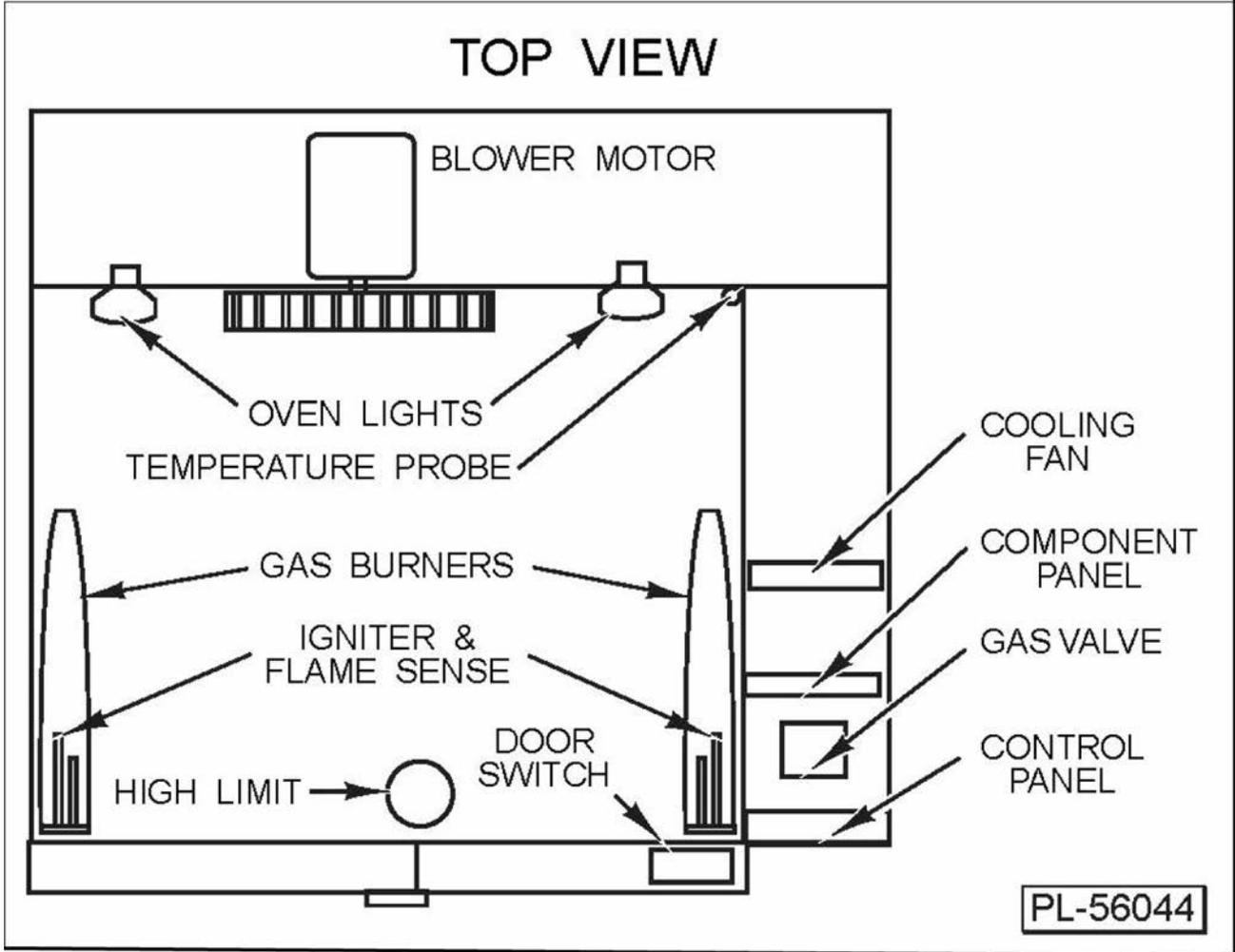


Fig. 1

## COVERS AND PANELS



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

**Top Front Cover**

1. The top front cover is secured with four screws, two on each side of cover. Remove these screws, then remove the cover from the oven.

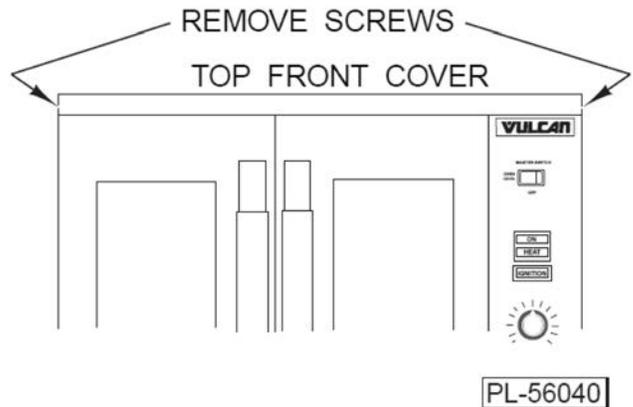
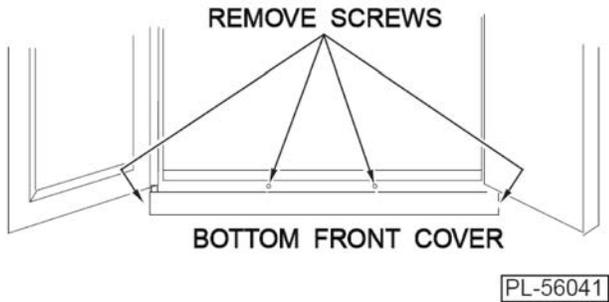


Fig. 2

- Reverse the procedure to install.

**Bottom Front Cover**

- The bottom front cover is secured with six screws, two on each side of cover and two on the top. Remove these screws then remove the cover from the oven.

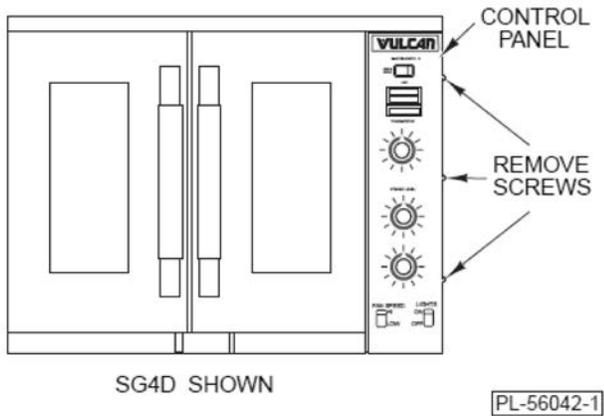


**Fig. 3**

- Reverse the procedure to install.

**Control Panel**

- Remove three screws on the right side which secure the control panel. Pull the panel away from the oven.

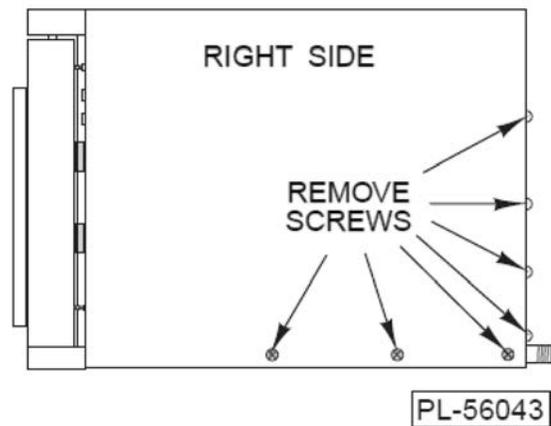


**Fig. 4**

- Disconnect the temperature probe leads from the solid state temperature controller.
- Unplug the wire harness connector to the control panel components.
- Reverse the procedure to install.

**Right Side Panel**

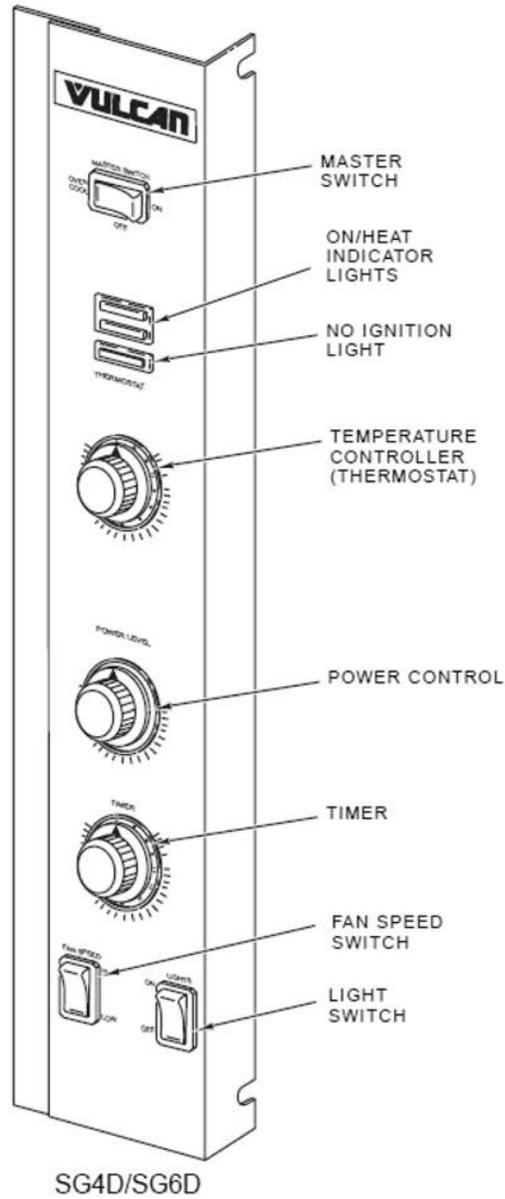
- Remove the screws that secure the right side of the control panel.
- Remove the remaining screws securing the right side panel.
- Pull the right-side panel out at the bottom then down to remove.



**Fig. 5**

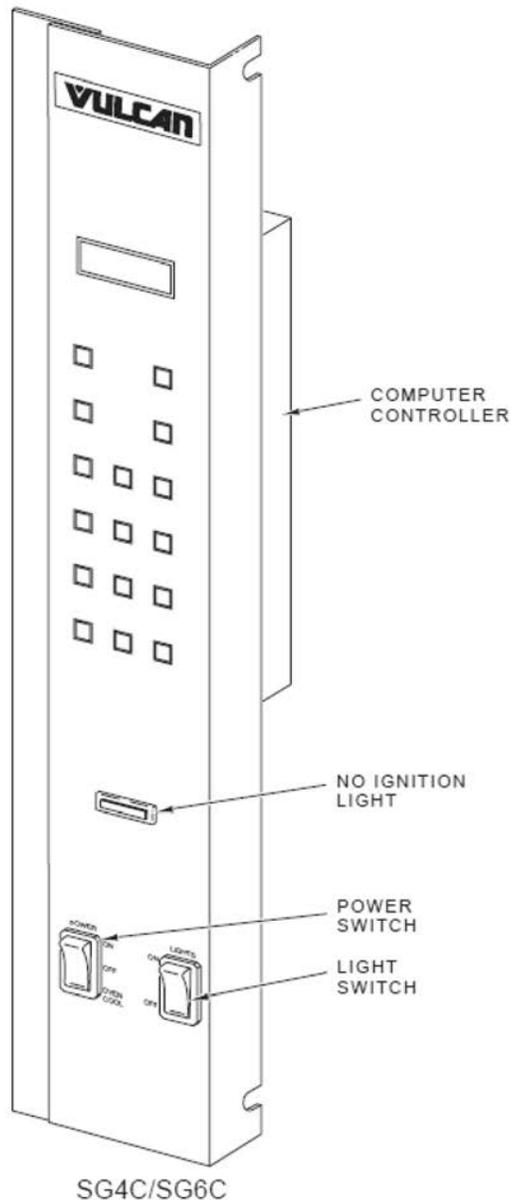
- Reverse the procedure to install.

## CONTROL PANEL COMPONENTS



PL-56045-1

Fig. 6



PL-56046

Fig. 7

**Procedure**



**WARNING**

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

1. Remove the control panel as outlined under Covers and Panels.
2. Remove the component being replaced.
3. Reverse the procedure to install the new component, then check oven for proper operation.

## COMPONENT PANEL COMPONENTS

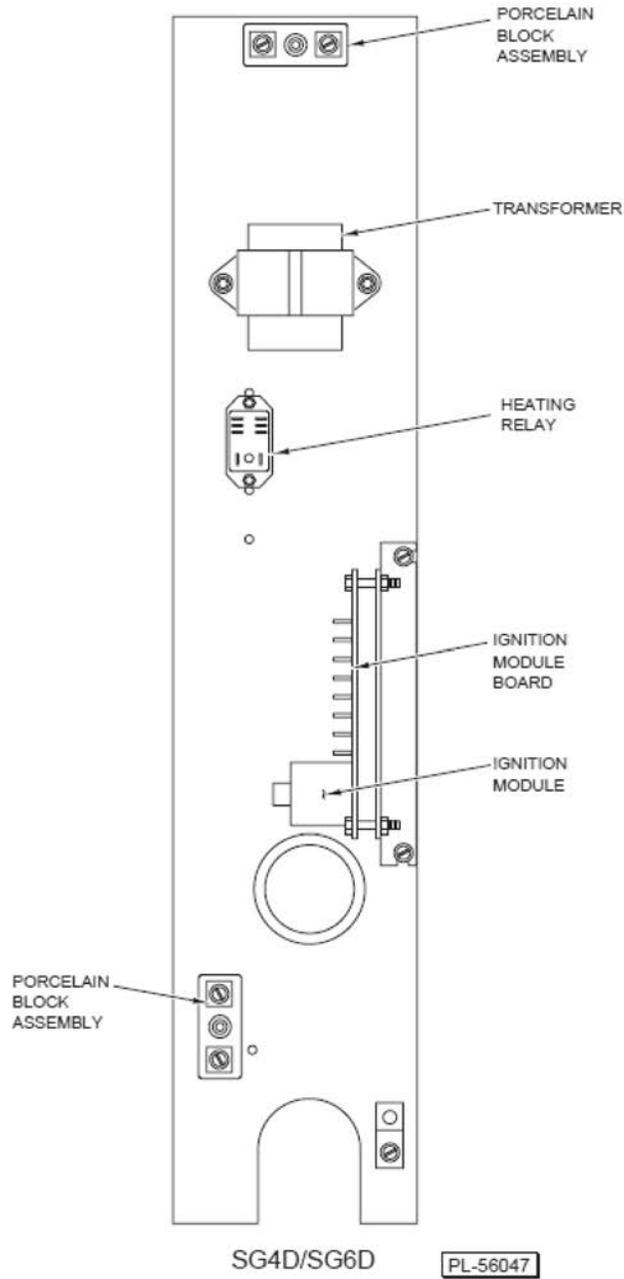
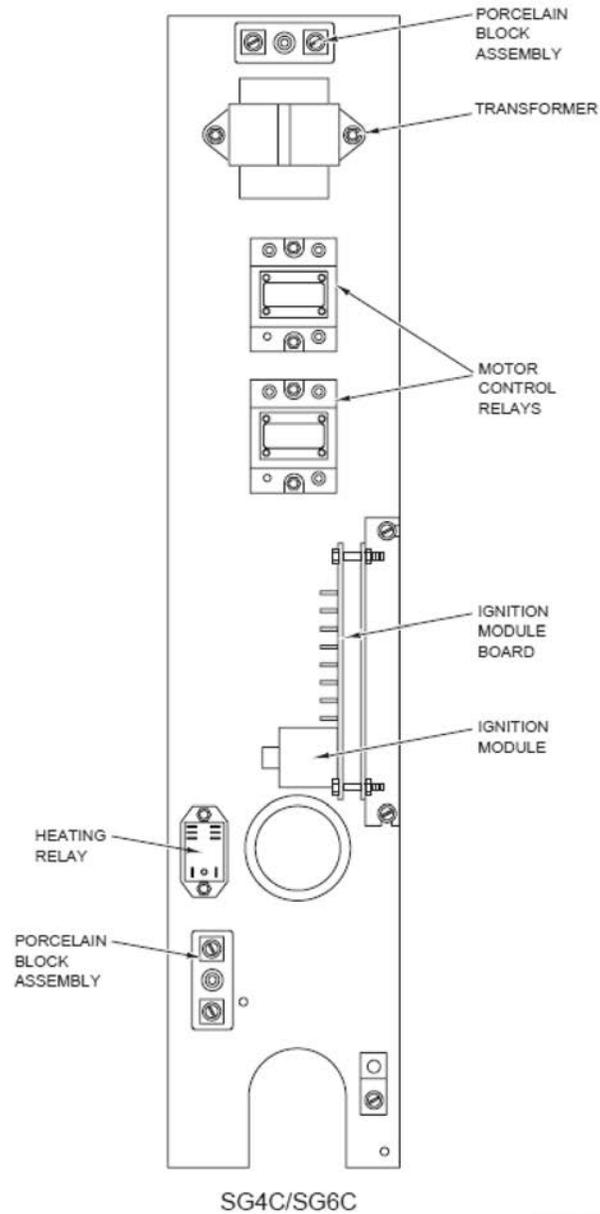


Fig. 8



PL-56048

Fig. 9

Procedure



**WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the right side panel as outlined under Covers and Panels.
2. Disconnect the wire leads to the component being replaced.
3. Remove the component.
4. Reverse the procedure to install the new component and check oven for proper operation.

## TEMPERATURE PROBE



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the right-side panel as outlined under Covers and Panels.
2. Disconnect probe leads from the solid state temperature controller on the SG4D/SG6D or the computer controller on the SG4C/SG6C.
3. Remove the racks and right rack support.
4. Remove the upper and lower door seals.

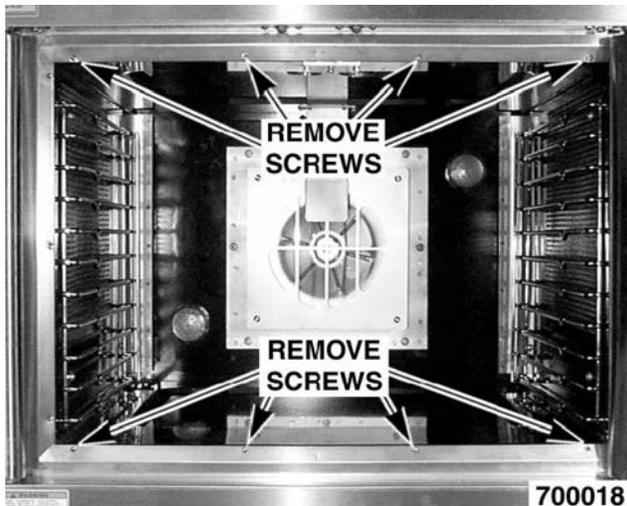


Fig. 10

5. Loosen the three screws securing the right side air scoop to the rear heat exchanger. Rotate the air scoop off of the heat exchanger tube into the oven cavity.
6. Remove the screws that secure the perforated side panel and lift out.

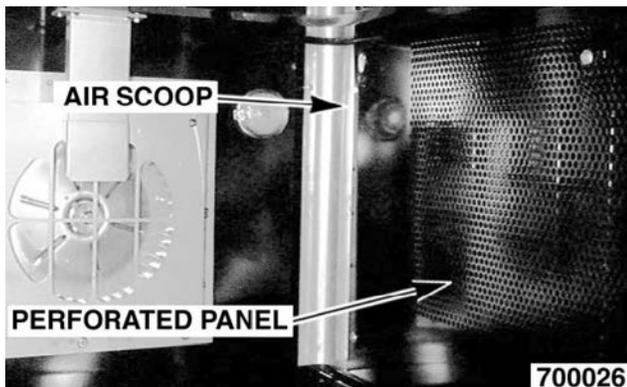


Fig. 11

7. Remove the probe from the bracket(s).

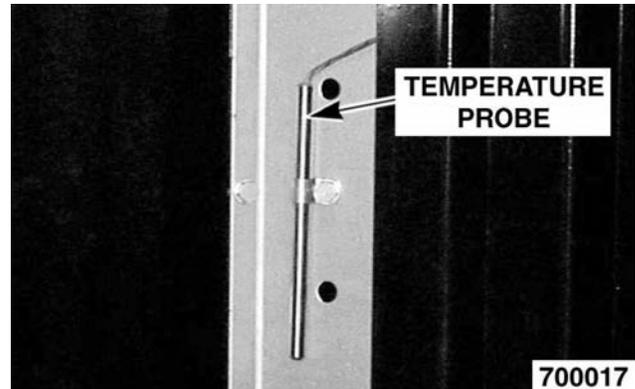


Fig. 12

### SG4C/SG6C Temperature Probe Shown

8. Push the probe through the oven wall and into the control panel area.
9. Reverse the procedure to install the new probe.
10. Calibration:
  - A. SG4D/SG6D: Adjust the temperature controller as outlined under Solid State Control Calibration.
  - B. SG4C/SG6C: Adjust the computer controller as outlined under Computer Controller and/or Computer Controller Calibration in Service Procedures and Adjustments.

## GAS BURNERS



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### ⚠ WARNING

Shut off the gas before servicing the oven.

1. Remove the lower front cover as outlined under Covers and Panels.
2. There are two burners located on the bottom left and right side of the oven. Disconnect the ignition cable and the flame sense lead from each burner.

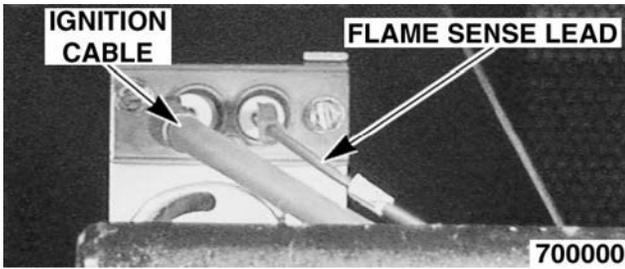


Fig. 13

3. Remove the bolts securing the gas manifold and place manifold aside.



Fig. 14

4. Grasp the burner and lift out.



Fig. 15

5. Reverse the procedure to install and check for proper operation.
  - A. Ensure the spacers are in place on the ignition wires. The spacers are intended to keep the ignition wires from laying flat on the oven chassis.
  - B. Ensure that the bracket on the back of the burner is inserted into the slot at the rear of the burner chamber.

**NOTE:** Check the flame current by following the Flame Current Measurement procedures under the Procedures and Adjustments Section of this manual.

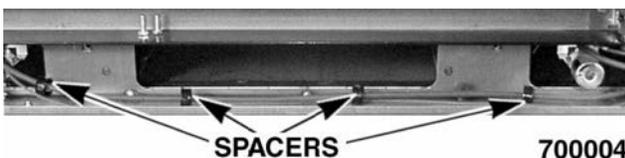


Fig. 16

## GAS ORIFICE



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### ⚠ WARNING

**Shut off the gas before servicing the oven.**

1. Remove the lower front cover as outlined under Covers and Panels.
2. Remove the bolts securing the gas manifold and place manifold aside.



Fig. 17

3. There are two gas orifices on the manifold. Remove each orifice and replace with the correct orifice for the given altitude as needed.

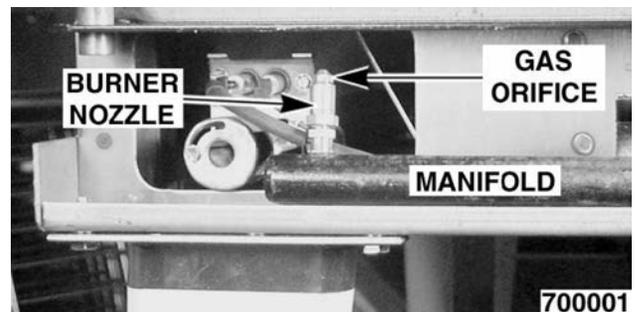


Fig. 18

4. Reverse the procedure to install manifold and check for proper operation.

## GAS SOLENOID VALVE



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### ⚠ WARNING

**Shut off the gas before servicing the oven.**

1. Remove the control panel and the right side panel as outlined under Covers and Panels.

2. Disconnect the lead wires.
3. Disconnect compression fittings from the valve.

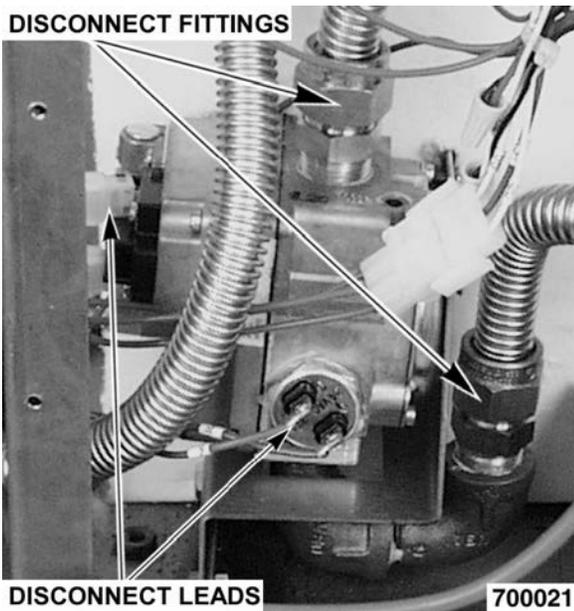


Fig. 19

4. Loosen the bolts securing the valve and bracket assembly, then remove the screws securing the valve to the bracket.

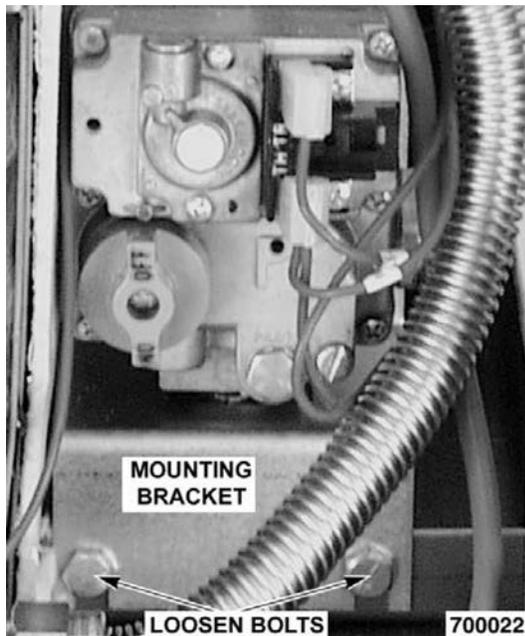


Fig. 20

5. Reverse the procedure to install the replacement gas valve.

**⚠ WARNING**

All gas joints disturbed during servicing must be checked for leaks. Check with soap and water solution (bubbles). Do not use an open flame.

6. Verify gas pressure as outlined under the Gas Pressure Adjustment in Service Procedures and Adjustments. Check for proper operation.

**IGNITION CONTROL MODULE**



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the right side cover as outlined under Covers and Panels.
2. Loosen the screws securing the mounting bracket to the component panel and remove the bracket.

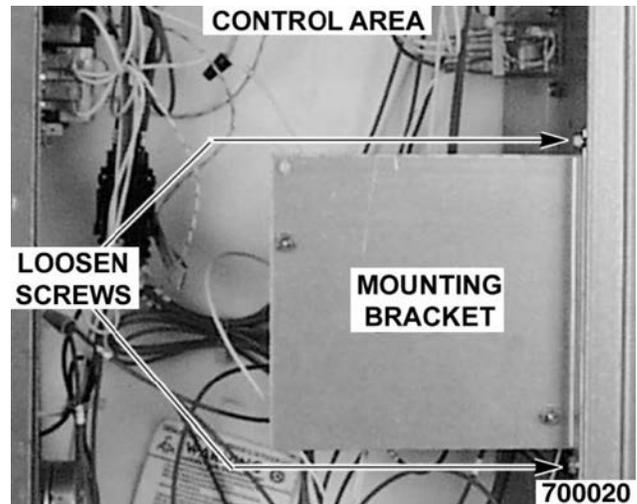


Fig. 21

3. Disconnect the lead wires and igniter cables from the ignition module board.

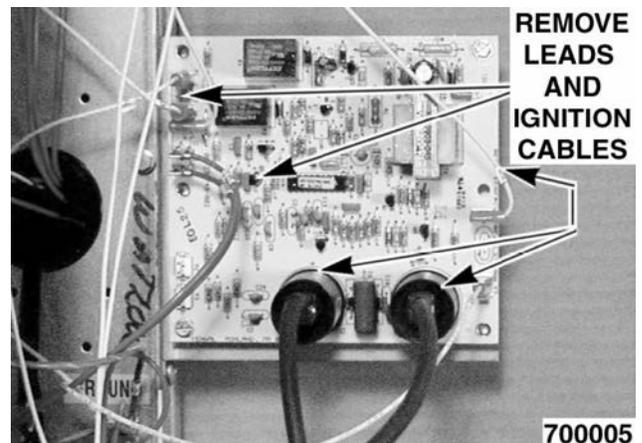


Fig. 22

4. Remove the ignition module board from the mounting bracket.

5. Reverse the procedure to install the replacement ignition module board.
6. Check for proper operation.

## SPARK IGNITER AND FLAME SENSE



### ⚠ WARNING

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

### ⚠ WARNING

**Shut off the gas before servicing the oven.**

1. Remove the two gas burners as outlined under Gas Burners.
2. Remove the screws securing the igniter and flame sense to each burner. Remove the assembly.

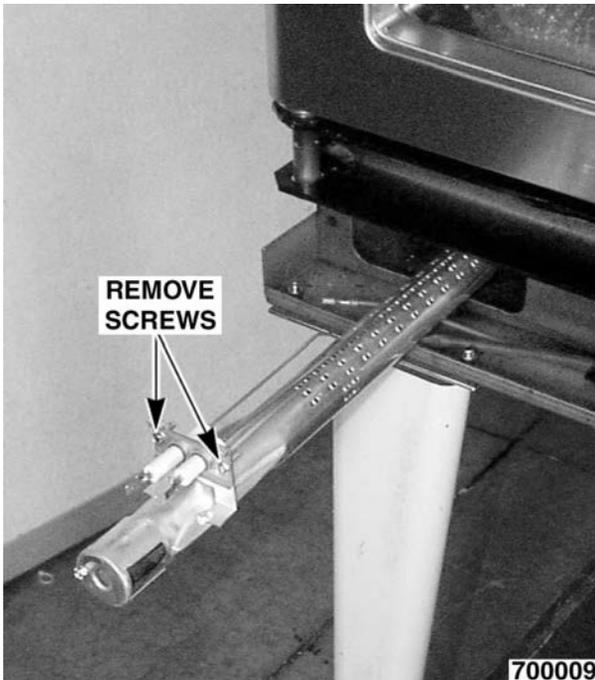


Fig. 23

3. The spark gap is 1/8" from the inside of the spark rod to the inside to the ground rod. The ground rod (the end of the spark) is 1/8" above the burner. If the gap is not correct or poor sparking is occurring, then adjust accordingly.

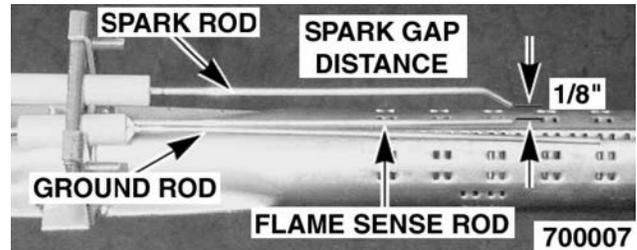


Fig. 24

4. Reverse the procedure to install the assembly and check for proper operation.

## BLOWER AND MOTOR Ending at Serial Number 481913935



### ⚠ WARNING

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

1. Remove racks.
2. Remove the screws securing the snorkel and remove the snorkel.

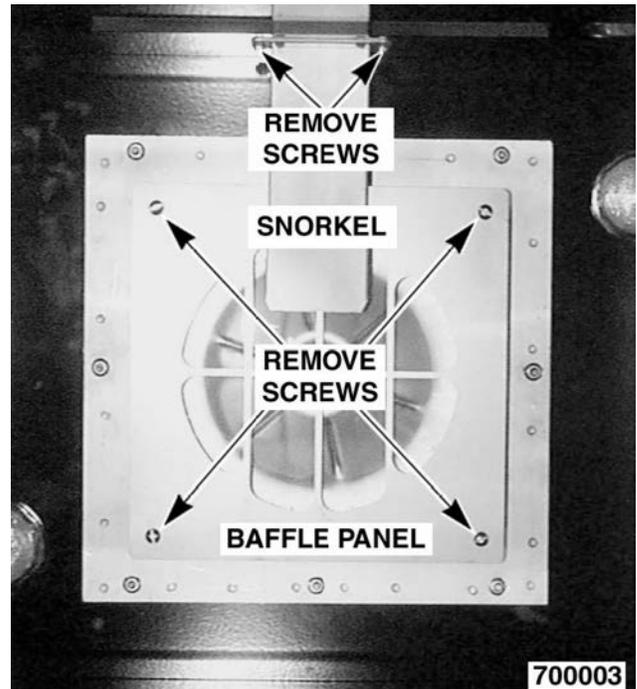


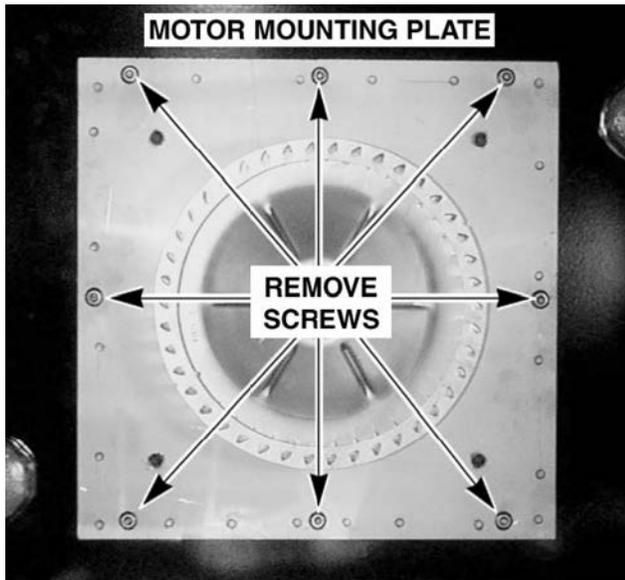
Fig. 25

3. Remove screws securing baffle panel and remove the panel.
4. If replacing:
  - A. **Blower Only** - Loosen set screws on blower hub and using a bearing puller, remove blower from motor shaft.

- 1) Reverse procedure to install and adjust blower position as outlined under the Blower Adjustment in Service Procedures and Adjustments section.

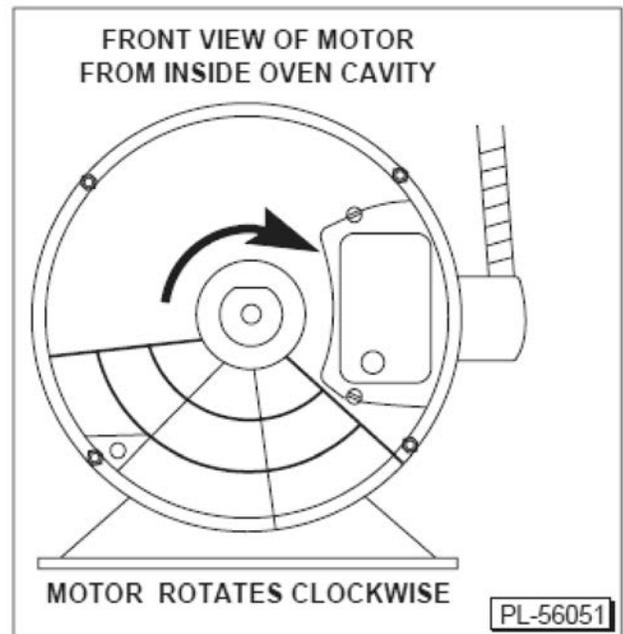
B. **Motor** - Perform step 4A and continue procedure.

5. Remove the screws that secure the motor mounting plate to the rear wall.



**Fig. 26**

6. Place a piece of cardboard on the bottom of the oven cavity to protect its surface from any damage during motor assembly removal.
7. Pull the motor assembly into the oven cavity and place it on the cardboard.
8. Remove the junction box cover from the motor, disconnect lead wires and remove the conduit.
9. Remove motor mounting bolts and flat washers, then lift the motor from the mounting plate.
10. Position the replacement motor on the motor mounting plate and install mounting bolts and washers. Hand tighten mounting bolts only.
11. Reconnect to lead wires at the motor, and replace conduit and junction box cover.



**Fig. 27**

12. Slide blower onto motor shaft until hub is flush with end of shaft, then tighten setscrews.
13. Adjust motor position until blower is parallel to motor mounting plate as outlined in Blower Adjustment under Service Procedures and Adjustments.
14. Position motor mounting plate on the rear wall and secure with nuts and washers.
15. Replace the baffle panel and snorkel.
16. Replace the air baffle on the rear wall at the lower right hand corner.
17. Remove cardboard from the bottom of the oven cavity.
18. Install racks.
19. Check oven for proper operation.

**BLOWER AND MOTOR Starting at  
Serial Number 481913936**



**⚠ WARNING**

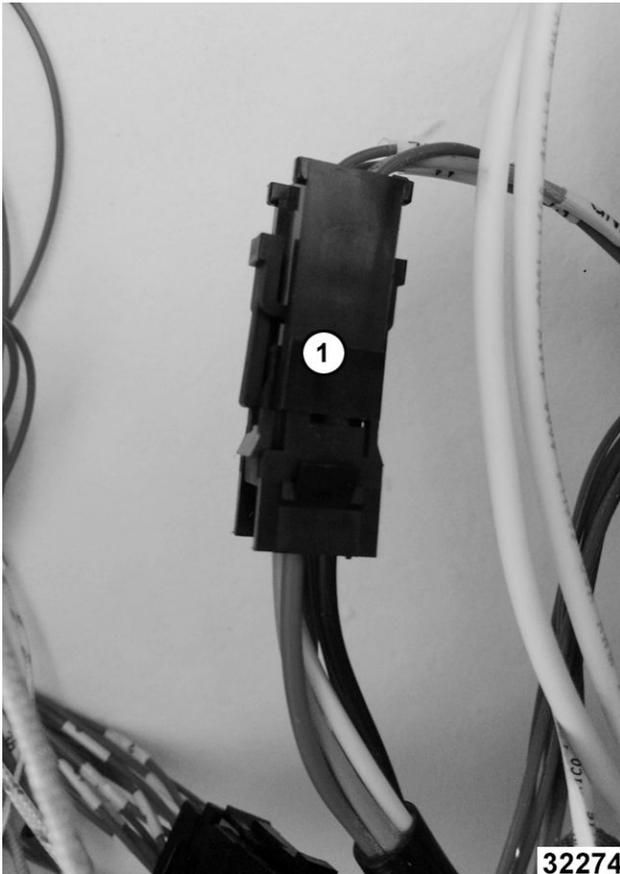
Disconnect the electrical power to the machine and follow lockout / tagout procedures.



**⚠ WARNING**

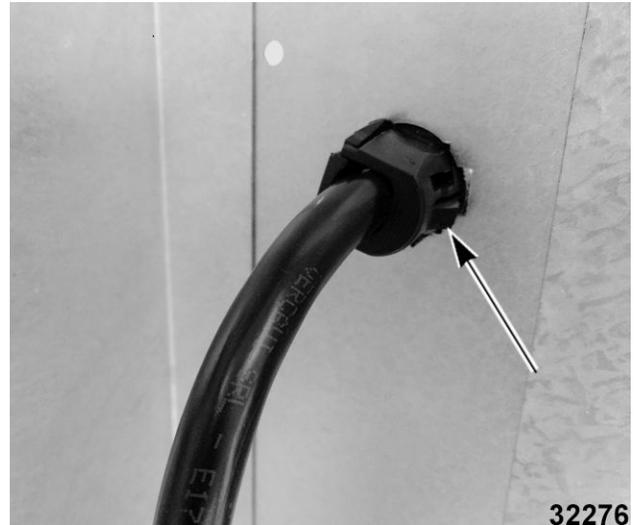
Shut off the gas before servicing the unit and follow lockout / tagout procedures.

1. Remove RIGHT SIDE PANEL(S).
2. Disconnect motor harness (1, Fig. 28).



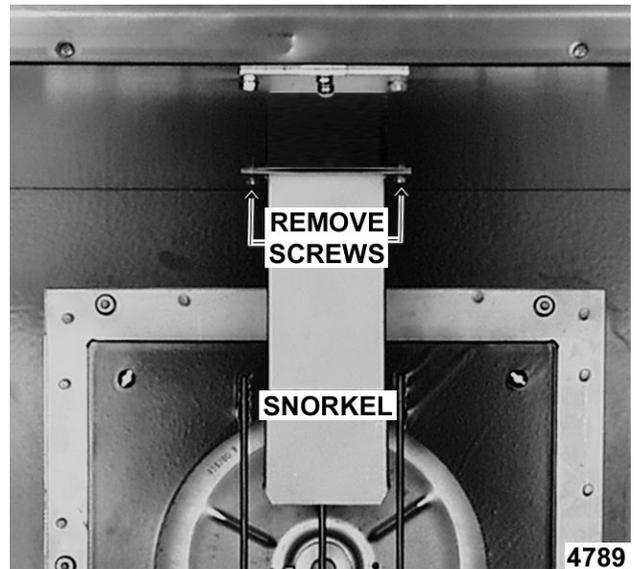
**Fig. 28**

3. Pinch cord grip together to remove from rear panel.



**Fig. 29**

4. Push motor wiring harness/cord out hole in rear panel.
5. Remove racks.
6. Remove screws securing "snorkel" and remove snorkel.



**Fig. 30**

7. Remove blower baffle screws (2, Fig. 31) if applicable.

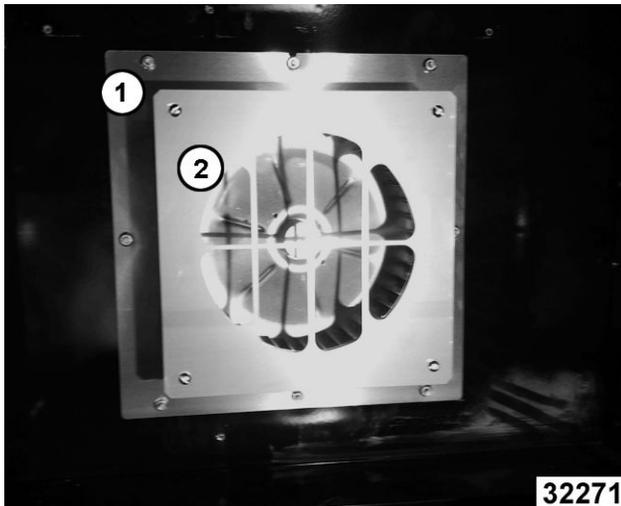


Fig. 31

8. Remove motor mounting plate nuts (1, Fig. 31).
9. Place a piece of cardboard on bottom of oven cavity to protect its surface from any damage during motor assembly removal.
10. Pull motor assembly into oven cavity and place on cardboard.
11. Remove motor mounting bolts and washers and lift motor off mounting plate.

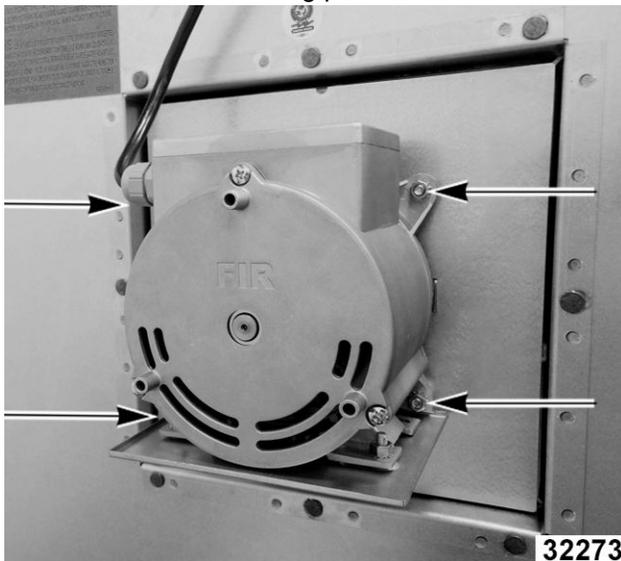


Fig. 32

**NOTE:** Motor graphics are shown with motor installed.

12. Remove drip pan from motor and install onto replacement motor.

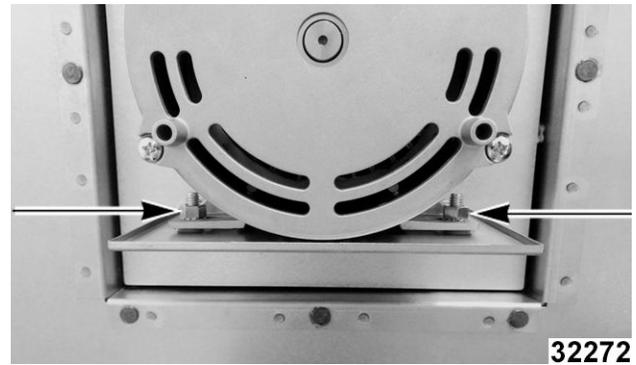


Fig. 33

13. Reverse procedure to install.
14. Verify operation.

## OVEN DOORS AND BEARINGS Ending at Serial Number 481907145



### WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover and bottom front cover as outlined under Covers and Panels.
2. Remove the door switch lever.

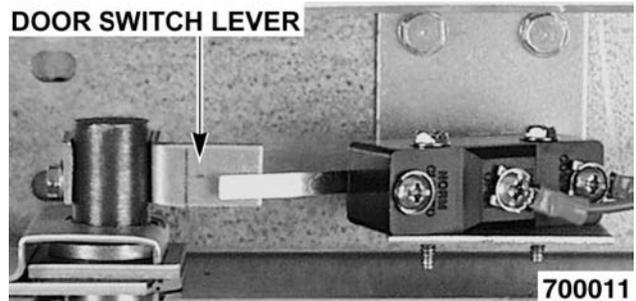


Fig. 34

3. Remove the lower door seal strip to expose the mounting screws of the door assembly.
4. Remove the two lower sill bolts by the lower door shaft and the four countersunk screws from the lower sill.



Fig. 35

- A. The door assembly is heavy and will drop down once the last screw is removed. If removing the door assembly without assistance, the ignition cable, flame sense lead and gas manifold should also be removed to avoid damage to these components.
- 5. Tilt the top of the door slightly forward and lift the door up until the bottom of the door shaft clears the opening in the sill.
- 6. Lay the door flat to prevent damage.
- 7. The top and bottom bearings are now accessible for inspection and/or replacement if needed.
  - A. If bearings are OK, proceed to step 8.
  - B. If replacing the top bearing, remove the top bearing retainer and top bearing.

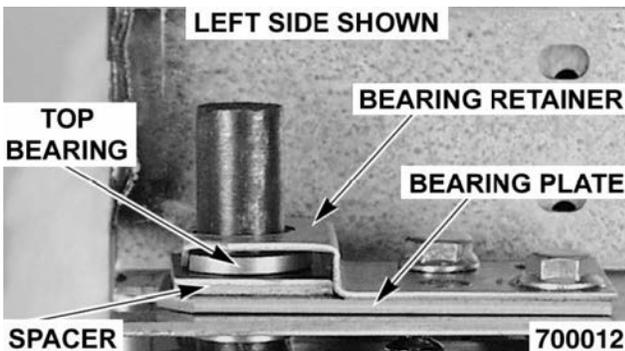


Fig. 36

- C. If replacing the bottom bearing, remove it from the door shaft or the lower sill opening.
- 8. Reverse procedure to install door assembly and check for proper operation as outlined under the Door Adjustment and Door Switch Adjustment section in Procedures and Adjustments.

**OVEN DOORS (INDEPENDENT DOORS) Starting at Serial Number 481907146**



**WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove TOP FRONT COVER.
2. If servicing right side door, remove door switch lever (1, Fig. 37).

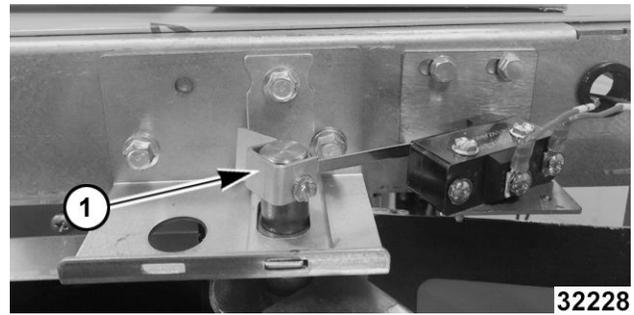


Fig. 37

3. While supporting door, remove hex bolts holding upper bearing retainer (1, Fig. 38) and upper shaft bracket (2, Fig. 38).

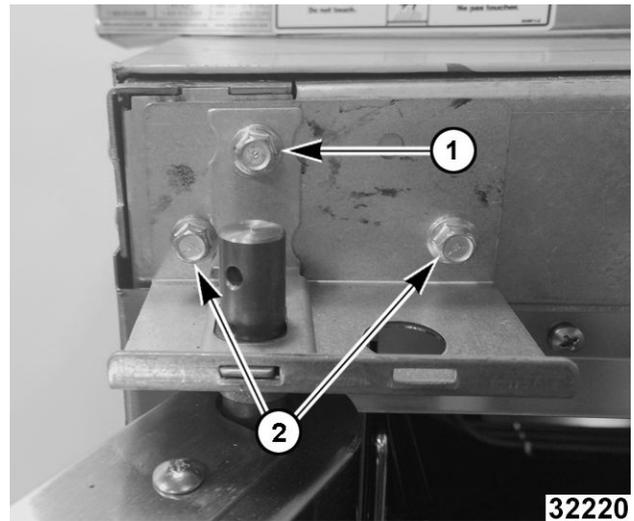


Fig. 38

4. Lift door off lower shaft bracket.

**NOTICE**

Lay door on flat protective surface to service.

5. Reverse procedure to install.
6. Perform door switch adjustment if servicing right side door.

**ROLLER LATCH ASSEMBLY (INDEPENDENT DOORS)**

**NOTE:** For units with serial number starting with 48 made after 8/12/07 and serial number starting with 54 made after 8/26/07.



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the screws that attach roller latch assembly to door.
2. Reverse procedure to install.

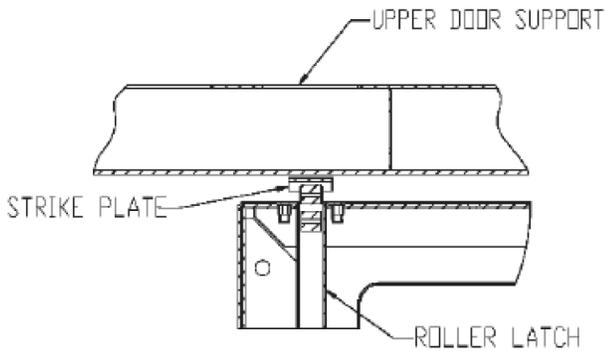


Fig. 39

**DOOR CATCH ROLLER ASSEMBLY (INDEPENDENT DOORS)**

**NOTE:** For units with serial number starting with 48 made before 8/13/07 and serial number starting with 54 made before 8/27/07.



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover as outlined under COVERS AND PANELS.
2. Remove the nuts and bolts that secure the door catch assembly.

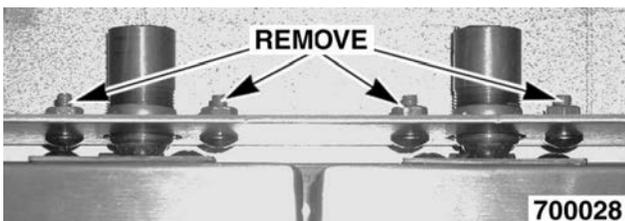


Fig. 40

3. Reverse the procedure to install.
4. Adjust the roller catch as outlined under the Door Catch Adjustment in Service Procedures and Adjustments.

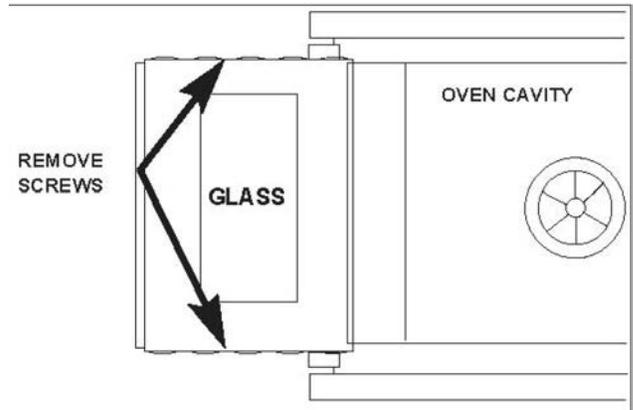
**DOOR WINDOW**



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the screws at the top and bottom of the door.



PL-56052

Fig. 41

2. Remove the door handle, then remove the outer door panel.
3. Lift out the inner door panel window assembly.
4. Remove the door seal from the inside of the left door only.
5. Remove the screws securing the window tabs to the door bracket and lift the window assembly out from the door frame.

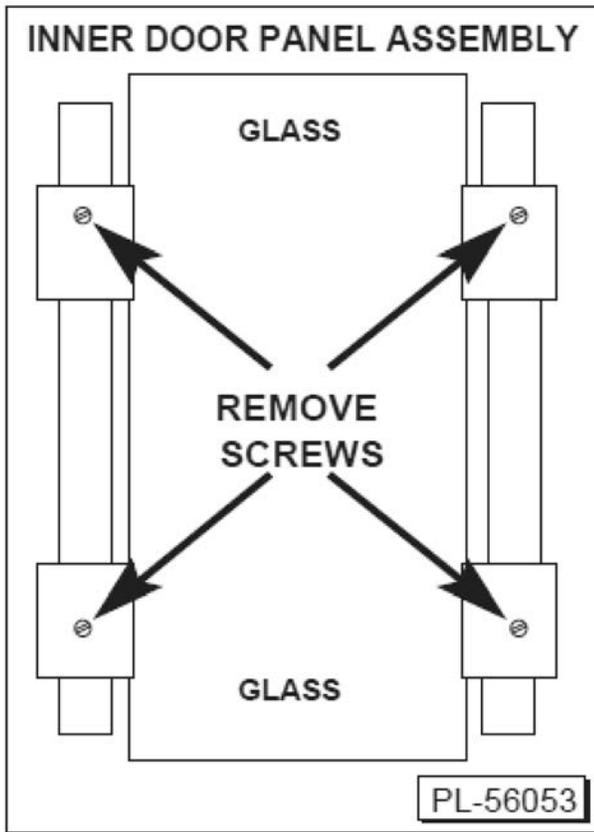


Fig. 42

- Reverse procedure to install the replacement window.

## INTERIOR LIGHTS (Rear Mounted, Round)



### WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### Lamp

- Remove racks.
- Unscrew glass lens for the light being replaced then unscrew bulb.

**NOTE:** Use a cloth when handling bulb so you do not leave fingerprints on bulb.

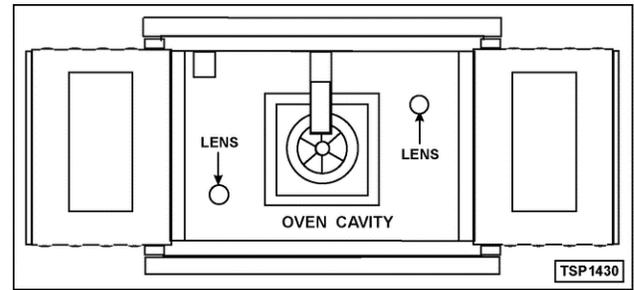


Fig. 43

- Replace bulb then reverse procedure to install.



### WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

### Lamp Assembly

- Remove lens and bulb.
- Remove springs from retaining tabs (2 places) on the socket.

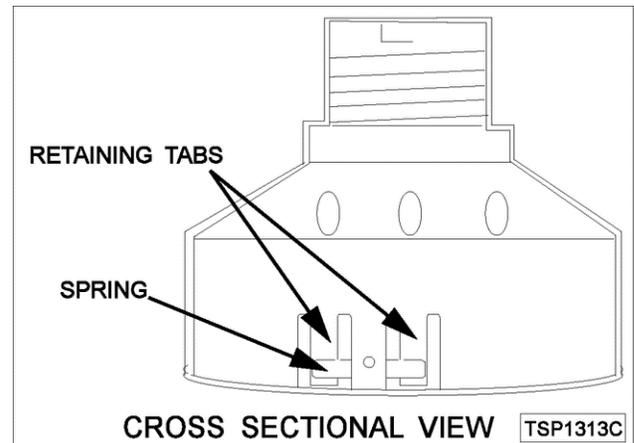


Fig. 44

- Depress retaining tabs and pull socket out from the oven, far enough to disconnect lead wires.
- Remove socket from the oven.
- Attach lead wires to the replacement socket.
- Insert socket into the hole in oven and push until socket is held in place by retaining tabs.
- Install light bulb and lens.
- Check for proper operation.

## INTERIOR LIGHTS (Side Mounted, Square)

### Bulb Replacement



**WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove racks and right-side hand rack guide.
2. Pull lamp cover off.
3. Grasp lamp using a clean cloth and remove from lamp assembly.

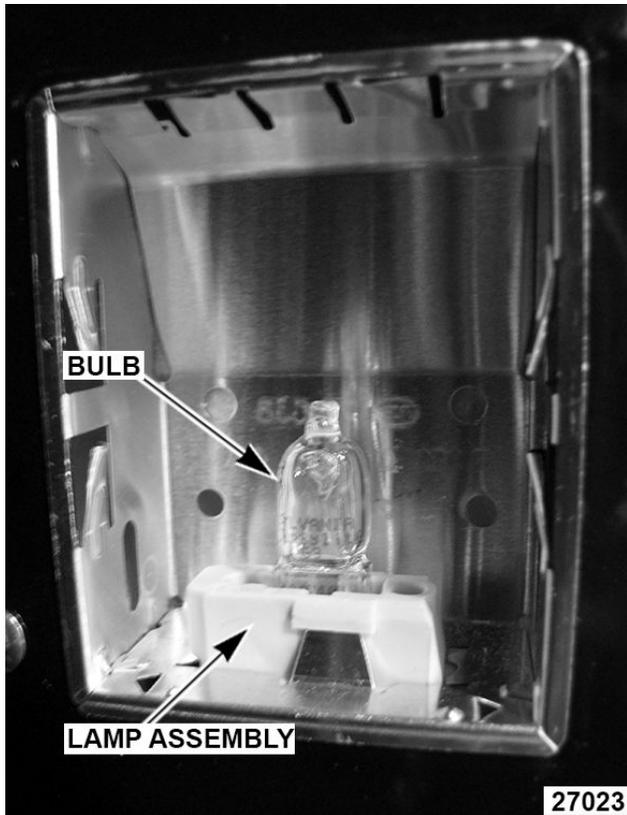


Fig. 45

4. Reverse procedure to install new bulb.

**NOTE:** Verify gasket (1, Fig. 46) is flat on lamp cover and not damaged.

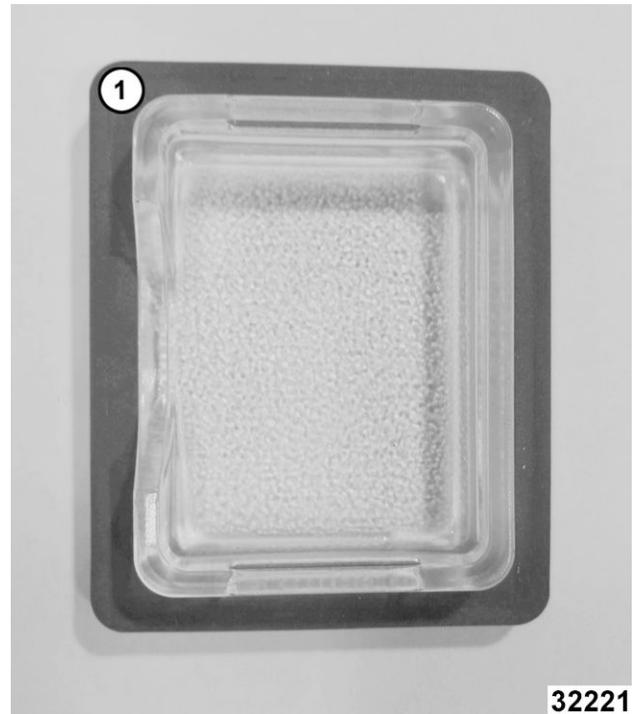


Fig. 46

**Lamp Assembly Replacement**



**WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove racks.
2. Remove BULB if reusing.
3. Lift right side rack guide off oven cavity.
4. Pull lamp cover off from the top or bottom.
5. Insert narrow blade screwdriver into tab and bend out to release. Repeat with second tab.

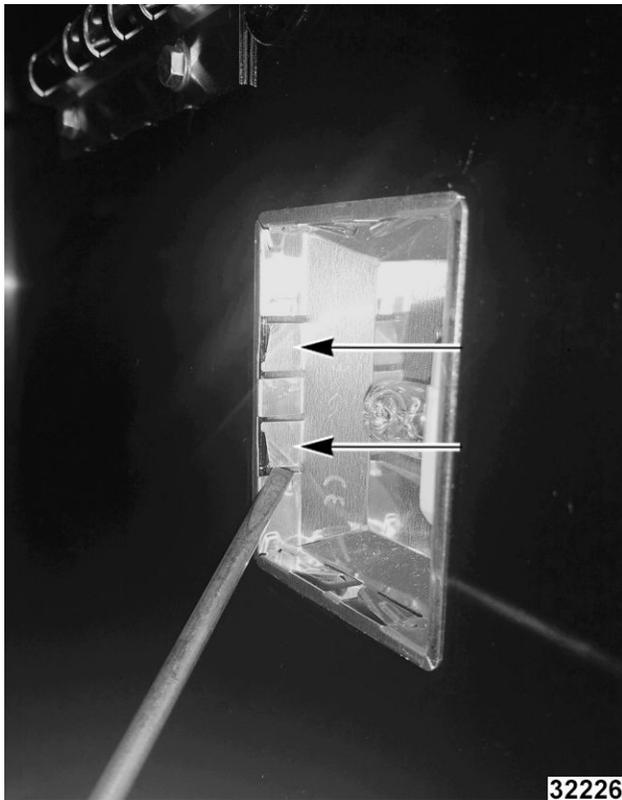


Fig. 47

6. Pull lamp housing out of oven cavity.
7. Disconnect wires.

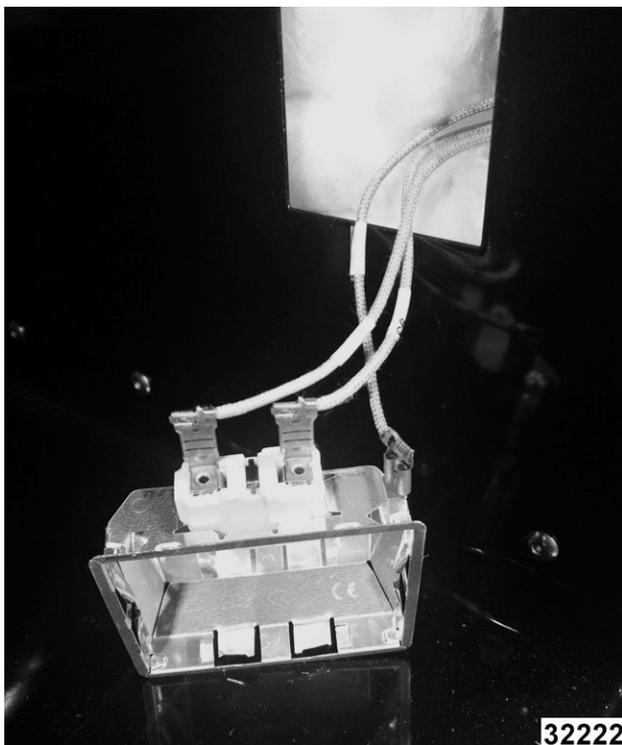


Fig. 48

8. Reverse procedure to install.

**NOTE:** Verify gasket (1, Fig. 49) is flat on lamp cover and not damaged.

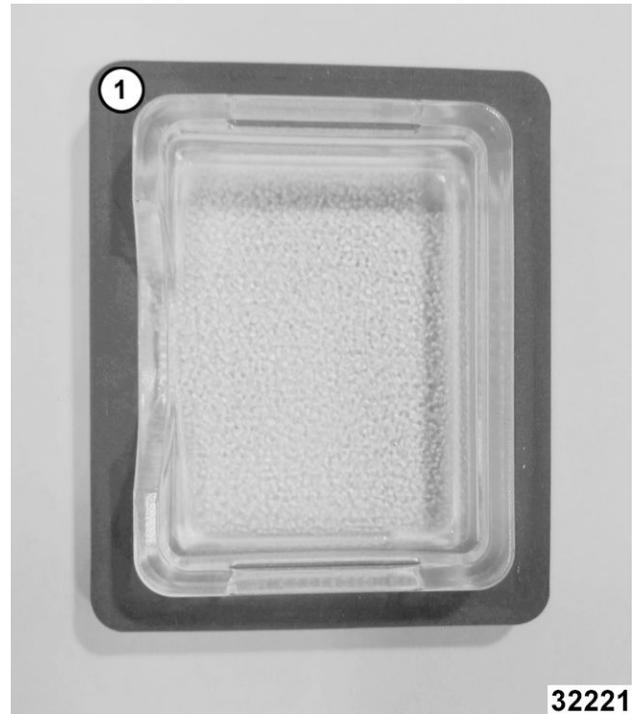


Fig. 49

## DOOR SWITCH



### **WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover as outlined under Covers and Panel.
2. Disconnect the lead wires to the door switch.

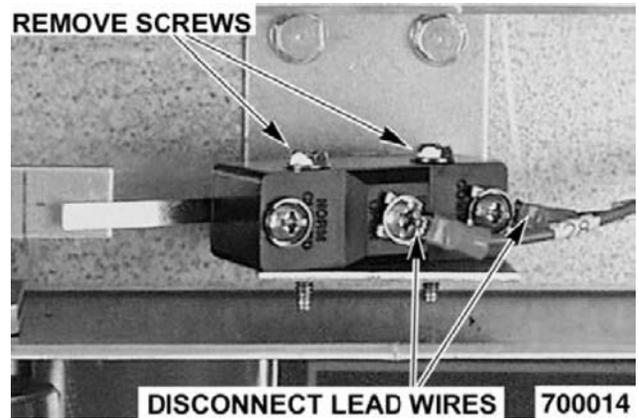


Fig. 50

3. Remove the switch.

- Reverse procedure to install the replacement switch and check for proper adjustment as outlined in Door Switch under Service Procedures and Adjustments.

## HIGH LIMIT THERMOSTAT



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

- Remove the top four racks from the oven.
- Remove the high limit thermostat cover/ mounting plate. It is located at the top of the oven cavity.

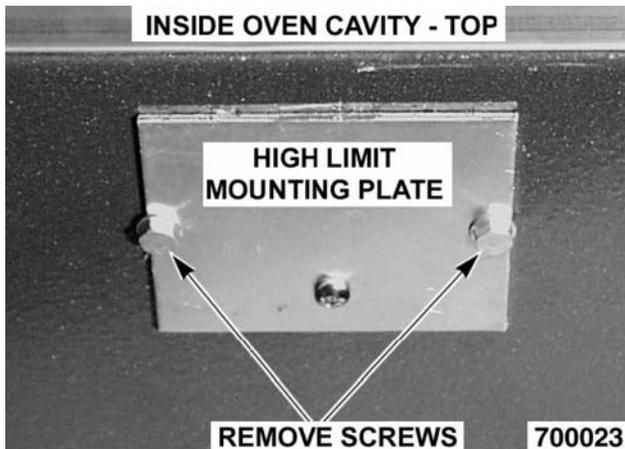


Fig. 51

- Disconnect the lead wires from the high limit thermostat. Remove the high limit thermostat from the cover mounting plate.

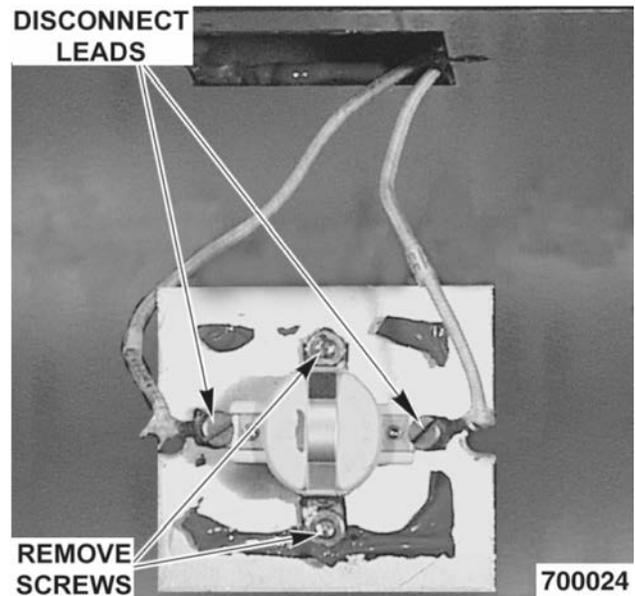


Fig. 52

- Remove the old RTV silicone from the cover and mating surfaces inside the oven cavity, and apply new RTV silicone before installing.
- Reverse procedure to install.

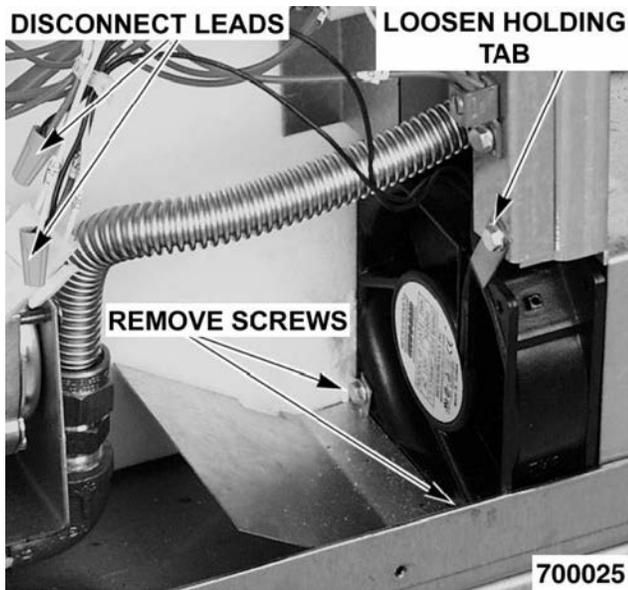
## COOLING FAN



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

- Remove the right side panel as outlined under Covers and Panels.
- Disconnect the lead wires to the fan motor by removing the wire nuts.
- Remove the screws securing the air deflector to the fan, then loosen the tab screw holding the fan to the component panel. Rotate the tab so that the fan will clear. Remove the fan.



**Fig. 53**

4. Reverse the procedure to install the replacement fan and check for proper operation.

#### **Fan Installation Tips**

- The fan must be installed so air is pulled from the rear of the oven and blown into the control area. The arrow on the fan body indicates airflow direction and should be pointing toward the controls.
- Ensure the fan is seated squarely against the air tube and the oven bottom.
- The air deflector should be angled upward at approximately 30 degrees to properly direct the airflow.



- 1) If temperature probe is functioning properly and the temperature controller failed the test in 8c above, replace the temperature control and check for calibration as outlined under Solid State Temperature Controller Calibration (SG4D/SG6D).

## SOLID STATE TEMPERATURE CONTROL CALIBRATION (SG4D/SG6D)

### **⚠ WARNING**

**Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.**

Before attempting any calibration, see Section 8C of SOLID STATE TEMPERATURE CONTROLLER TEST (SG4D/SG6D) on previous page.

#### **Calibration Steps**

1. Place a thermocouple in the geometric center of the oven cavity.
2. Set the ON/OFF/OVEN COOL switch to ON.
3. Set the temperature controller dial to 350°F. Set the power control to 100% (10).
4. Allow the oven temperature to stabilize (minimum three heating cycles).
5. Record the temperature at which the Heat lamp comes ON (heating starts) and goes OFF (heating stops). This is the control differential. Heat lamp OFF temp - Heat lamp ON temp = Control Differential.
6. The nominal control differential should be less than 20°F.
  - A. If the control differential is less than 20°F, the temperature control circuit is functioning properly. Proceed to step 7.
  - B. If the control differential is more than 20°F, check the temperature probe as outlined under Temperature Probe Test (SG4D/SG6D).
  - C. If the control differential is more than 20°F and the probe passes its' test parameters, then temperature controller is malfunctioning. Install a new temperature controller and run calibration steps again.
7. Calculate the average oven temperature by adding the actual minimum temperature to the actual maximum temperature and dividing by 2.
 

EXAMPLE:

Oven set to 350°F.

Actual minimum oven temperature = 335°F

Control cuts on at 334°F

Actual maximum oven temperature = 347°F

Control cuts off at 340°F

$$335 + 347 = 682$$

$$682 / 2 = 341 \text{ (the control is } 9^\circ\text{F out of calibration)}$$

$$340 - 334 = 6^\circ\text{F Control Differential}$$

$$347 - 335 = 12^\circ\text{F Oven Temperature Differential}$$
  - A. If the average oven temperature is within +/- 5°F from the dial setting, no calibration is necessary.
  - B. If the average oven temperature is not within +/- 5°F, calibration is recommended.
8. Loosen the set screw on the temperature controller and carefully remove the knob from the shaft, without rotating the shaft. This will expose the calibration adjustment control access hole in the front panel.
9. Monitor the internal oven temperature and determine at what temperature the control should cut on to give you the required minimum temperature (Example:  $350 - 341 = 9$ ;  $334 + 9 = 341$ . 341°F is the temperature at which you would wish the controller to cut on).
10. After allowing the oven to operate through several cycles (minimum 3 cycles), monitor the temperature as it falls to the desired "cuts on" point. Using a small screw driver, adjust the calibration adjustment until the controller cuts on at the desired "cuts on" temperature.
11. The calibration control is adjusted clockwise in order to increase the set temperature and counter clockwise to decrease the set temperature.
12. The controller has only +/- 25°F of adjustment. 1/4 turn of the calibration adjustment represents approximately 20°F shift in calibration.

## TEMPERATURE PROBE TEST (SG4D/SG6D)

**⚠ WARNING**

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

**Test Steps**

1. Remove the right side panel as outlined under Cover and Panels in Removal and Replacement of Parts.
2. Place a shielded thermocouple in the geometric center of the oven cavity and determine the temperature in the oven cavity.
3. Remove the probe lead wires from the solid state temperature controller.
4. Test the probe with an ohmmeter.
  - A. If the measured resistance values are inside the given tolerance, then the probe is functioning properly.
  - B. If the measured resistance values are outside the given tolerance, then replace the probe and make sure wires are secured to the terminals of the temperature controller. Recheck the temperature by performing step 2.
    - 1) Check the oven for proper operation.
5. Reverse Procedure to install.

TEMP (°F)	OHMS*
77	90,000
240	4,077
260	3,016
280	2,266
300	1,726
320	1,332
340	1,041
360	822
380	656
400	529
425	424
450	334
475	266
(*) Resistance in ohms ± 10%	

## COMPUTER CONTROLLER (SG4C/SG6C)

### ⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.

### Operation

Refer to the Installation & Operation Manual for specific operating instructions.

### Setup Mode

Use the setup mode to verify that the control is configured to the factory settings which result in the proper operation of the oven. If the CAL1 parameter is other than zero, see Computer Control Calibration (SG4C/SG6C).

**CAUTION:** Changing the C\_F, InP1, rL1 and rH1 parameters will default all menus.

- Use this key sequence to access the setup mode: UP arrow, Rack 1, Temperature, Temperature, DOWN arrow, Rack 1.



Fig. 55

- Once in the setup mode the display will alternate between the parameter and programmed data.
  - To change data to the factory setting, use the arrow keys.
  - To select the next parameter, press the Rack 1 key.
  - After the last parameter and data are viewed, press the Rack 1 key to exit the setup mode and return to operations mode. The current set point temperature will be displayed.
  - If there are no key activations after 1 minute, the control will return to operation mode.
- Listed are the parameters and data in the setup mode.

MENU	ALTERNATING ON DISPLAY	
	PARAMETER	DATA
Celsius_Fahrenheit	C_F	F

Guard Band	gb	4000
Temperature Compensaion	tcnP	OFF
Input Type 1	InP1	J
Range Low 1	rL1	75
Range High 1	rH1	500
Hysteresis	HYS1	3
Calibration Offset	CAL1	0
Exit setup mode and return to operation mode.	Set point temperature is displayed or if calling for heat, dashes (----) are displayed.	

### Probe Test

If the oven is not heating or displaying the proper temperature, the temperature probe may be malfunctioning. Determine if the probe is good or causing the operational problem.

- Temporarily disconnect the existing lead wires from the computer control and connect them to a good J-type thermocouple.
- Turn the power switch to ON and set the temperature controller to 350°F.
  - If the oven reaches the set temperature and cycles with the temporary thermocouple, then the existing probe is malfunctioning.
- Replace the temperature probe with the correct part and check for proper operation.

### Solid State Relay Test

- Remove the right side panels as outlined under Covers and Panels in Removal and Replacement of Parts.
- Turn the power switch to the ON position.
- Check for +5 VDC on input side of SSR-1 in the normal heating mode (terminals 3 & 4) and SSR-2 in the roast and hold mode.
  - If +5 VDC is present, continue to step 4.
  - If no voltage is present, computer control is not functioning properly.
- Check for 120 VAC at load side of SSR (terminals 1 & 2).
  - If no voltage is present, solid state relay is not functioning properly.
    - Replace the SSR and check for proper operation.

- B. If 120 VAC is present, component is functioning properly.
5. Reassemble oven and check for proper operation.

## COMPUTER CONTROL CALIBRATION (SG4C/SG6C)

### **⚠ WARNING**

**Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.**

#### **Calibration Steps**

1. Place a thermocouple in the geometric center of the oven cavity.
2. Set the ON-OFF-COOL DOWN switch to ON.
  - A. If the set point temperature is 350°F, proceed to step 4.
  - B. If the set point temperature is other than 350°F, proceed to step 3 to change the temperature.
3. Press the set key then temperature key to enter the temperature set mode.
  - A. The display will alternate between the term StPt (set point) and the current oven temperature setting.
  - B. Press the UP or DOWN arrows to make the proper selection.
  - C. Press the set key again to save the change, then exit the temperature set mode.
4. Allow the oven temperature to stabilize (normally three cycles).
5. Compare the controls set point temperature to the thermocouple meter reading when the heat light goes out.
  - A. A temperature variance more than 5°F indicates an adjustment is needed.
    - 1) To make the adjustment, proceed to step 6.
    - 2) If temperature variances is less than 5°F, then the computer control is functioning properly.
6. Enter the setup mode as outline in Setup Mode under Computer Control (SG4C/SG6C).
  - A. Advance through the menu until CAL1 (calibration offset) appears.
    - 1) If the thermocouple reading is higher than set point temperature, press the down arrow key and enter a negative offset value that is equal to the number of degrees above the 5°F tolerance.
    - 2) If the thermocouple reading is lower than set point temperature, press the UP arrow and enter a positive offset value that is equal to the number of degrees below the 5°F tolerance.
    - 3) Exit the setup mode.
7. Allow the oven to cycle at least two times between adjustments.
  - A. If the temperature variance still differs more than 5°F from the set point, verify the correct calibration offset value was entered and retained.
    - 1) Adjust the calibration offset value as outlined in step 6, until the cycling temperature is within tolerance.
  - B. If the above adjustment cannot be obtained, replace the computer control and check for proper operation.

## GAS PRESSURE ADJUSTMENT

### **⚠ WARNING**

**Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.**



### **⚠ WARNING**

**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

Accurate gas pressure adjustments can only be made with the gas on and the burner lit. If the incoming line pressure to the valve is less than the minimum stated, then the manifold pressure cannot be set correctly.

1. Turn gas supply off at manual shutoff valve.
2. Remove the right side panel as outlined under Covers and Panels in Removal and Replacement of Parts.

- Remove the plug from the manifold pressure port.

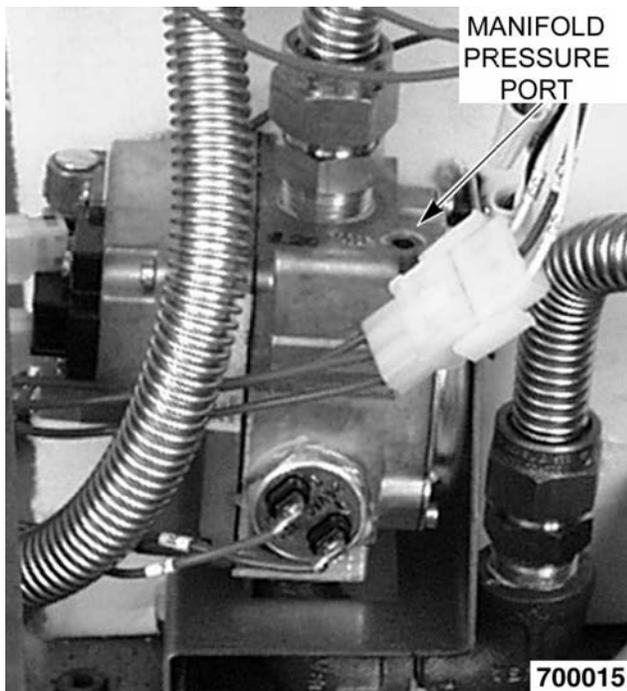


Fig. 56

- Install hose barb adapter and attach manometer tube.

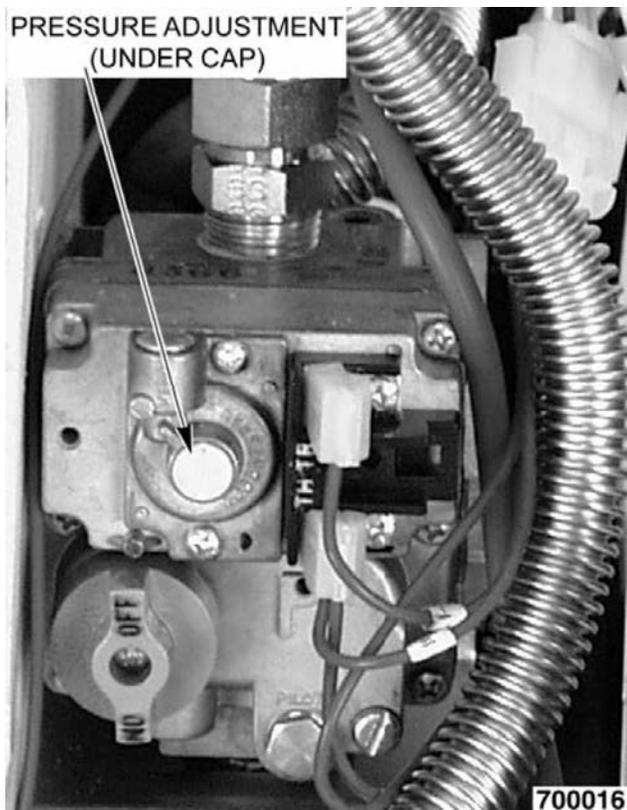


Fig. 57

- Remove adjustment screw cap from the gas valve and turn gas supply to the oven back on.

**⚠ WARNING**

The following steps require power to be applied to the unit during test. Use extreme caution at all times.

- Plug the unit in and turn the power switch ON.
- Set the temperature controller to its highest setting and allow burner to ignite. The burner must be lit during test and adjustment.
- Turn the set screw to obtain the proper gas pressure (clockwise = pressure increase; counterclockwise = pressure decrease).

GAS TYPE	PRESSURE READINGS (IN W.C.)			
	MANIFOLD	LINE		
		RECOMMENDED	MIN	MAX
Nat.	3.5	7.0	5.0	14
Prop.	10	11.0	11.0	

**NOTE:** Nat. = Natural Gas; Prop. = Propane

**VERIFICATION OF SPARK AT IGNITOR**

**⚠ WARNING**

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.



**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

**⚠ WARNING**

Shut off the gas before servicing the oven.

- Remove the bottom front cover as outlined under Covers and Panels in Removal and Replacement of Parts.
- Disconnect the high voltage ignition cable from the spark igniter.

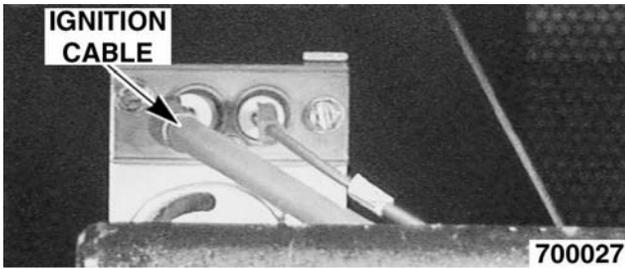


Fig. 58

**⚠ WARNING**

Do not hold the wire with your hands for this test. The manual gas valve must be closed.

3. Clamp the ignition cable in a manner that will position the end of the cable 3/16" from the oven frame (bare metal surface). It is critical that the cable be held 3/16" away from the surface of the oven frame or sparking may not occur even though the sparking circuit is functioning properly.

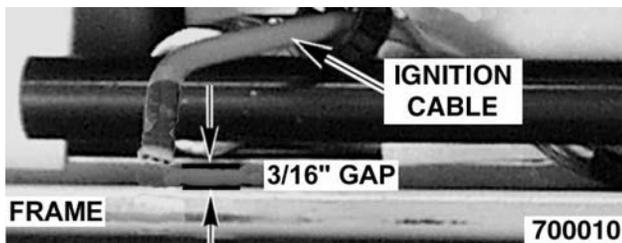


Fig. 59

**⚠ WARNING**

The following steps require power to be applied to the unit during the test. Use extreme caution at all times.

4. Plug the oven in and set the temperature controller to the maximum setting.
5. Turn the power switch ON.
6. Sparking should occur after a 4 second delay and continue for 7 seconds. The cycle will repeat twice after a 15 second purge time. Arcing from the ignition cable to the oven frame should be observed.

## DOOR SWITCH ADJUSTMENT

**⚠ WARNING**

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.

**⚠ WARNING**

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover as outlined under Covers and panels in Removal and Replacement of Parts.
2. Door operation:
  - A. The switch actuator is engaged by the switch lever when the right door is between 1" and 1 1/2" from being closed.
3. If adjustment is necessary, bend the switch actuator to obtain the proper setting.

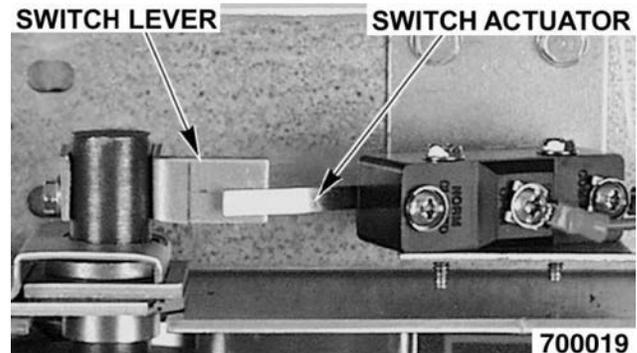


Fig. 60

4. Install the top front cover.
5. Apply power to the oven and check for proper operation.

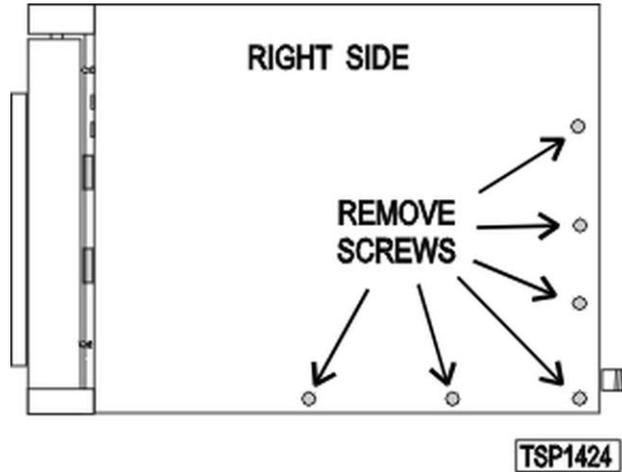
## FLAME SENSE CURRENT TEST



**⚠ WARNING**

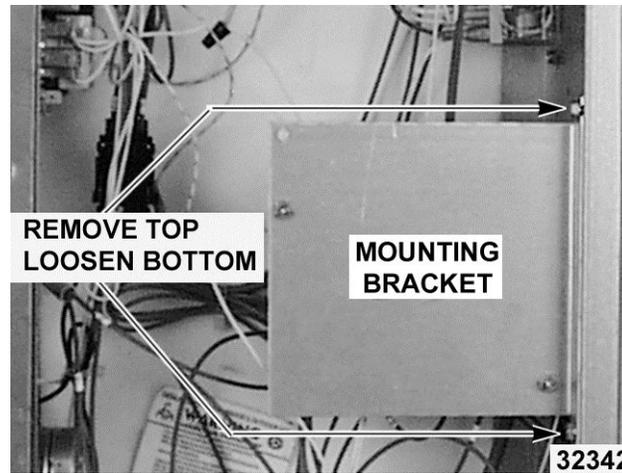
**Disconnect the electrical power to the machine and follow lockout / tagout procedures.**

1. Remove screws securing right side of the top front cover, bottom front cover and control panel.
2. Remove right side panel mounting screws.



**Fig. 61**

3. Pull right side panel out from the bottom then down to remove.
4. Remove top screw and loosen bottom screw securing the ignition control module mounting bracket.



**Fig. 62**

5. Position bracket horizontally by pulling forward 90 degrees, with ignition module facing up for accessibility.
6. Set VOM meter to read Micro Amps.
7. Place red (Positive) lead on FC+ and black (Negative) lead on FC- terminals on ignition module to test. Repeat on other Micro Amps.

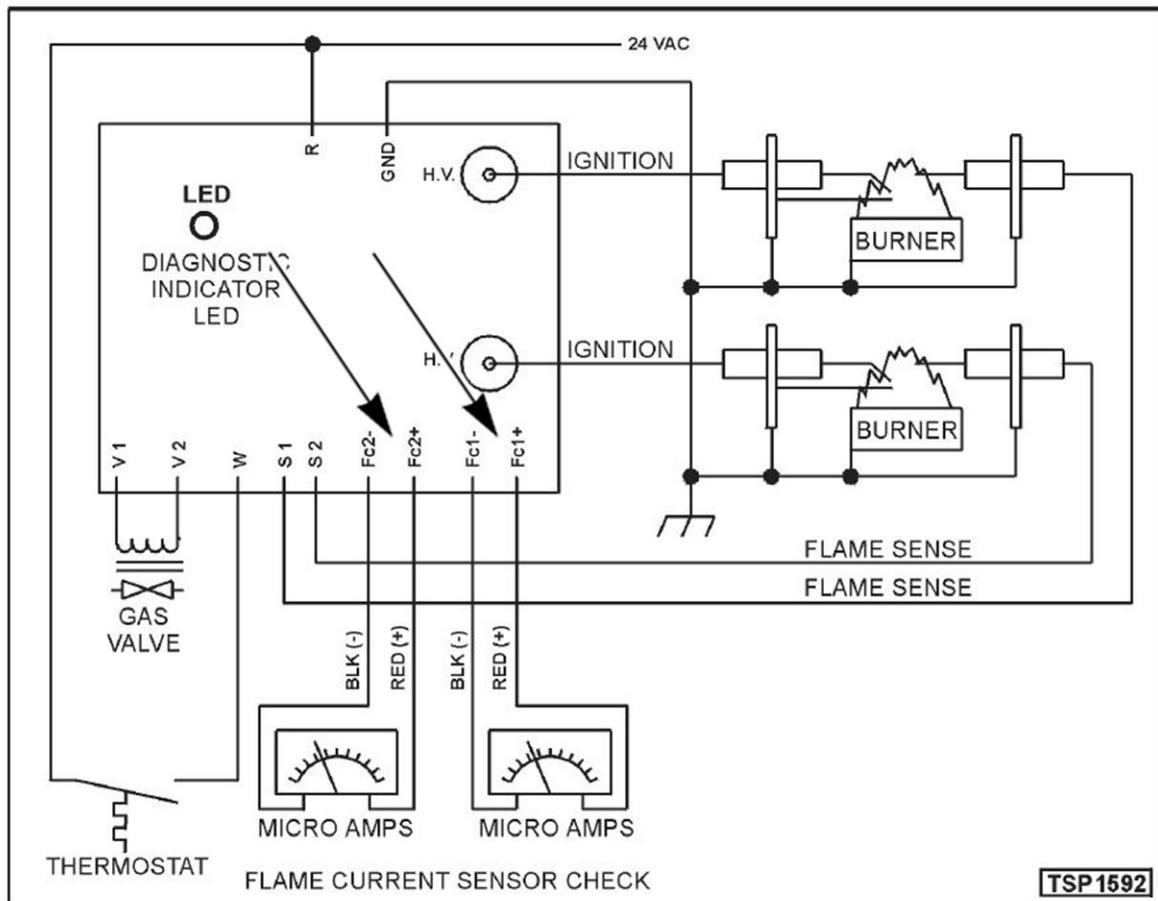


Fig. 63

8. Set the oven to call for heat and measure the Micro Amps reading.

**NOTICE**

Micro Amp reading from the flame sensor should measure a minimum of 0.7 Micro Amps to maintain burner ignition.

- If Micro Amp reading is correct and the burner does not light and maintain flame, replace ignition module.
- If Micro Amp reading is **NOT** correct, check wiring from flame sensor/igniter to the ignition module. If wiring is ok, replace flame sensor/igniter.

9. Install ignition control module mounting bracket and right panel.
10. Verify operation.

## BLOWER ADJUSTMENT

### ⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the blower motor and mounting assembly as outlined under Blower and Motor in Removal and Replacement of Parts.
2. Loosen the motor mounting bolts.
3. Adjust the motor position until the blower is parallel to and 1/4" inch away from the motor mounting plate. Check to see if the blower is square to the motor mounting plate at the top, bottom, left and right of the blower.
  - A. If the blower is square, then tighten motor mounting bolts and proceed to step 4.
  - B. If the blower is not square, continue adjusting until proper spacing is achieved then tighten motor mounting bolts. If necessary, place shims between motor and frame.

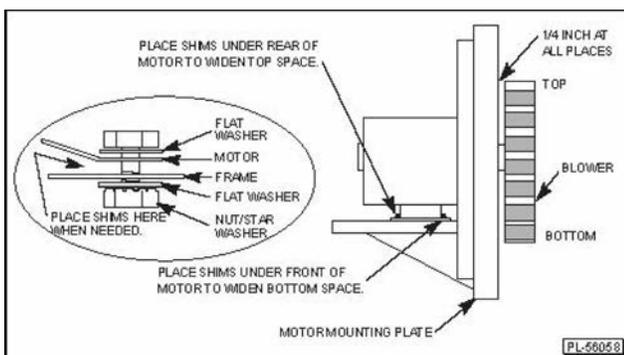


Fig. 64

4. Reverse the procedure to install. Use locktight on mounting nuts and bolts.

## DOOR STRIKE ADJUSTMENT (INDEPENDENT DOORS)

### ⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.

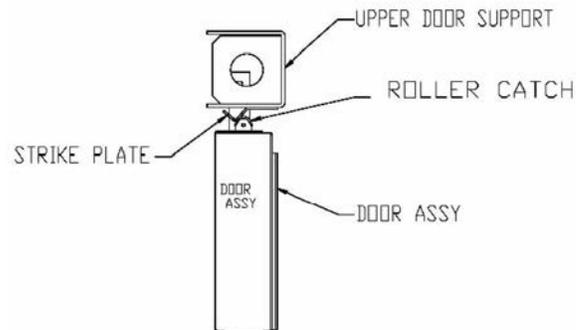
**NOTE:** For units with serial number starting with 48 made after 8/12/07 and serial number starting with 54 made after 8/26/07.



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

1. Remove the top front cover as outlined under COVERS AND PANELS in REMOVAL AND REPLACEMENT OF PARTS.
2. Open the doors and inspect the door strike for proper shape.
  - A. Replace if bent. Do not bend strike plate.
  - B. If adjustment is necessary, loosen fasteners, close doors and insure contact between the door inner surface and upper horizontal seal. Slide door strike plate until contact with roll latch is made. Tighten strike plate fasteners.



SIDE VIEW

Fig. 65

3. Open and close the doors several times while observing the roller latch and strike plate operation.

- A. Replace roller latch if malfunctioning as outlined under ROLLER LATCH ASSEMBLY (INDEPENDENT DOORS) and adjust as outlined in this procedure.
- 4. Each oven door should be open with a force of 8 to 25 pounds when pulled at the handle. The adjustments must allow the doors to remain closed during normal operation and allow opening without exertion by the user.

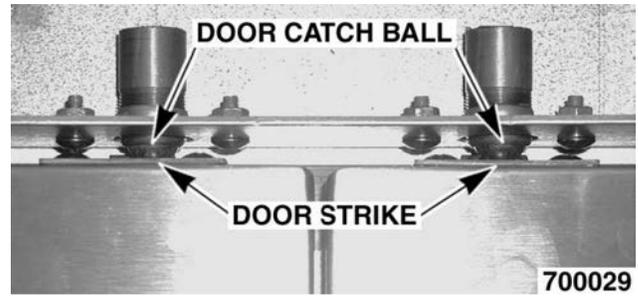


Fig. 66

## DOOR CATCH ROLLER ADJUSTMENT

### ⚠ WARNING

Certain procedures in this section require electrical test or measurements while power is applied to the machine. Exercise extreme caution at all times. If test points are not easily accessible, discern power, attach test equipment and reapply power to test.

**NOTE:** For units with serial number starting with 48 made before 8/13/07 and serial number starting with 54 made before 8/27/07.



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

- 1. Remove the top front cover as outlined under Cover and Panels in Removal and Replacement of Parts.
- 2. Inspect the door strike to make sure it is straight, and replace if bent.
- 3. Inspect the door catch assembly, and replace if it is damaged.
- 4. Check for proper door alignment.
  - A. Doors should be centered in the cavity opening and parallel to top and bottom of oven as outlined under Door Adjustment.
- 5. With the door in closed position, check to see that the ball of the catch is centered and touching the door strike. If not, it may be necessary to adjust and add a shim piece to the door strike.

- 6. Place a standard flat screwdriver through the opening in the top channel into the slot in the cylinder of the catch assembly.

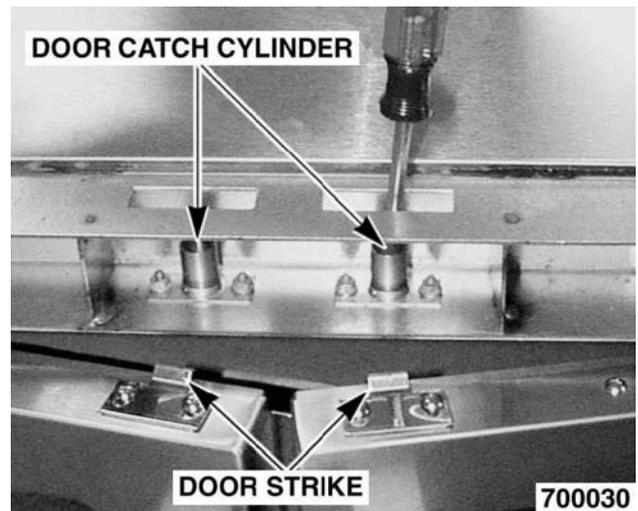


Fig. 67

- 7. Turn the screwdriver clockwise to increase the ball pressure or counterclockwise to decrease the pressure onto the door strike. The ball pressure should be tight enough to hold the door in place when the blower is engaged.
- 8. After the adjustment is complete, lubricate the inside of the door catch cylinder.

## DOOR ADJUSTMENT



### ⚠ WARNING

Disconnect the electrical power to the machine and follow lockout / tagout procedures.

- 1. Check the doors to make sure they have a .125 (1/8") gap between them and that the vertical edge of the door is parallel to the vertical door seal. If the doors are not positioned in this manner, adjust the doors as described.

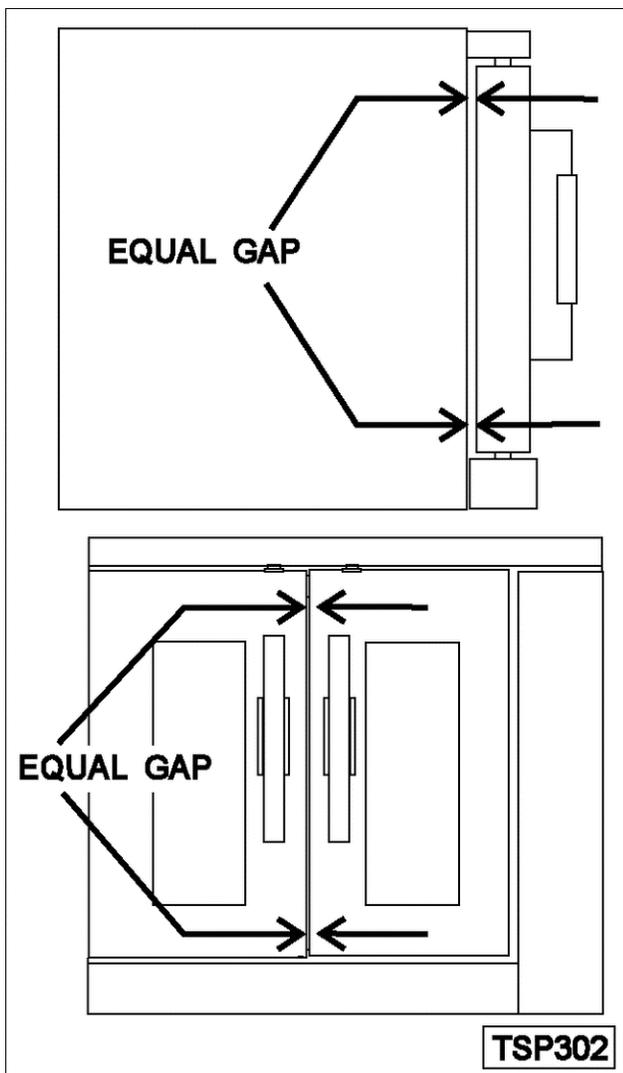


Fig. 68

2. Remove the TOP FRONT COVER.
3. Loosen the screws/bolts that secure the upper door brackets just enough to allow door movement.

Figure Shown below (Left Side) is ending at Serial Number 481907145.

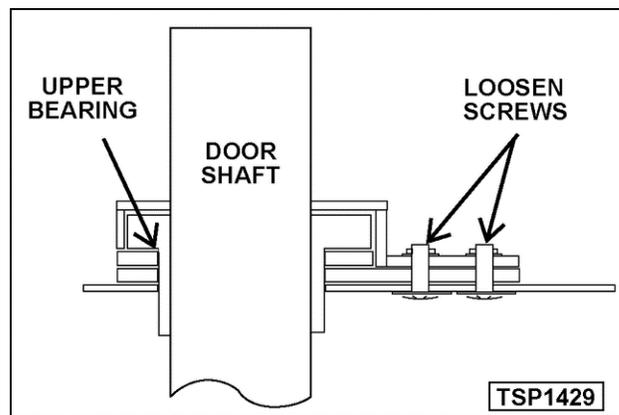


Fig. 69

Figure shown below (Left Side) is starting at Serial Number 481907146.

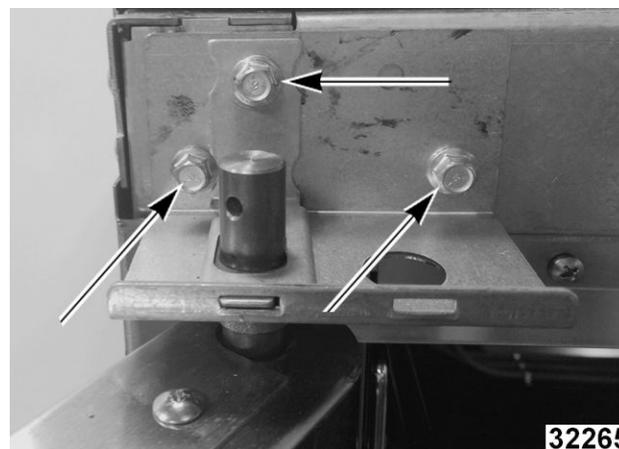


Fig. 70

4. Move the door until proper alignment is achieved then tighten the screws/bolts on the upper door bearing hardware.
5. Repeat STEP 3 and STEP 4 on the opposite door, if necessary.
6. Install TOP FRONT COVER.

# ELECTRICAL OPERATION

## COMPONENT DESCRIPTION

**Master Switch (S1)** - Determines the mode of operation; ON, OFF or OVEN COOL

**Lights Switch (S2)** - Controls the oven cavity lights.

**Fan Speed Switch Hi/Low (S3)** - Controls blower motor speed between HI and LOW settings. Available on models SG4D/SG6D.

**Alarm/Buzzer** - Signals the end of the normal cook cycle when cooking time expires.

**Timer** - Times the cooking cycle and signals the buzzer at the end of the cycle.

**Door Switch** - Allows the oven to operate when the doors are closed but stops the oven from operating when the doors are opened.

**Blower Motor** - Operates the oven cavity blower. Also, an internal centrifugal switch on the motor is utilized to allow the connection of power to the heat relay when the motor is at operating speed.

**Transformer (T1)** - Provides 24 VAC power to the ignition control module and heating circuit.

**Motor Control Relay(s) (SG4C/SG6C)** - Provides power to HI and LOW speed motor windings based on operator requirements.

**Solid State Temperature Controller (SG4D/SG6D)** - Monitors temperature sensor and regulates the oven cavity temperature by controlling the heat relay through the blower motor centrifugal switch contacts.

**Ignition Control Module** - Provide ignition spark and monitors burner(s) flame current during ignition sequence.

**Ignition Electrode and Flame Sense Device** - Ignites the gas and senses the presence of a flame. The flame presence generates a micro-amp flame sense current that is monitored by the ignition control module. A flame sense current of 1 micro amp (minimum and stable) is required to maintain burner ignition.

**Power On Light (SG4D/SG6D)** - Lit whenever the Master Switch (S1) is turned to ON or OVEN COOL mode.

**Heat Light** - Lit whenever temperature controller is calling for heat.

**No Ignition Light (SG4C/SG6C)** - Lit when power is turned ON, during ignition trial and gas purge time and when no flame is detected by flame sensor. If the oven fails to ignite after three attempts, it will remain lit until power is reset.

**Temperature Probe (SG4D/SG6D)** - This temperature probe is a thermistor device. A thermistor is a calibrated resistor which changes resistance with the temperature. As the temperature increases, the resistance of the thermistor decreases. The resistance of the probe is compared to the resistance of the temperature controller resistor in to control and maintain temperature.

**Temperature Probe (SG4C/SG6C)** - This temperature probe is a J-type thermocouple. As the temperature increases, a DC voltage is generated within this thermocouple and compared to a list of temperature values stored within the cooking computer memory to control and maintain temperature.

**High Limit Thermostat** - Protects the oven from temperatures above 550°F by removing power from the first valve (safety) on the dual solenoid gas valve which stops the flow of gas to the burner. Auto resets at 500°F.

**Gas Valve (Dual Solenoid)** - Contains two valves. The first valve is opened when the unit is turned on and the limit temperature is not exceeded. The second valve is turned by the heating system. Both valves must be open in order to get gas to the main burners.

**SSR1 and SSR2 (SG4C/SG6C)** - When SSR1 is energized, it connects power to the blower motor for HI fan speed operation. When SSR2 is energized, it connects power to blower motor for LOW speed operation.

**Cooling Fan** - Circulates cooler air from rear of oven forward to cool components in the control area.

**Computer Control (SG4C/SG6C)** - Monitors temperature sensor and regulates the oven cavity temperature by controlling the heat relay (R1) through the blower motor centrifugal switch contacts. Also, counts the time of the product and signals the electronic alarm at the end of the cook cycle.

**Power Level Control** - Selects the percent of heat input between 22% and 100%. Power level must be on for oven to work.

Plug, Socket and Components (SG4D/SG6D)

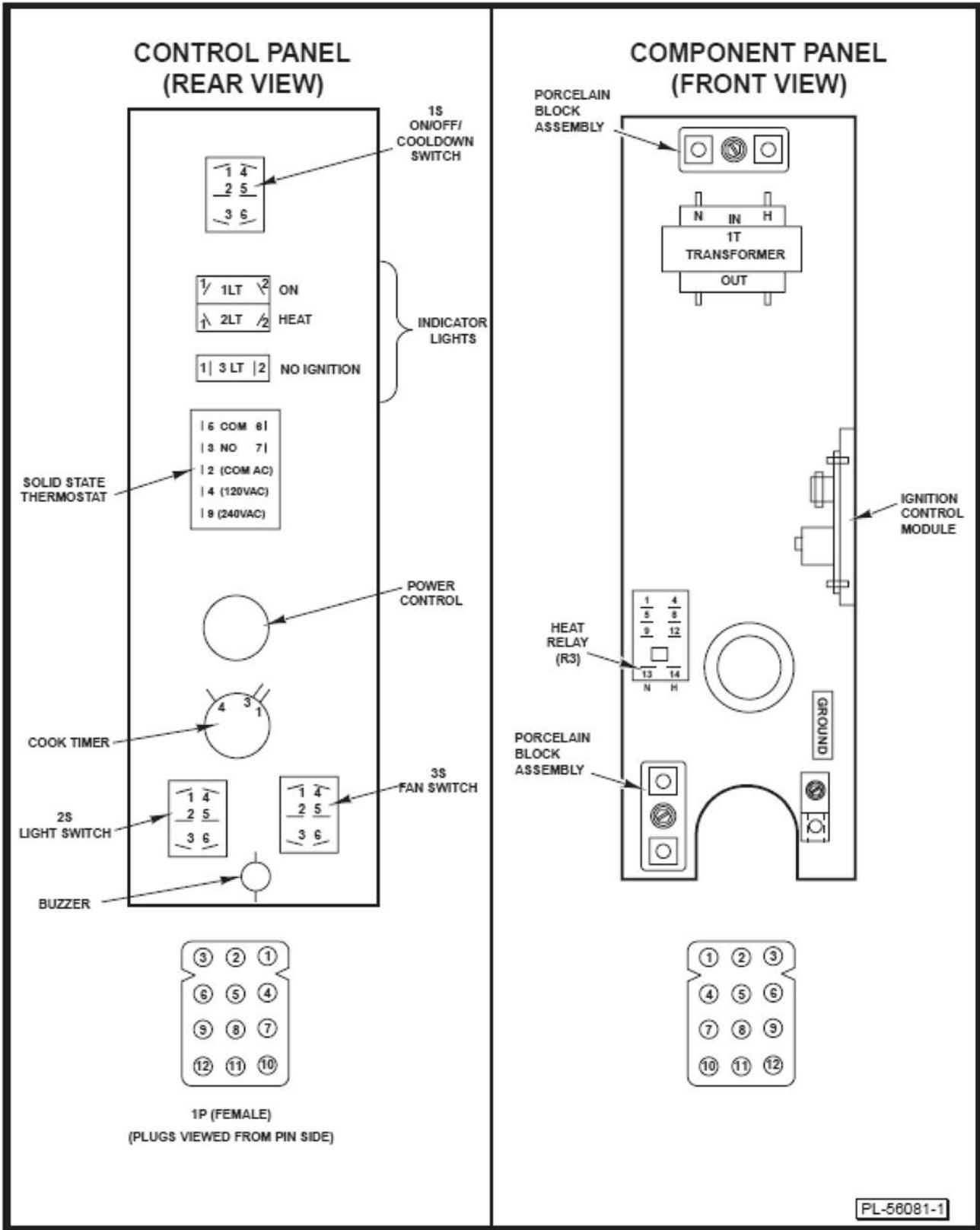


Fig. 71

Plug, Socket and Components (SG4C/SG6C)

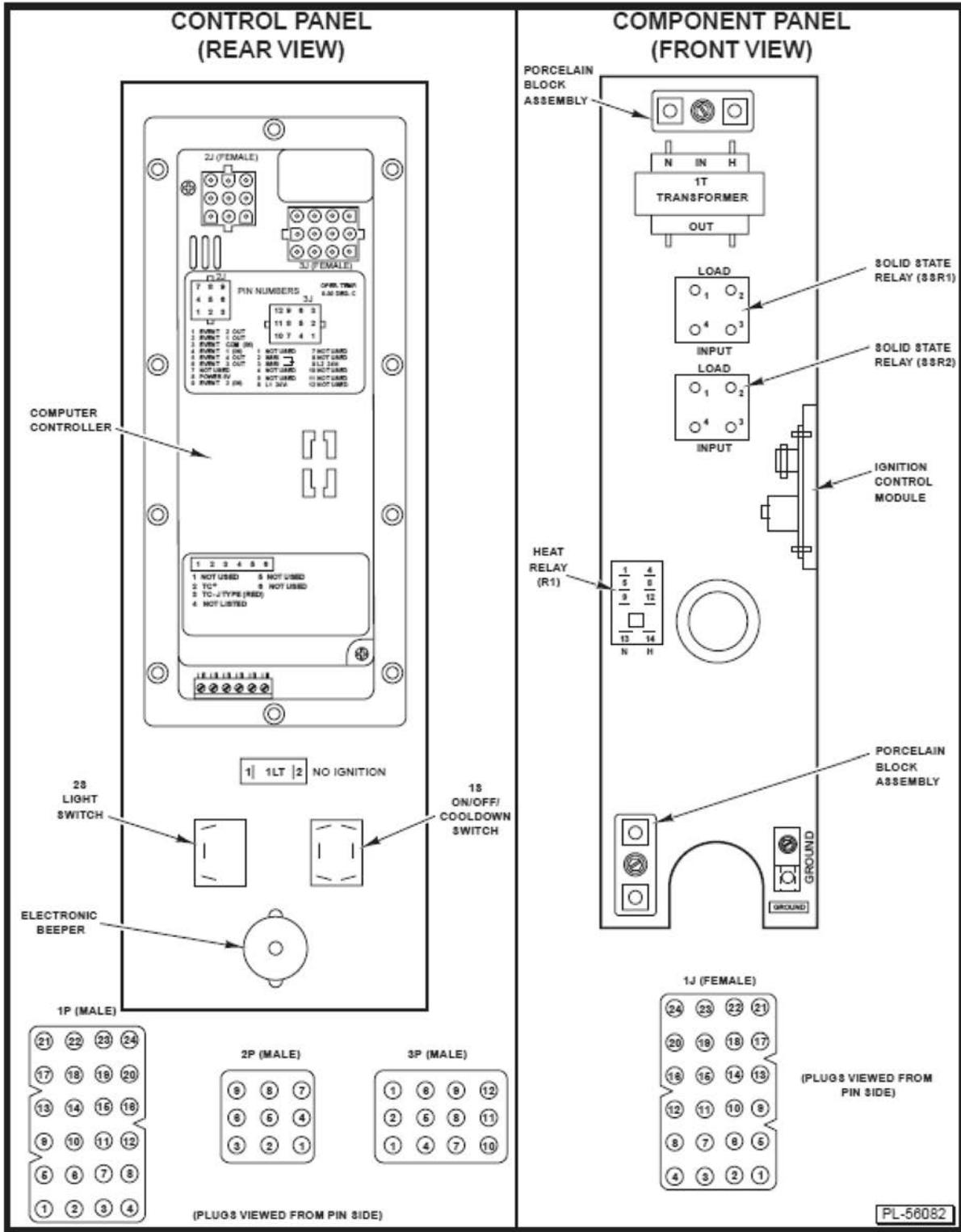
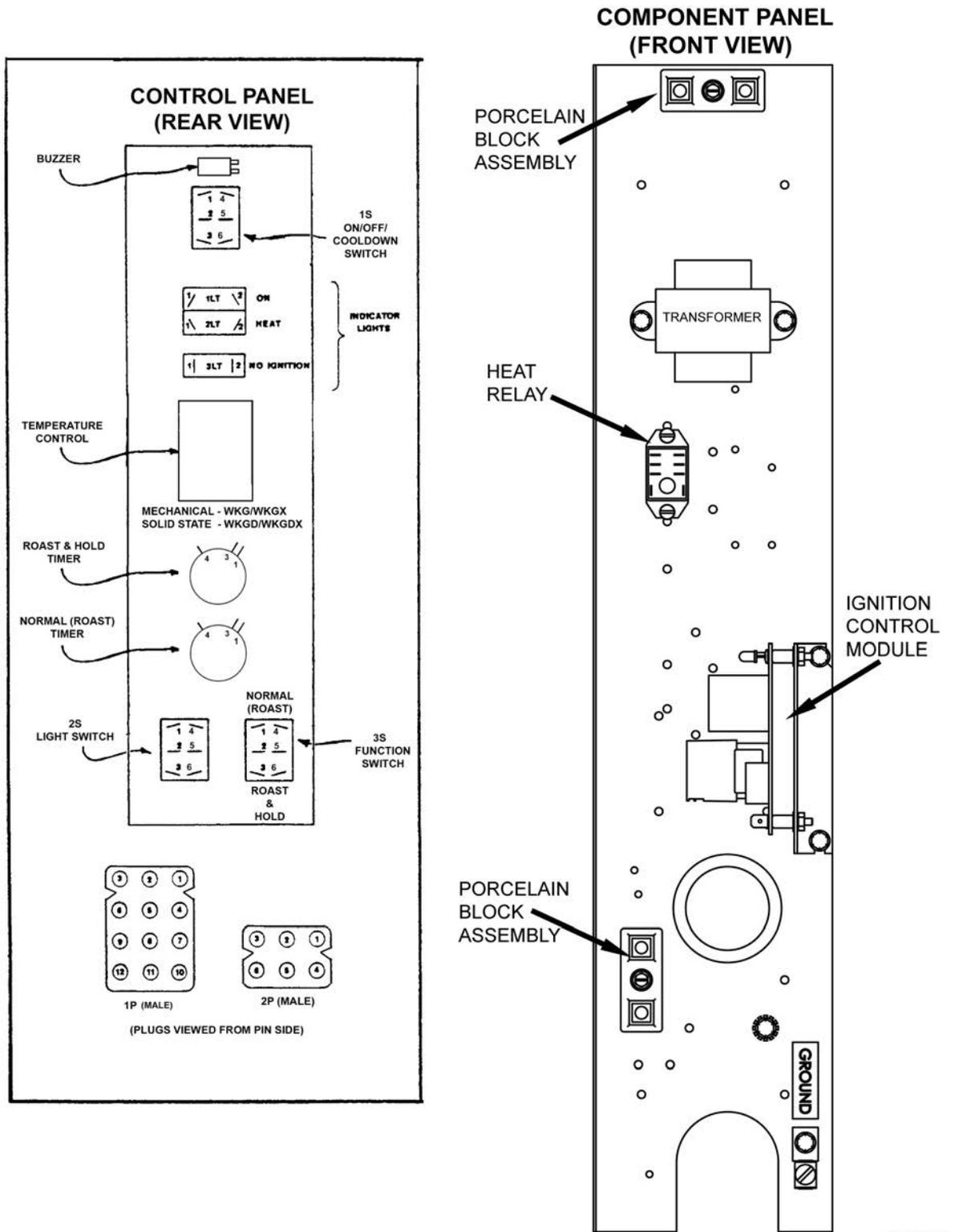


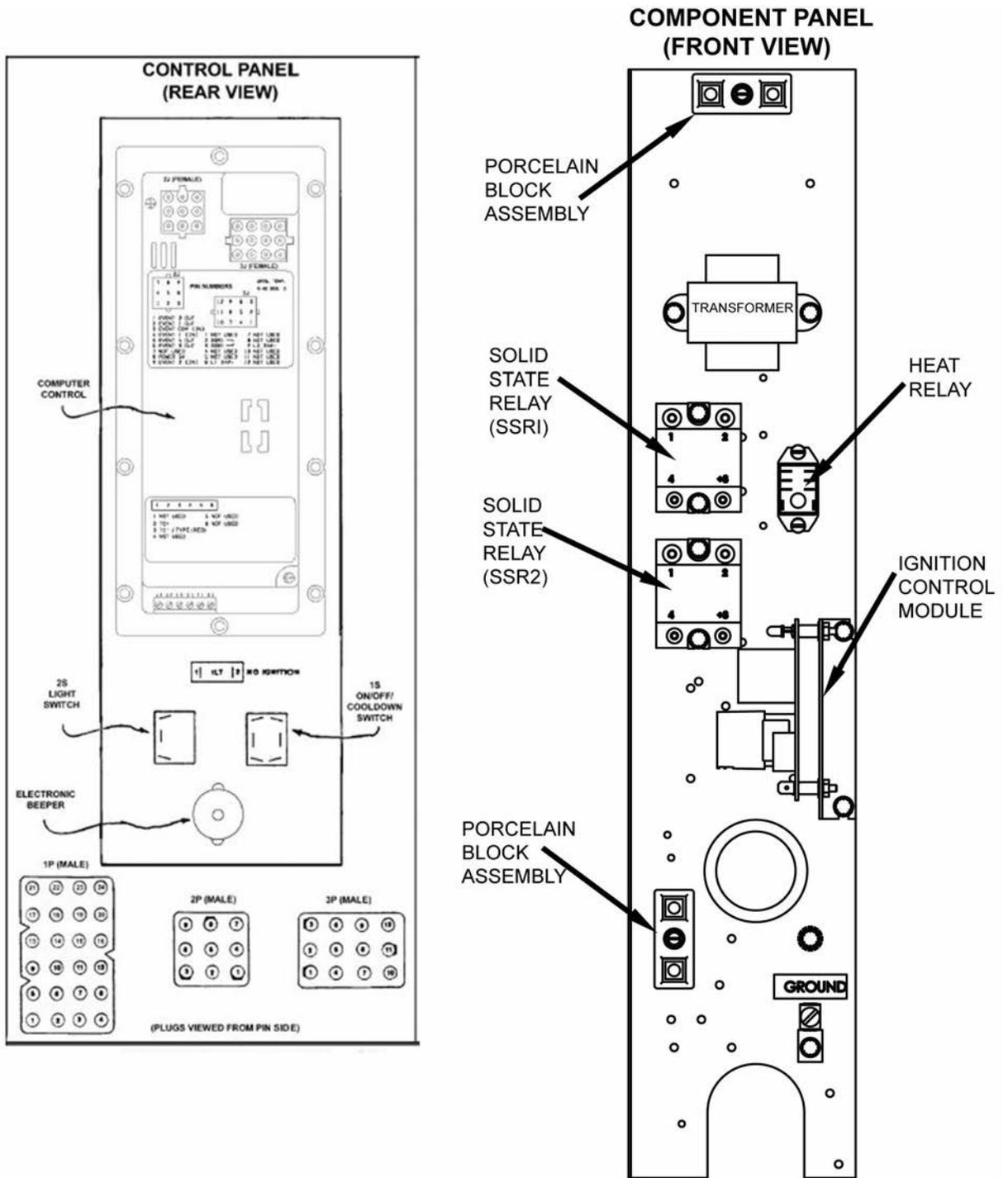
Fig. 72



DERIVED FROM 424207

AI4912

STARTING AT SERIAL NUMBER 481913936 (STANDARD)



DERIVED FROM 424826

AI4913

**STARTING AT SERIAL NUMBER 481913936 (COMPUTER)**

**SEQUENCE OF OPERATIONS**

**SG4D/SG6D with Solid State Temperature Controller**

Schematic 424373-1 will be used to explain the electrical sequence of operation.

**Cook Cycle**

1. Conditions

- A. Oven connected to correct voltage.
    - 1) L1 (HOT) to power switch (S1).
    - 2) L2 (neutral or second line) to one side of the following components: L1 of the power level control, power ON light, heat light, temperature controller board terminal 9 (120VAC) or terminal 10 (208-240 VAC), oven cavity lights, buzzer, timer motor, heat relay coil (R3), convection fan motor common (C), transformer primary T1), motor speed (Hi/Low) relay coil (R1), hold relay coil (R2) and the component cooling fan.
  - B. Oven properly grounded.
  - C. Gas supply valve ON.
  - D. Gas combination control valve ON.
  - E. Power switch (S1) OFF.
  - F. Oven light switch (S2) ON/OFF (position has no affect on the function of the normal cooking cycle).
  - G. Temperature controller dial set to lowest temperature (fully counterclockwise).
  - H. High limit switch closed (position has no affect on the function of the normal cooking cycle).
  - I. Timer in the OFF position.
  - J. Oven doors closed.
  - K. Door switch contacts closed.
  - L. Oven cavity temperature below 140°F.
  - M. Power level switch to 100%.
2. Set temperature controller dial to desired temperature.
    - A. Contacts J3 and J5 close.
  3. Power switch (S1) is turned ON.
 

**NOTE:** Power is available to the oven light switch

    - A. Component cooling fan energized.
    - B. ON light (amber) is lit.
    - C. Power to timer terminal C.
    - D. Transformer (T1) energized.
      - 1) Power (24 VAC) to one side of the following components: heat relay (R3) normally open (N.O.) contact.
      - 2) First valve (safety) on the gas valve energized. Gas does not flow to the burner until the 2nd valve (main) is energized.
      - 3) Ignition module energized.
    - E. Heating light is lit.
    - F. Power to one side of centrifugal switch.
    - G. Convection fan motor is energized through (S3) high-low.
      - 1) When the convection fan motor reaches operating speed, the centrifugal switch (N.O.) on the motor closes.
    - H. Heat relay is energized.
      - 1) N.O. contacts close.
  4. Heating circuit is powered.
    - A. No ignition light (red) comes ON.
    - B. Module performs a self diagnostic test for 4 seconds.
    - C. Second valve (main) on the gas valve is energized. Gas starts to flow to burners.
    - D. Sparking begins, the no ignition light goes out and burners light.

**NOTE:** Sparking continues for up to 7 seconds or until a flame is established on both burners. If a flame is sensed on both burners, the no ignition light stays out and burner remains lit. If a flame is not sensed on both burners after 7 seconds of sparking, the no ignition light comes back on, second valve (main) on the gas valve is de-energized and gas flow to the burner stops. Ignition trial cycle repeats after a 15 second purge between cycles for two additional tries before locking out. To reset after a lockout, turn power switch (S1) OFF then ON.
  5. Oven reaches set temperature.
    - A. Temperature controller de-energizes internal relay and the normally open (N.O.) contacts open.
      - 1) Heat light goes out.
    - B. Power removed from heat relay.
    - C. Heat relay normally open (N.O.) contacts OPEN.
    - D. Power removed from heating circuit.
      - 1) Second gas valve de-energized.

6. The oven will continue to cycle on the temperature controller until the doors are opened or master switch (S1) is turned to the OFF or OVEN COOL position.

### Timer Cycle

The timer operates independently of the heating cycle. Additional time can be set or the timer can be turned OFF throughout the cooking cycle.

1. With the master switch turned ON, power is supplied to timer.
  - A. Set the timer to desired time.
  - B. Contacts 1 & 3 close, timer motor is energized and timing down begins.
2. Time expires on timer.
  - A. Contacts 1 & 3 open, timer motor is de-energized and timing stops.
  - B. Contacts 1 & 4 close.
    - 1) Buzzer energized and sounds. The buzzer continues to sound until the timer dial is set to the OFF position or additional time is set.

### Cool Down Cycle (Solid State Temperature Controller)

1. Conditions.
  - A. Oven is ON.
  - B. Oven cavity temperature needs to be lowered.
  - C. Doors are open.
    - 1) Convection fan de-energized.
    - 2) Thermostat de-energized.
      - a. Heat light out.
      - b. Power removed from heat relay.
    - 3) 24 V transformer de-energized.
    - 4) Cooling fan de-energized.
2. Power switch (S1) turned to COOL DOWN.
  - A. Power to fan speed switch (S3). Set fan speed switch to either HI or LO.
3. If door is closed, power is supplied to one side of the following components:
  - A. Power ON light (Amber) comes ON.
  - B. Transformer (T1) energized.

- 1) Power (24 VAC) to one side of the following components: heat relay (R3) normally open (N.O.) contacts, high limit connected through the normally closed (N.C.) contacts to the first valve (safety) on the dual solenoid gas valve.
  - a. First valve (safety) on the gas valve energized. Gas does not flow to the burner until the second valve (main) is energized.
- C. Component cooling fan.
- D. Power to timer and oven cavity lights.
4. The oven will remain in this condition until the master switch (S1) is turned to the OFF or ON position.

### SG4C/SG6C with Computer Controller

Schematic 426575-1 will be used to explain the electrical sequence of operation.

### Normal Cook Cycle

1. Conditions
  - A. Oven connected to correct voltage.
    - 1) L1 (hot) to power switch (S1).
    - 2) L2 (neutral or second line) to one side of the following components: oven cavity lights, convection fan motor common (C), transformer primary (T2), component cooling fan and the heat relay coil (R1).
  - B. Oven properly grounded.
    - 1) Ground (GND) to one side of the following components: computer control case, no ignition light, transformer secondary (T2), ignition control module, the first valve (safety) and second valve (main) on the dual solenoid gas valve and computer control pin 9 (C3-9).
  - C. Gas supply valve ON.
  - D. Gas combination control valve ON.
  - E. Power switch (S1) OFF.
  - F. Computer control is set up properly and ready to use.
  - G. Oven lights switch (S2) ON or OFF (position has no affect on the function of the normal cook cycle).
  - H. High limit thermostat closed.
  - I. Oven doors closed.

- J. Oven cavity temperature below 140°F.
- 2. Power switch (S1) turned ON.
  - A. Power (120 VAC) to computer control pin 3 (C3-3). Power at pin 3 is not transferred to other components until computer control is energized and operation conditions are met.
  - B. Power is available to the oven light switch (S2).
  - C. Power to terminal 1 on solid state relay 1 SSR1-load side and solid state relay 2 SSR2-load side.
  - D. Component cooling fan energized.
  - E. Transformer (T1) is energized, 24 volt output.
    - 1) Power (24 VAC) to one side of the following components: heat relay (R1) normally open (N.O.) contacts, high limit connected through the normally closed (N.C.) contacts to the first valve (safety) on the dual solenoid gas valve.
    - 2) First valve (safety) on the gas valve energized. Gas does not flow to the burner until the second valve (main) is energized.
    - 3) Ignition module energized.
    - 4) Power (24 VAC) to the oven computer control.
- 3. Control is energized and performs a power on self test before energizing outputs. If the control passes self test, then the outputs are energized and operation sequence continues, If control does not pass self test, then the corresponding error code is displayed.

**NOTE:** Control retains last temperature set.

- A. Computer control senses oven cavity temperature.
  - 1) With the oven cavity temperature below set point, the controls 120 VAC output from pin C3-2 is activated and power is connected to the common (C) side of the blower switch contacts on the convection fan motor.
  - 2) The controls 5 VDC output from pins C2-2 (-) and C2-8 (+) is activated and SSR1 relay is energized.
    - a. Convection fan motor is energized (fan speed on HI).

- 3) When the convection fan motor reaches operating speed:
    - a. The blower switch (N.O.) on the motor closes.
  - B. Heat relay coil (R1) energized.
    - 1) (R1) contacts (N.O.) close and the heating circuit is powered.
    - 2) Oven heat light on the control comes on.
  - C. Ignition module is energized.
    - 1) Heating circuit is powered.
    - 2) No ignition light (red) comes ON.
    - 3) Module performs a self-diagnostic test for 4 seconds.
    - 4) Second valve (main) on the gas valve is energized. Gas starts to flow to burners.
    - 5) Sparking begins, the no ignition light goes out and burners light.
- NOTE:** Sparking continues for up to 7 seconds or until a flame is established on both burners. If a flame is sensed on both burners, the no ignition light stays out and burner remains lit. If a flame is not sensed on both burners after 7 seconds of sparking, the no ignition light comes back on, second valve (main) on the gas valve is de-energized and gas flow to the burner stops. Ignition trial cycle repeats after a 15 second purge between cycles for two additional tries before locking out. To reset after a lockout, turn power switch (S1) OFF then ON.
- 4. Oven reaches set point temperature.
    - A. Computer control deactivates the 120 VAC output to heat relay (R1).
      - 1) Heat relay (R1) de-energized and the normally open (N.O.) contacts open.
    - B. Power removed from ignition control module.
      - 1) The second valve (main) on the gas valve is de-energized and gas flow to the burner stops.
      - 2) Oven heat LED on the control goes out.
      - 3) Oven ready LED on the control comes ON.
      - 4) Electronic beeper sounds momentarily.

- C. The oven will continue to cycle on the computer control until the doors are opened or power switch (S1) is turned to the OFF or COOL DOWN position.

**Temperature and Time Cycle (Normal Cooking)**

The computer's internal cook timer operates independently of the heating cycle. Additional time can be set or the timer can be stopped and restarted throughout the cooking cycle.

Refer to the Installation & Operation Manual for specific operation instructions of the oven computer control.

**Function Switch SG4C/SG6C** - Selects the cooking mode of the oven between Cook or Roast and Hold. Is used in conjunction with the Roast and Hold timer during Roast and Hold cooking. The selected mode also determines the fixed blower speed: HI for Cook and LO for Roast and Hold. If Roast and Hold is selected, when the Roast (then hold) time expires, the oven heating stops and the oven enters the hold mode. Once the oven cavity temperature drops to 150°F, the heat comes back on and the oven cycles at this temperature to hold the cooked product.

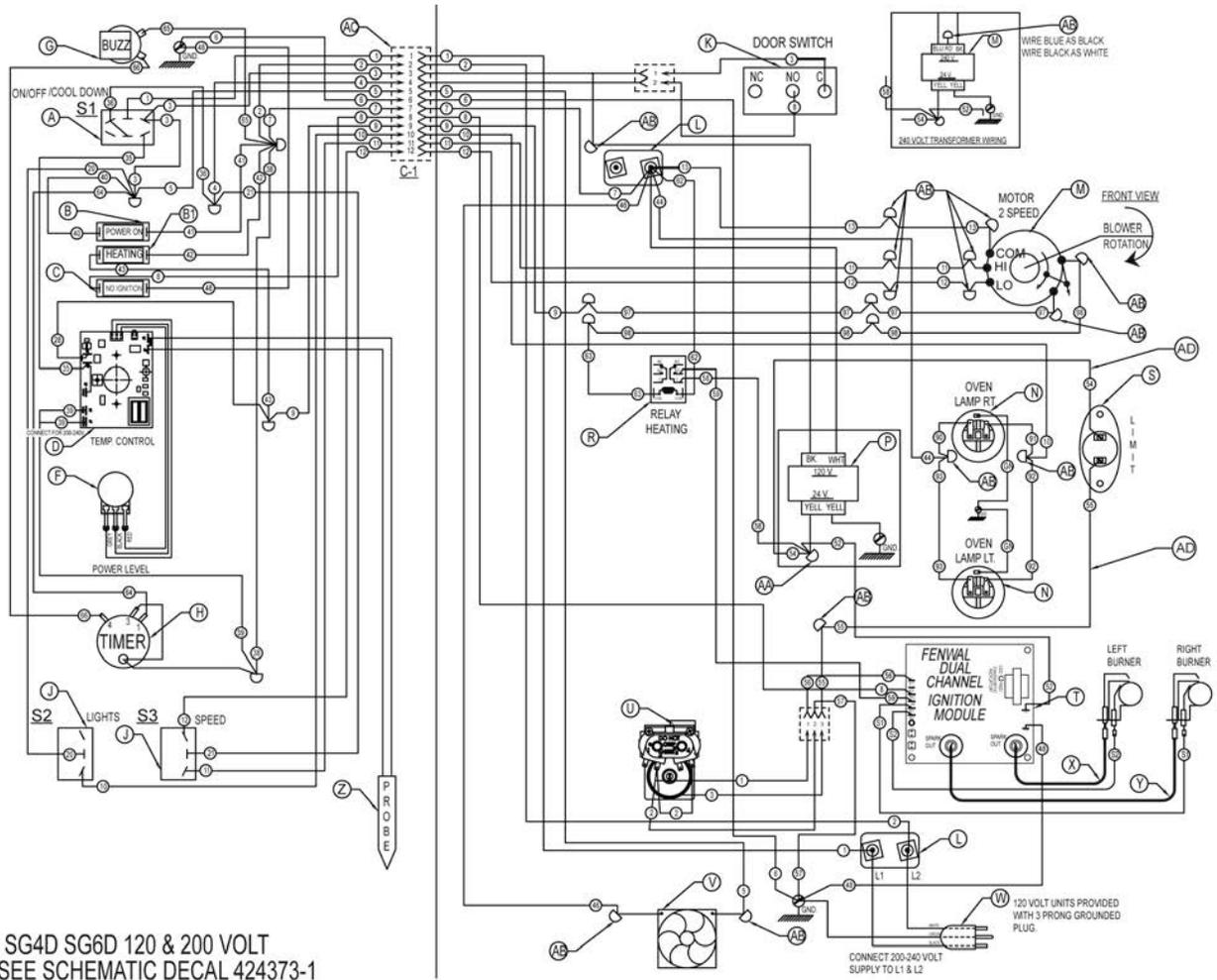
**Roast and Hold Cycle**

For a detailed explanation of the Roast and Hold mode, refer to the instructions manual.

In the Roast and Hold mode, the operation of the computer control is identical to the normal cook cycle, with these exceptions:

1. Oven Roast and Hold light on the control comes ON.
2. Convection fan speed changes from HI to LO.
  - A. The computer control 5 VDC output from pins C2-2 (-) and C2-8 (=) is deactivated and SSR1 relay is de-energized.
3. At the end of the cook time, the electronic beeper sounds momentarily to indicate the end of the first stage cooking (oven operates normally at the temperature and time selected until time expires).
4. The display flashes HOLD as the oven enters the hold mode. This is also considered second stage cooking (oven heating stops but product continues to cook on residual heat).
  - A. Convection fan motor is de-energized.
  - B. Oven fan cycles with the output of the heating system. Anytime the system calls for heat, the fan must be running. After the oven has reached the 150°F set temperature, the heat and fan are deenergized.
5. After the oven temperature drops below 150°F, the heat comes back on and cycles as needed to maintain the hold temperature of 150°F.
  - A. Convection fan motor energized.
6. The oven continues to cycle in this manner until one of the following occurs:
  - A. The cook and hold mode is turned OFF.
  - B. Power switch (S1) is turned to the OFF or COOL DOWN position.

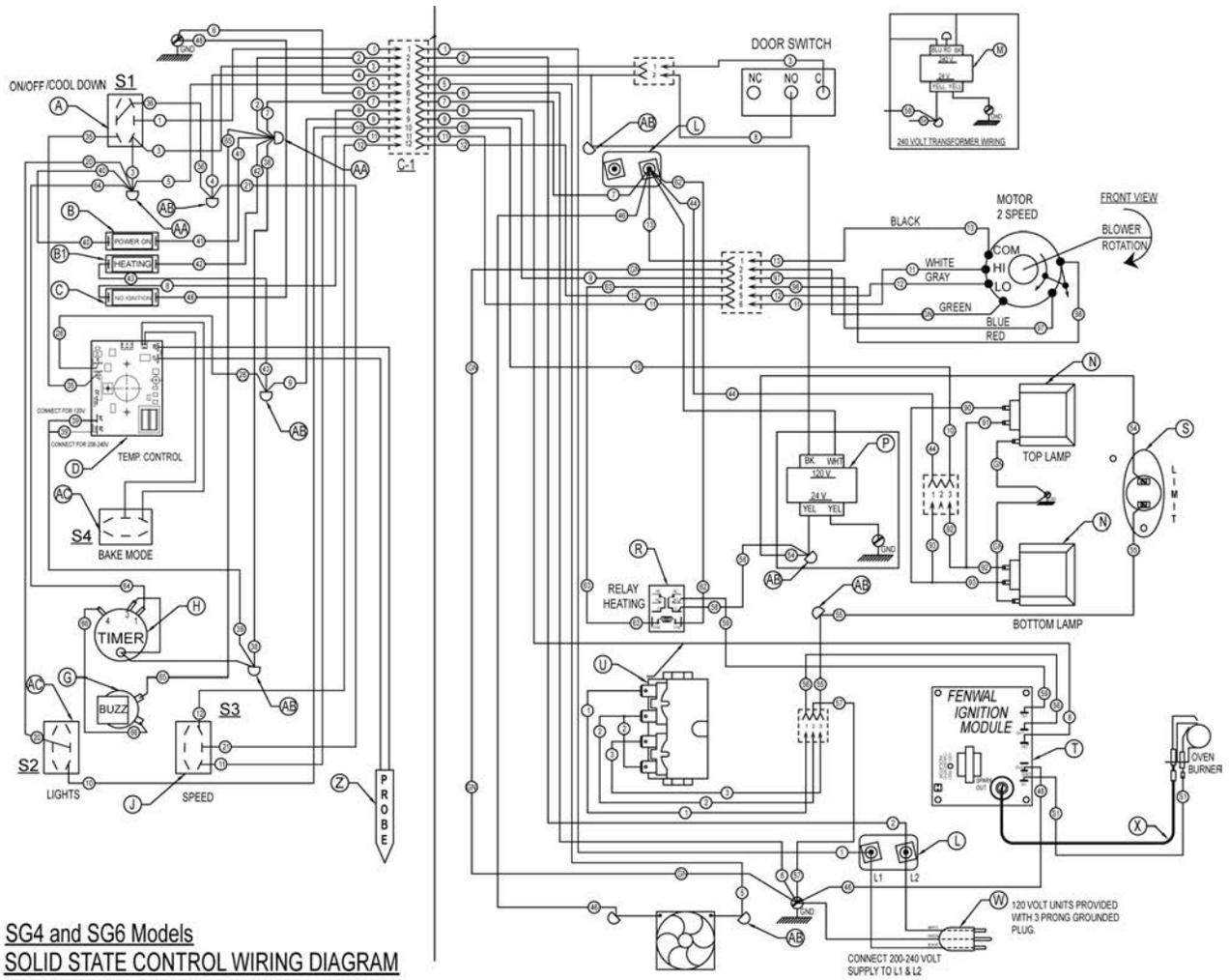
**WIRING DIAGRAMS**



SG4D SG6D 120 & 200 VOLT  
SEE SCHEMATIC DECAL 424373-1  
DERIVED FROM 424372

AI4902

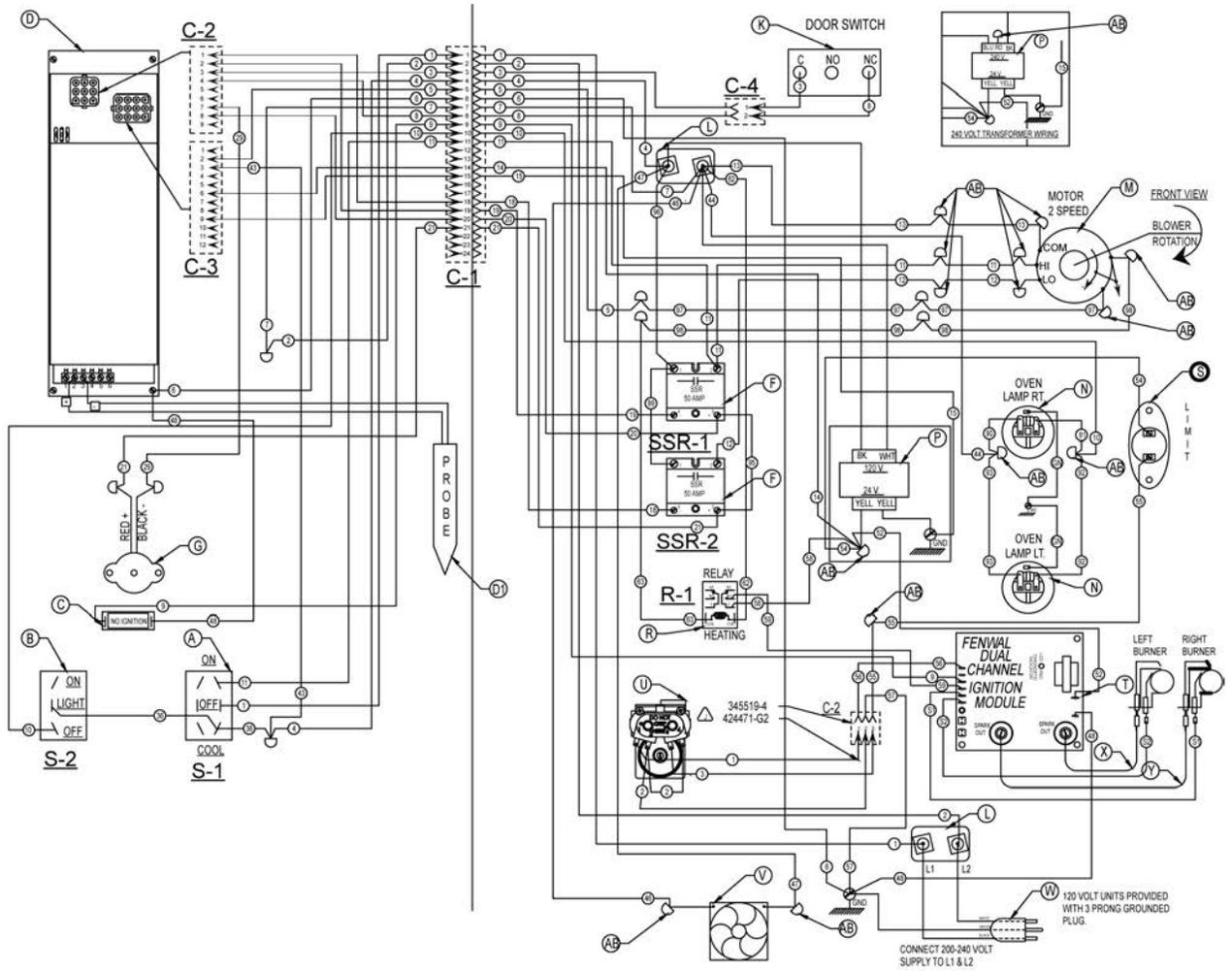
**Fig. 75**



SG4 and SG6 Models  
 SOLID STATE CONTROL WIRING DIAGRAM  
 1 BURNER CONVECTION OVEN 120 & 240V (NEW SG4)  
 DERIVED FROM 00959718

STARTING AT SERIAL NUMBER 481913936

AI4891

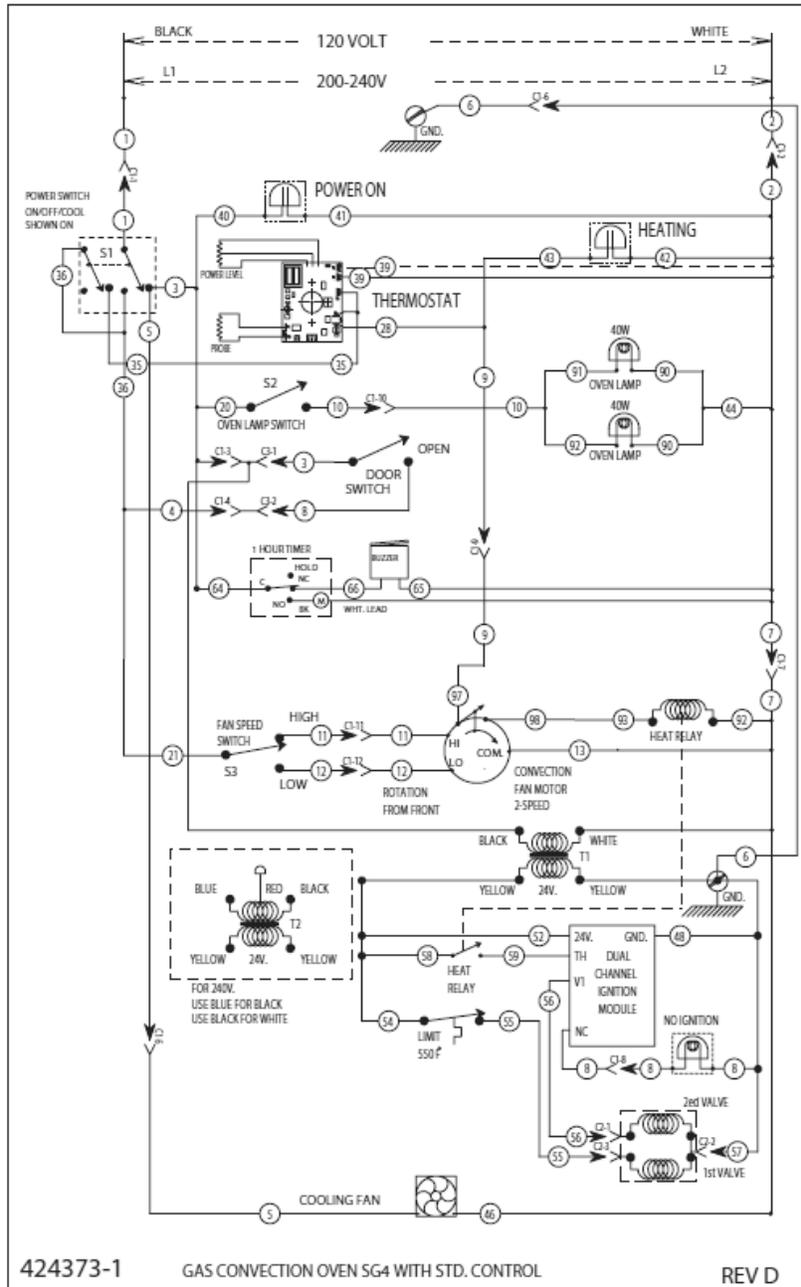


SG4 / SG6 CONVECTION OVEN DUAL BURNER - COMPUTER CONTROL 120 TO 240V.  
 REFER TO SCHEMATIC 426575 - 1  
 DERIVED FROM 426574 Rev. C

AI4903

Fig. 77

**SCHEMATICS**



**Fig. 78**

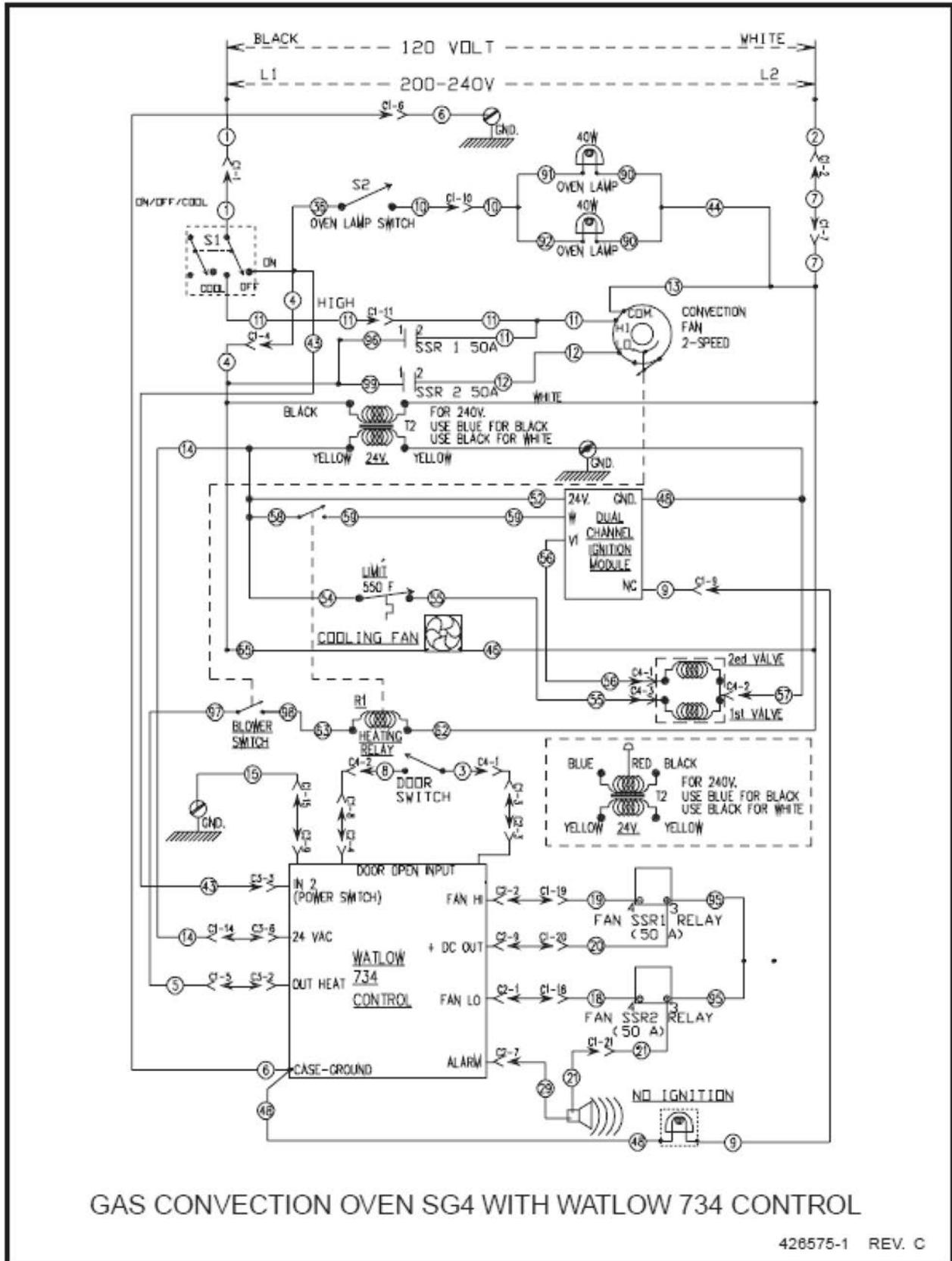


Fig. 79

# TRUBLESHOOTING

## TRUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES
Blower motor doesn't run in OVEN COOL or ON position.	Line voltage. Power/Master switch malfunction. Fan switch malfunction. Interconnection wiring malfunction.
Blower motor doesn't run in the ON position. Cool Down functions OK.	Door switch malfunction. Power/Master switch contacts inoperative. Interconnecting wiring malfunction.
Blower motor doesn't run in OVEN COOL position. Runs OK in ON position.	Power/Master switch malfunction. Interconnection wiring malfunction.
Gas does not ignite. No spark. No Ignition light is not ON.	Shorted electrode on igniter/flame sense. Igniter cable (high voltage) OPEN. Heat relay malfunction. Centrifugal switch in blower motor inoperative. Transformer inoperative. High limit thermostat open. Interconnecting wiring malfunction. Ignition module malfunction.
Sparks but gas does not ignite.	Gas solenoid valve off or inoperative. Manual gas valve closed. Gas supply OFF or insufficient gas pressure. Interconnecting wiring malfunction. Ignition module malfunction.
Gas ignites but will not maintain flame.	Igniter lead connections malfunction. Igniter ground inoperative. Igniter/flame sense malfunction or maladjusted. Insufficient gas pressure. Snorkel vent plugged, obstructed or missing. Incorrect polarity from transformer to ignition module.

SYMPTOMS	POSSIBLE CAUSES
Excessive or low heat.	Temperature probe malfunction. Temperature control board malfunction. Gas pressure insufficient. Gas orifice plugged or obstructed. Power level may be set to low.
Mechanical timer inoperative or not functioning properly.	Interconnecting wiring malfunction. Line voltage incorrect. Timer malfunction.
Component cooling fan does not run.	Motor inoperative. Interconnecting wiring malfunction.
Uneven cooking.	Convection fan motor speed/direction. Poor combustion. Gas pressure incorrect. Exhaust vent plugged or obstructed. Snorkel vent plugged or obstructed. Air flow baffles missing or damaged.
Intermittent problems.	High ambient temperatures. Wiring connections loose. Cooling fan malfunction.
No power to temperature controller.	Power/Master switch in OVEN COOL position. Door or door switch open.
No heat; LED on the controller is flashing.	Probe open or shorted.

**COMPUTER CONTROL MODELS ONLY**

SYMPTOM	POSSIBLE CAUSES
Oven does not heat.	High limit switch open. Probe malfunction. Control malfunction. Power level control set to off.
High limit thermostat shutting off gas burner.	Probe malfunction. Control malfunction.
Oven not hot enough.	Probe malfunction. Control range high (rH1) setting to low. See Setup Mode under Computer Controller (SG4C/SG6C).

**ERROR CODES**

CODE AND PROBLEM	PROBABLE CAUSE	SOLUTION
Er01 - ROM check sum error	Internal ROM malfunction	Cycle power.

CODE AND PROBLEM	PROBABLE CAUSE	SOLUTION
Er02 - RAM check sum error	Internal RAM malfunction	Cycle power.
Er03 - Ambient sensor error	Ambient temperature is below 32°F	Check ambient temperature at the control.
Er04 - Configuration error	Microprocessor malfunction	Cycle power.
Er05 - EEPROM error	Power loss while storing data	Cycle power.
Er06 - Zone 1 A/D under flow error	<ul style="list-style-type: none"> <li>• Incorrect sensor type</li> <li>• Measuring temperature outside the sensor range</li> </ul>	<ul style="list-style-type: none"> <li>• Check the InP1 setup parameter. Verify that it matches the sensor.</li> <li>• Check sensor and connections for a reversed or open sensor. If the condition causing the error is resolved, the error will clear.</li> </ul>
Er07 - Zone 1 A/D overflow error	Open sensor	<ul style="list-style-type: none"> <li>• Check the InP1 setup parameter. Verify that it matches the sensor.</li> <li>• Check sensor and connections for a reversed or open sensor. If the condition causing the error is resolved, the error will clear.</li> </ul>
Er10 - Stack overflow error	Microprocessor malfunction	<ul style="list-style-type: none"> <li>• Cycle Power.</li> <li>• Check sensor and connections for a reversed or open sensor.</li> </ul>
Er11 - Open sensor error	Open sensor	<ul style="list-style-type: none"> <li>• Check the InP1 setup parameter. Verify that it matches the sensor.</li> <li>• Check sensor and connections for a reversed or open sensor.</li> </ul>
Er12 - Shorted sensor	<ul style="list-style-type: none"> <li>• Incorrect sensor type</li> <li>• Measuring temperature outside the sensor range</li> </ul>	<ul style="list-style-type: none"> <li>• Check the InP1 setup parameter. Verify that it matches the sensor.</li> <li>• Check sensor and connections for a reversed or open sensor.</li> </ul>

## IGNITION MODULE DIAGNOSTICS

NUMBER OF LED FLASHES	INDICATES	POSSIBLE CAUSE
2 Flashes	Burner flame with no call for heat.	<ol style="list-style-type: none"> <li>1. Main gas valve stuck open, burner on with no call for heat from the temperature control system. Replace main gas valve.</li> <li>2. Check flame sensor and sensor wire.</li> <li>3. Ignition module malfunction.</li> </ol>

NUMBER OF LED FLASHES	INDICATES	POSSIBLE CAUSE
3 Flashes	Ignition system has locked out.	1. Ignition module could not "Prove" flame after three tries for ignition within the lockout time timing provided. <ul style="list-style-type: none"> <li>A. Check for gas supply to burner.</li> <li>B. Check for spark to ignition electrode.                             <ul style="list-style-type: none"> <li>1) Check spark gap (gap should be 1/8").</li> </ul> </li> <li>C. Check for flame current in flame sense wire (0.000001 Amp Min. DC) using FC designated terminals.                             <ul style="list-style-type: none"> <li>1) Check burner adjustment (air/gas).</li> </ul> </li> </ul> <p><b>NOTE:</b> If A thru C check out, replace ignition module.</p>
4 Flashes	Internal board problem.	1. Ignition module malfunction. Remove power from "R" terminal for five seconds then reconnect. If fault remains, replace ignition module.

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# CATALOG OF REPLACEMENT PARTS

## GAS CONVECTION OVENS



**SG4**

**ML-126610**

**SG6**

**ML-126612**

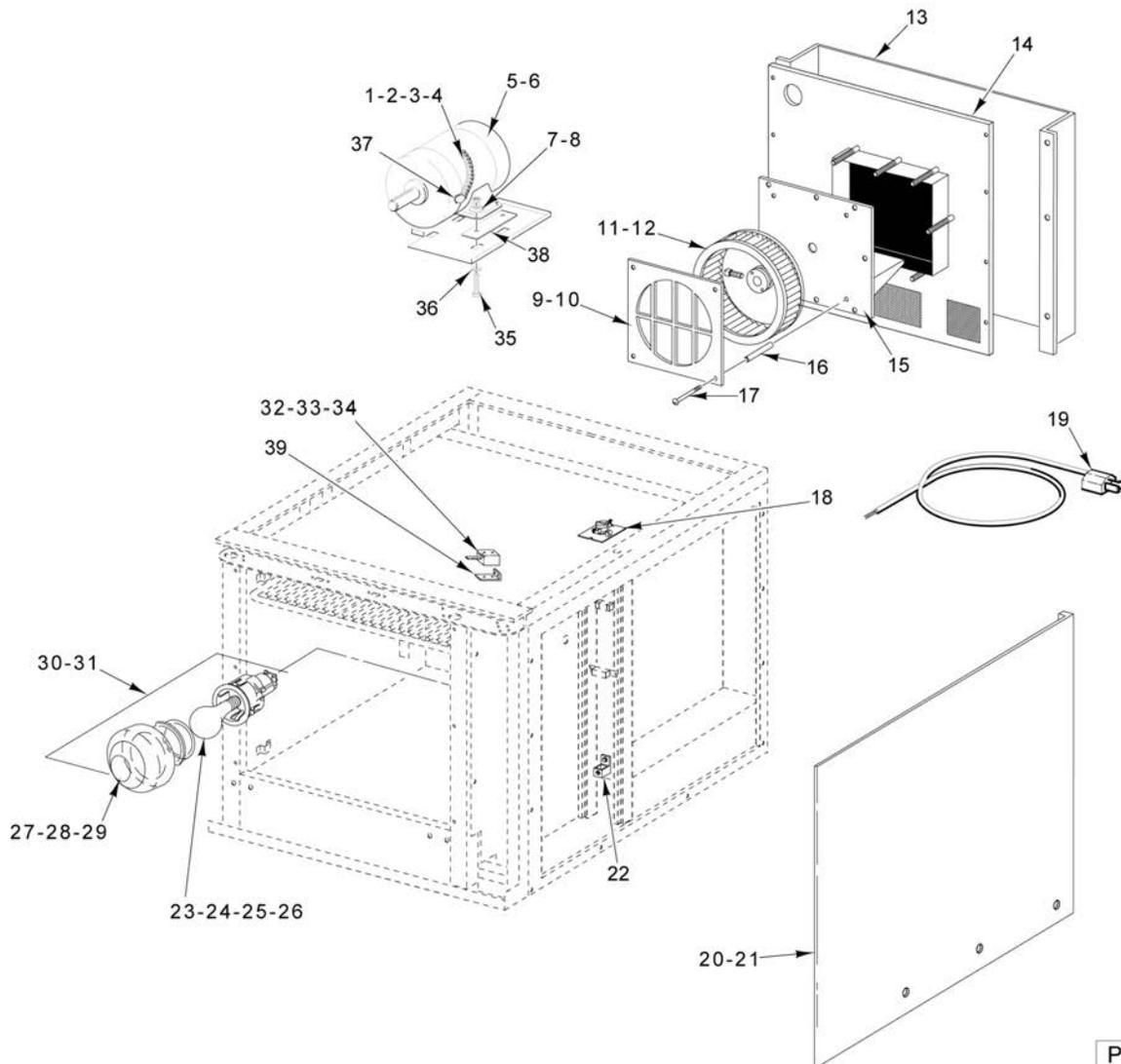


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21	ELECTRICAL COMPONENT PANEL
23	CONTROL PANEL

40	00-427617-00001	Flue - Deflector	48	00-343634-00002	Caster
41	00-959663-00001	Tube - Snorkel Assy.	49	00-357047-00001	Caster - Swivel
42	00-402558-00004	Clip - Bulb	50	00-357047-00002	Caster - Swivel
43	00-424172-00001	Leg - Set (PTD)	51	00-417063-00001	Strap
44	00-424172-00002	Leg - Set (SST)	52	00-357093-00001	Ring - Locking
45	00-424174-00001	Leg - Set	53	00-288946-00002	Foot
46	00-342150-00005	Leg (For Double Stack)	54	SC-113-76	Screw
47	00-343634-00001	Caster	55	00-425428-00001	Foot (Adjustable)

**PARTS NOT ILLUSTRATED**



PL-61426

**OVEN PANELS & MOTOR  
(PREVIOUS CONSTRUCTION BEFORE 3/18/2019)**

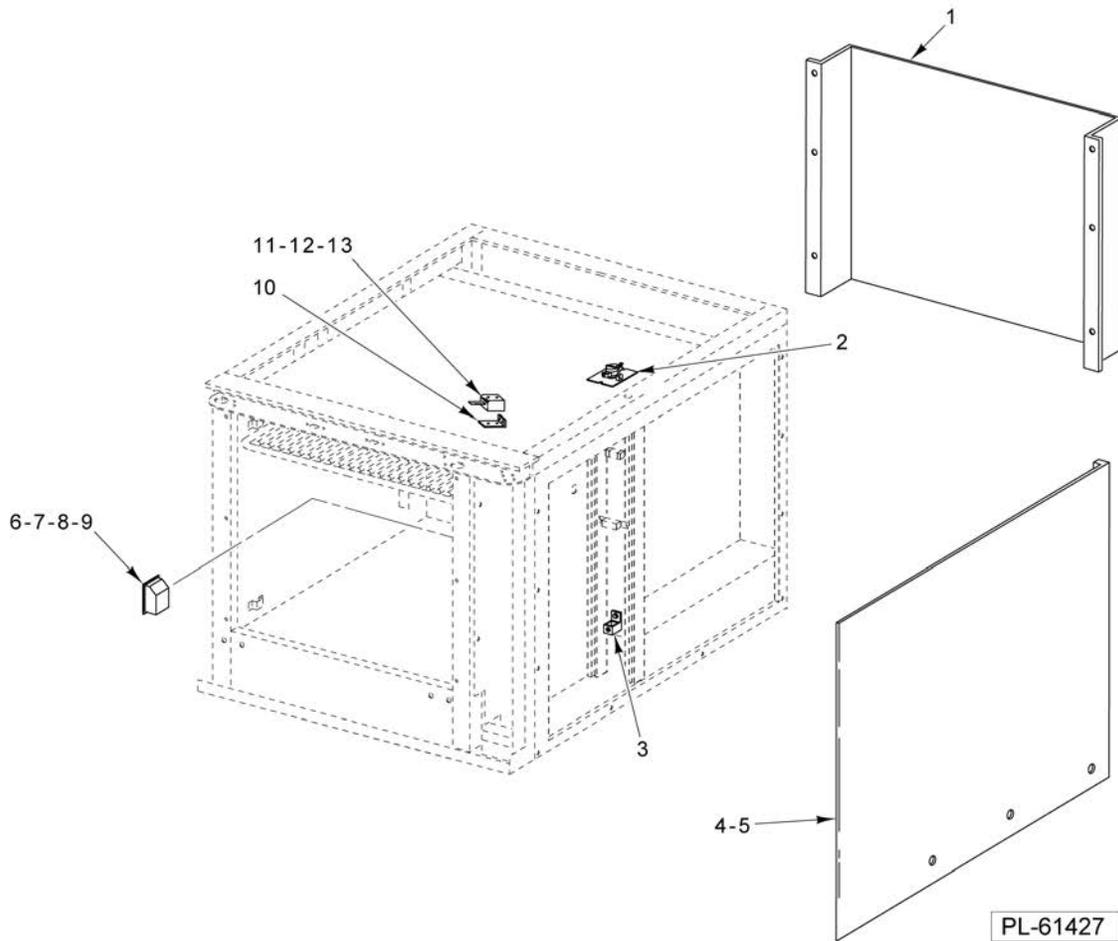
**OVEN PANELS & MOTOR  
(PREVIOUS CONSTRUCTION BEFORE 3/18/2019)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-61426			
1	FE-006-05	Lock Nut 1/2 .....	1
2	00-414540-00B35	Conduit 3/8 x 35 In. Lg.....	1
3	00-342285-00001	Bushing - Plastic.....	2
4	FE-002-03	Connector - Conduit 3/8 TS Straight.....	1
5	00-358516-00001	Motor 1/2 Hp. (2-Speed) (115 V., 50/60 Hz., 1 Ph.).....	1
6	00-358516-00002	Motor 1/2 Hp. (2-Speed) (208-240 V., 50/60 Hz., 1 Ph.).....	1
7	WS-029-46	Washer.....	4
8	NS-046-86	Nut Assy. 5/16-18 KEPS Hex.....	4
9	00-411136-00003	Cover - Fan (50 Hz.).....	1
10	00-411136-00004	Cover - Fan (60 Hz.).....	1
11	00-415780-00003	Wheel - Blower (60 Hz.).....	1
12	00-415780-00005	Wheel - Blower (50 Hz.).....	1
13	00-424840-00002	Panel - Back (SST) (Optional).....	1
14	00-426839-000G1	Panel Assy. - Back.....	1
15	00-423289-000G1	Motor Mount.....	1
16	00-411289-00004	Spacer - Fan Housing.....	4
17	SC-120-15	Mach. Screw 1/4-20 x 4 Rd. Hd.....	4
18	00-958827-000G3	Kit - Oven Limit Assy.....	1
19	00-405016-00001	Cord - Electric Supply (120 V. Only).....	1
20	00-424140-00002	Panel - Outer (RH) (SST).....	1
21	00-424228-00002	Panel - Outer (RH) (SST).....	1
22	00-417856-00001	Lug - Grounding (With Set Screw).....	1
23	01-1000V7-00028	Bulb.....	1
24	01-1000V7-00053	Lamp - Oven (Complete) (Lens, Base, & Bulb).....	1
25	00-342766-00002	Light Bulb - Oven (40 Watts) (240 V.).....	1
26	00-913102-00032	Kit - Lamp & Housing (250 V.).....	1
27	00-423832-00001	Cover - Lamp Electrical.....	2
28	01-1000V7-00054	Bulb - Halogen G9 Base.....	1
29	00-357036-00003	Lens - Lamp.....	1
30	00-357036-00001	Oven Lamp (40 Watts) (120-130 V.).....	2
31	00-913102-00032	Kit - Lamp & Housing (250 V.).....	2
32	00-411496-000F1	Switch - Micro.....	1
33	00-499310-000G1	Micro Switch Kit.....	1
34	SD-034-47	Self-Tapping Screw 6-32 x 1 Hex Washer Hd., Type T.....	2
35	SC-113-65	Cap Screw 5/16-18 x 1-1/4 Hex Hd.....	4
36	WS-029-46	Washer.....	4
37	FE-002-52	Connector - Conduit 3/8 TS 90 Degree.....	1
38	00-358723-00001	Spacer - Steel.....	2
39	00-425324-00001	Bracket - Door Switch.....	1
40	00-427617-00001	Flue - Deflector.....	1
41	00-959663-00001	Tube - Snorkel.....	1
42	00-402558-00004	Clip - Tubing.....	2
*43	00-424172-00001	Leg - Set (25-3/4 In.) (PTD).....	1
*44	00-424172-00002	Leg - Set (25-3/4 In.) (SST).....	1
45	00-424174-00001	Leg - Set.....	4
46	00-342150-00005	Leg (8 In.).....	4
47	00-343634-00001	Caster (Swivel With Brake) (7.5 In.).....	2
48	00-343634-00002	Caster (Rigid) (7.5 In.).....	2
49	00-357047-00001	Caster - Swivel (Without Brake).....	2
50	00-357047-00002	Caster - Swivel (With Brake).....	2
51	00-417063-00001	Strap - Tie Down.....	4
52	00-357093-00001	Ring - Locking.....	4
53	00-288946-00002	Foot - Adjustable (1-5/8) (SST).....	4
54	SC-113-76	Cap Screw 1/4-20 x 1 Hex Hd.....	AR
55	00-425428-00001	Foot - Adjustable.....	4

\* No Longer Available

14	00-427617-00001	Flue - Deflector	25	00-417063-00001	Strap
15	00-959663-00001	Tube - Snorkel Assy.	26	00-357093-00001	Ring - Locking
16	00-402558-00004	Clip - Bulb	27	00-288946-00002	Foot
17	00-424172-00001	Leg - Set (PTD)	28	SC-113-76	Screw
18	00-424172-00002	Leg - Set (SST)	29	00-425428-00001	Foot (Adjustable)
19	00-424157-000G7	Leg (PTD)	30	00-427617-00001	Flue - Deflector
20	00-342150-00005	Leg (For Double Stack)	31	00-959663-00001	Tube - Snorkel
21	00-343634-00001	Caster	32	00-958827-000G1	Thermostat
22	00-343634-00002	Caster	33	00-499302-00001	Panel - Side
23	00-357047-00001	Caster - Swivel	34	00-499303-00001	Panel - Side
24	00-357047-00002	Caster - Swivel			

**PARTS NOT ILLUSTRATED**



**OVEN PANELS  
(CURRENT CONSTRUCTION)**

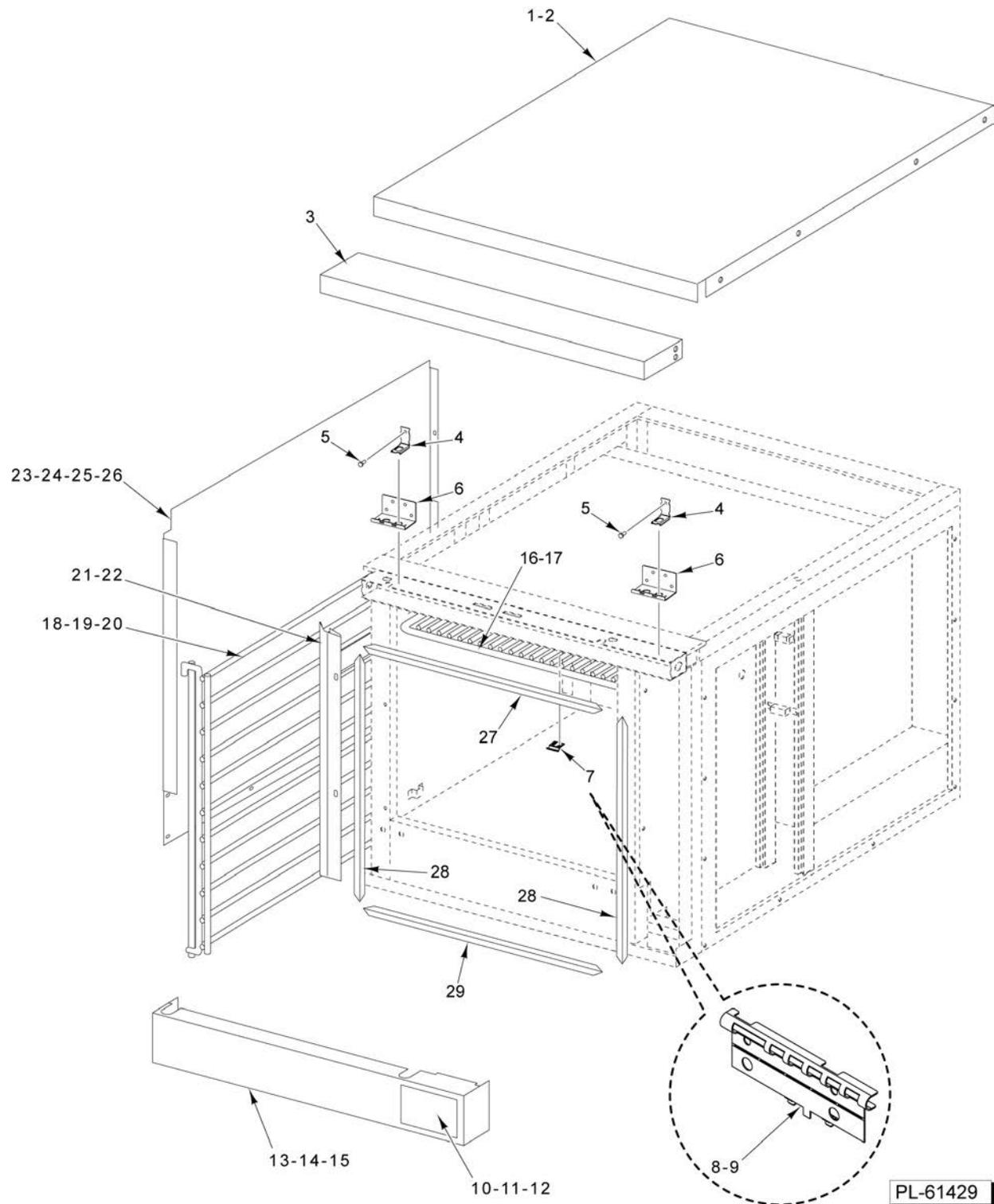
**OVEN PANELS  
(CURRENT CONSTRUCTION)**

ILLUS. PL-61427	PART NO.	NAME OF PART	AMT.
1	00-424840-00002	Panel - Back (SST) (Optional).....	1
2	00-958827-000G3	Kit - Oven Limit Assy.....	1
3	00-417856-00001	Lug - Grounding (With Set Screw).....	1
4	00-424140-00002	Panel - Outer (RH) (SST) (VC4G).....	1
5	00-424228-00002	Panel - Outer (RH) (SST) (VC6G).....	1
6	00-960194-00001	Oven Lamp (40W) (120 V.).....	2
7	00-961766-00001	Oven Lamp (40W) (240 V.).....	2
8	00-961291-00001	Bulb - Halogen (120 V.).....	AR
9	00-961291-00002	Bulb - Halogen (230V) (240 V.).....	AR
10	00-425324-00001	Bracket - Door Switch.....	1
11	00-411496-000F1	Switch - Micro (Door).....	1
12	00-499310-000G1	Micro Switch Kit (Incls. Items 10, 11,& 13).....	1
13	SD-034-47	Self-Tapping Screw 6-32 x 1 Hex Washer Hd., Type T.....	2
14	00-427617-00001	Flue - Deflector.....	1
15	00-959663-00001	Tube - Snorkel.....	1
16	00-402558-00004	Clip - Tubing.....	2
17	00-424172-00001	Leg - Set (25-3/4 In.) (PTD).....	1
18	00-424172-00002	Leg - Set (25-3/4 In.) (SST).....	1
19	00-424157-000G7	Leg Assembly for Caster and Foot (Painted Black).....	4
20	00-342150-00005	Leg (8 In.) (Double Stack).....	4
21	00-343634-00001	Caster (Swivel With Brake) (7.5 In.) (Double Stack).....	2
22	00-343634-00002	Caster (Rigid) (7.5 In.) (Double Stack).....	2
23	00-357047-00001	Caster - Swivel (Without Brake).....	2
24	00-357047-00002	Caster - Swivel (With Brake).....	2
25	00-417063-00001	Strap - Tie Down.....	4
26	00-357093-00001	Ring - Locking (Use with Item 19).....	4
27	00-288946-00002	Foot - Adjustable (1-5/8) (SST) (Use with Item 19).....	4
28	SC-113-76	Cap Screw 1/4-20 x 1 Hex Hd (Use with legs).....	AR
29	00-425428-00001	Foot - Adjustable (Use with Item 20).....	4
30	00-427617-00001	Flue - Deflector.....	1
31	00-959663-00001	Tube - Snorkel.....	1
32	00-958827-000G1	Thermostat (High Limit) (With Mounting Plate).....	1
33	00-499302-00001	Side - Left Body.....	1
34	00-499303-00001	Side - Left Body.....	1



**OVEN PANELS AND RACK SUPPORTS  
(PREVIOUS CONSTRUCTION)**

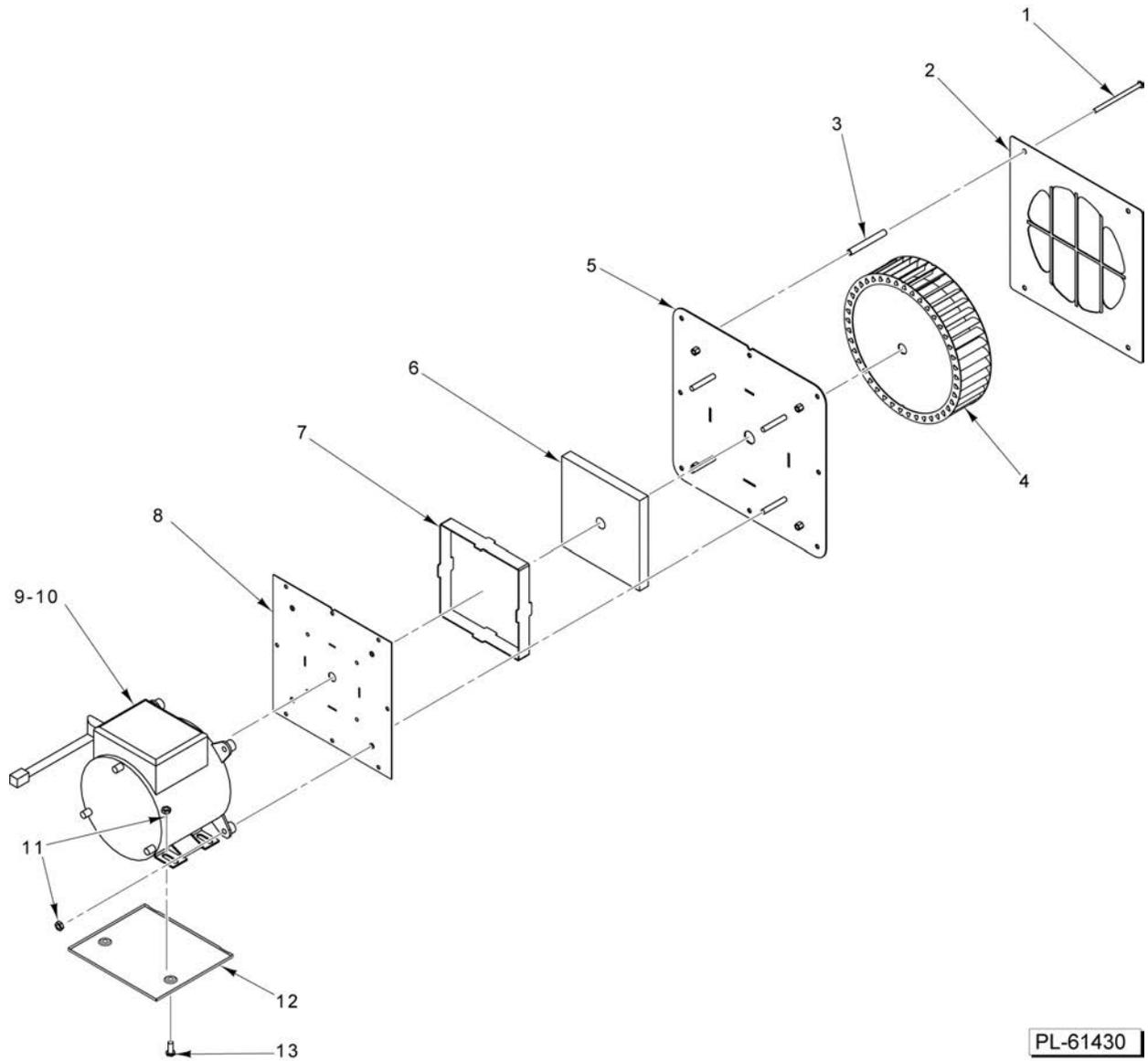
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-61428			
1	00-424141-00002	Top (SST).....	1
2	00-424229-00002	Top (SST).....	1
3	00-421799-00001	Top - Front.....	1
4	00-353484-00001	Plate - Retainer.....	2
5	SC-053-41	Mach. Screw 1/4-20 x 1/2 Slotted Truss Hd. (SST).....	4
6	NS-038-08	Lock Nut 1/4-20 x 1 Hex.....	4
7	00-347080-00002	Bearing - Door Shaft.....	2
8	00-353482-00001	Spacer.....	2
9	00-353483-00001	Plate - Upper Door Bearing.....	2
10	00-424142-00002	Panel - Outer (SST) (LH).....	1
11	00-424230-00002	Panel - Outer (SST) (LH).....	1
12	00-499302-00001	Side - Left Body.....	1
13	00-499303-00001	Side - Left Body.....	1
14	00-357919-00001	Kit - Door Seal.....	1
15	00-423842-000G1	Seal - Vertical Door (Set) (LH & RH).....	1
16	00-428104-00001	Guide - Rack (LH).....	1
17	00-428104-00002	Guide - Rack (RH).....	1
18	00-428104-00003	Guide - Rack (LH).....	1
19	00-428104-00004	Guide - Rack (RH).....	1
20	00-342141-00001	Rack - Support (LH).....	1
21	00-342141-00002	Rack - Support (RH).....	1
22	00-424833-00001	Rack - Support (LH).....	1
23	00-424833-00002	Rack - Support (RH).....	1
24	00-959456-00001	Support - Rack Guide (LH & RH).....	2
25	00-423766-000G1	Trim - Bottom W/Access Door Assy.....	1
26	00-421797-00002	Trim - Bottom.....	1
27	00-499261-00002	Trim - Bottom W/O Access Door Assy.....	1
28	00-423758-00001	Door - Access Trim.....	1
29	00-499297-00001	Door - Lower Access Trim.....	1
30	00-425199-00001	Fastener - Nylon (Push-In).....	2
31	00-424865-00001	Cover - Trim.....	1
32	00-357507-00001	Seal - Horizontal Door (30-1/2 In. Long) (Top & Bottom).....	2
33	00-411265-00011	Rack Assy.....	AR
34	00-411265-00022	Rack Assy.....	AR
35	00-959523-00001	Rack Assy.....	AR
36	00-411265-00010	Rack Assy.....	AR
37	00-411265-00020	Rack Assy.....	AR
38	00-959523-00002	Rack Assy.....	AR
39	00-959753-00001	Probe Guard & Retainer.....	1
40	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
41	SC-115-51	Mach. Screw 10-32 x 1/2 Phil. Truss Hd.....	2
42	00-347545-00001	Catch Assy. - Door.....	1
43	00-423848-00001	Shim - Door Strike.....	AR
44	NS-038-03	Lock Nut 10-32 SP.....	2
45	00-497585-00001	Plate - Strike.....	1



**OVEN PANELS AND RACK SUPPORTS  
(CURRENT CONSTRUCTION)**

**OVEN PANELS AND RACK SUPPORTS  
(CURRENT CONSTRUCTION)**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-61429			
1	00-424141-00002	Top (SST).....	1
2	00-424229-00002	Top (SST).....	1
3	00-421799-00001	Top - Front.....	1
4	00-961587-00001	Clip - Hold Down.....	2
5	00-922154	Screw 1/4-20 x 1 Hex Hd.....	9
6	00-961656-00001	Support - Door (Upper).....	2
7	00-497585-00001	Plate - Strike.....	1
8	00-959753-00001	Probe Guard & Retainer.....	1
9	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
10	00-423758-00001	Door - Access Trim.....	1
11	00-499297-00001	Door - Lower Access Trim.....	1
12	00-425199-00001	Fastener - Nylon (Push-In).....	2
13	00-423766-000G1	Trim - Bottom W/Access Door Assy.....	1
14	00-421797-00002	Trim - Bottom.....	1
15	00-499261-00002	Trim - Bottom W/O Access Door Assy.....	1
16	00-959523-00001	Rack Assy.....	AR
17	00-959523-00002	Rack Assy.....	AR
18	00-959456-00001	Support - Rack Guide (LH & RH).....	2
19	00-961434-00001	Guide - Rack (RH) (SG6).....	AR
20	00-961434-00002	Guide - Rack (LH) (SG6).....	AR
21	00-357919-00001	Kit - Door Seal.....	1
22	00-423842-000G1	Seal - Vertical Door (Set) (LH & RH).....	1
23	00-424142-00002	Panel - Outer (SST) (LH).....	1
24	00-424230-00002	Panel - Outer (SST) (LH).....	1
25	00-499302-00001	Side - Left Body.....	1
26	00-499303-00001	Side - Left Body.....	1
27	00-959770-00001	Seal - Door (Top).....	1
28	00-959771-00001	Seal - Door (Side).....	2
29	00-959772-00001	Seal - Door (Bottom).....	1

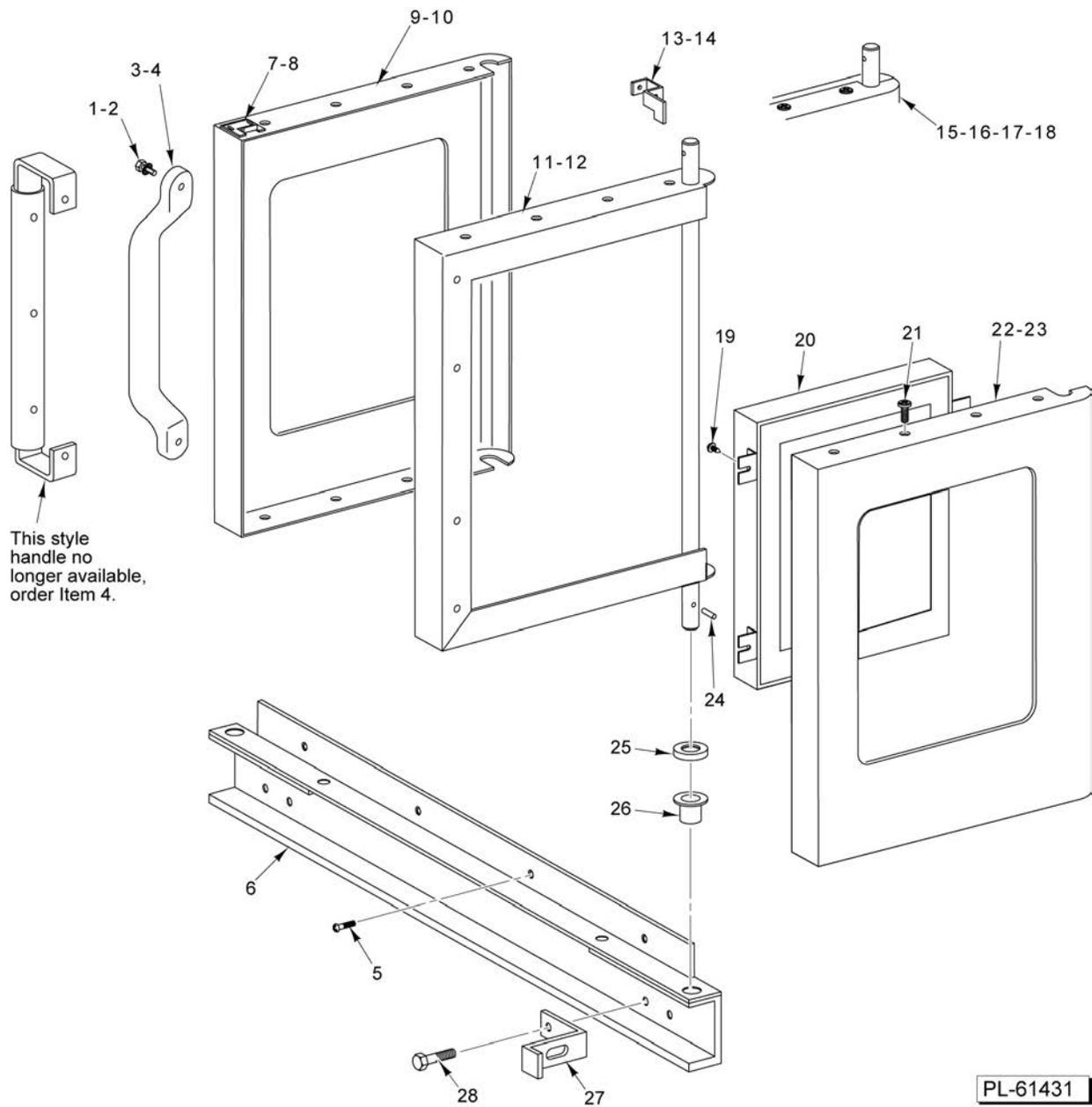


PL-61430

**CONVECTION MOTOR  
(CURRENT CONSTRUCTION AFTER 3/19/19)**

**CONVECTION MOTOR  
(CURRENT CONSTRUCTION AFTER 3/19/19)**

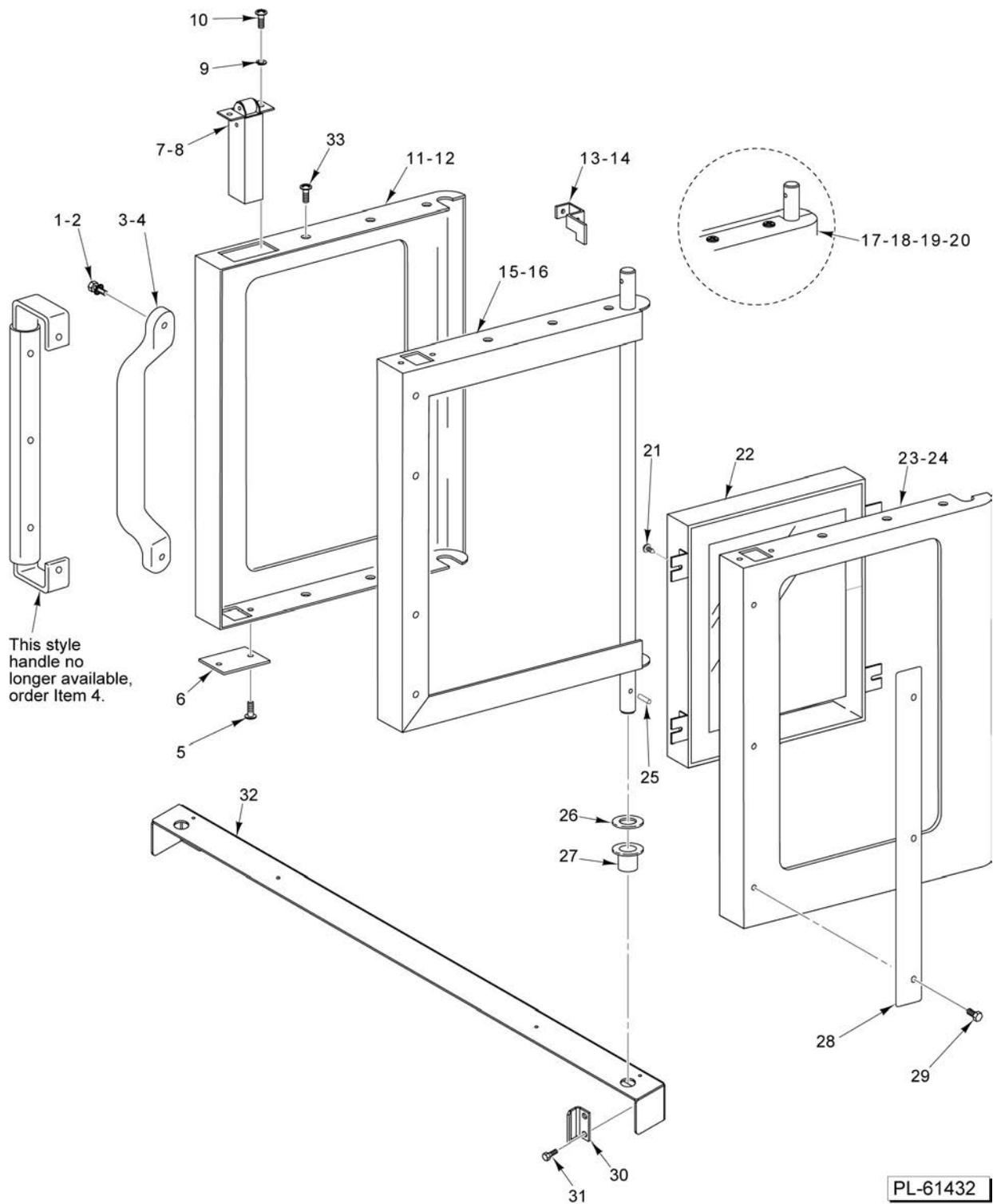
ILLUS. PL-61430	PART NO.	NAME OF PART	AMT.
1	SC-120-15	Mach. Screw 1/4-20 x 4 Rd. Hd.....	4
2	00-411136-00004	Cover - Fan.....	1
3	00-411289-00004	Spacer - Fan Housing.....	4
4	00-415780-00003	Wheel - Blower.....	1
5	00-961671-000G1	Mount - Motor (Front).....	1
6	00-342159-00033	Insulation (28 x 33 x 1 In.).....	AR
7	00-960963-00001	Mount - Motor, Wrapper.....	1
8	00-961668-00001	Mount - Motor (Rear).....	1
9	00-961739-000G1	Motor, 120 VAC, 0.5 HP.....	1
10	00-961739-000G2	Motor, 208-240 VAC, 0.5 HP.....	1
11	NS-046-86	Nut Assy. 5/16-18 KEPS Hex.....	6
12	00-961831-00001	Pan - Drip, Motor.....	1
13	SC-037-75	Cap Screw 5/16-18 x 3/4 Hex Hd.....	2



**DOOR ASSEMBLY  
(PREVIOUS CONSTRUCTION)**

**DOOR ASSEMBLY  
(PREVIOUS CONSTRUCTION)**

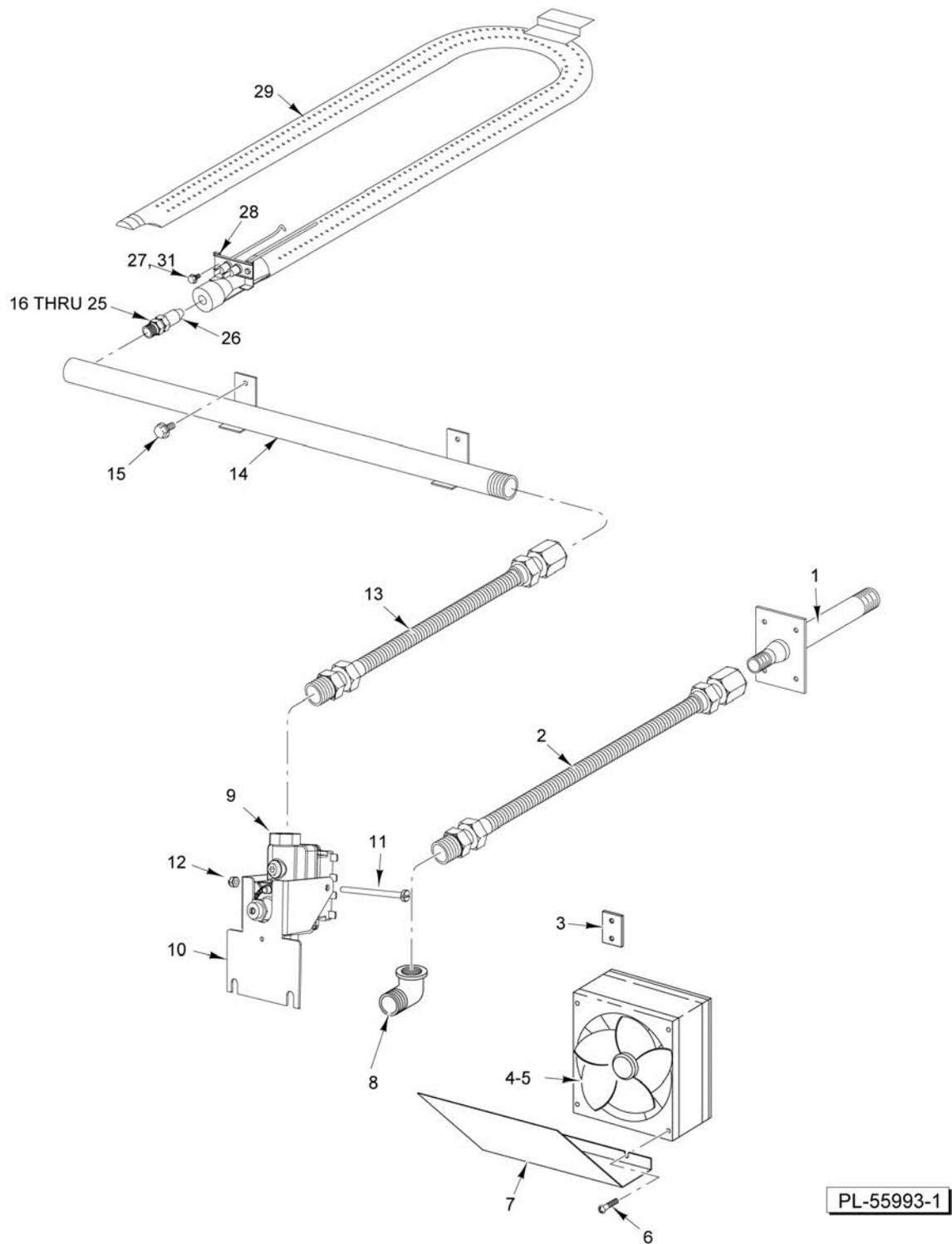
ILLUS. PL-61431	PART NO.	NAME OF PART	AMT.
1	00-959087-00001	Screw 1/4-20 x 1-1/4 Black Hd.....	2
2	WL-013-14	Lockwasher 1/4 Internal Shakeproof.....	2
3	00-957108-00001	Handle - Molded (Black).....	1
4	00-913102-00179	Kit - Handle.....	1
5	SC-022-40	Mach. Screw 1/4-20 x 3/4 Phil. Flat Hd. (SST).....	4
6	00-357846-00001	Channel - Door Sill Weldment.....	1
7	00-423847-00001	Strike - Door.....	1
8	SD-034-22	Self-Tapping Screw 10-16 x 5/8 Phil. Truss Hd., Type AB.....	2
9	00-358600-00001	Panel - Outer Door (RH) (W/Window).....	1
10	00-358529-00006	Door Assy. (LH) (W/O Window).....	1
11	00-421905-000G1	Frame Assy. - Door (RH).....	1
12	00-421904-000G2	Frame Assy. - Door (LH).....	1
13	00-424163-00001	Lever - Door Switch.....	1
14	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T.....	1
15	00-358529-00005	Door Assy. (LH) (W/Window).....	1
16	00-358529-00006	Door Assy. (LH) (W/O Window).....	1
17	00-358530-00003	Door Assy. (RH) (W/Window).....	1
18	00-358530-00004	Door Assy. (RH) (W/O Window).....	1
19	SD-034-62	Self-Tapping Screw 10-32 x 1/2 Hex Washer Hd., Type T.....	4
20	00-358534-00001	Window Assy.....	1
21	SD-034-22	Self-Tapping Screw 10-16 x 5/8 Phil. Truss Hd., Type AB.....	8
22	00-358532-00001	Panel - Inner Door (W/Window).....	1
23	00-358533-00003	Panel - Inner Door (W/O Window).....	1
24	PS-004-11	Spirol Pin 3/16 x 1-1/4 Heavy.....	1
25	00-343143-00002	Washer.....	2
26	00-347080-00002	Bearing - Door Shaft.....	1
27	00-424158-00001	Door Stop.....	1
28	SC-113-90	Mach. Screw 1/4-20 x 3/4 Hex Hd.....	2



**DOOR ASSEMBLY  
(CURRENT CONSTRUCTION)**

**DOOR ASSEMBLY  
(CURRENT CONSTRUCTION)**

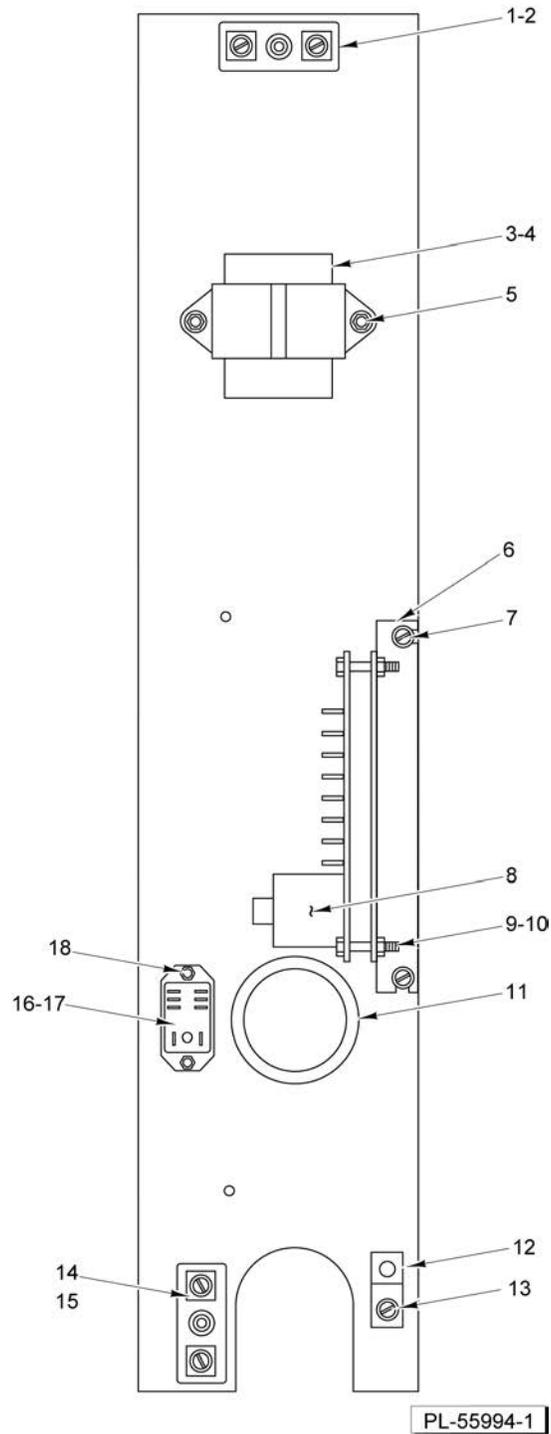
ILLUS. PL-61432	PART NO.	NAME OF PART	AMT.
1	00-959087-00001	Screw 1/4-20 x 1-1/4 Black Hd.....	2
2	WL-013-14	Lockwasher 1/4 Internal Shakeproof.....	2
3	00-957108-00001	Handle - Molded (Black).....	1
4	00-913102-00179	Kit - Handle.....	1
5	SD-034-22	Self-Tapping Screw 10-16 x 5/8 Phil. Truss Hd., Type AB.....	2
6	00-499264-00001	Plate - Latch Cutout.....	1
7	00-497586-00001	Latch - Door Roller.....	1
8	00-347545-00001	Catch Assy. - Door (Ball Style) (Not Shown).....	1
9	WL-013-11	Lockwasher #10 Internal Shakeproof.....	2
10	SC-117-73	Mach. Screw 10-32 x 5/8 Phil. Truss Hd.....	2
11	00-358600-00001	Panel - Outer Door (RH) (W/Window).....	1
12	00-358600-00002	Panel - Outer Door (RH) (W/O Window).....	1
13	00-424163-00001	Lever - Door Switch.....	1
14	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T.....	1
15	00-421905-000G1	Frame Assy. - Door (RH).....	1
16	00-421904-000G2	Frame Assy. - Door (LH).....	1
17	00-499285-000G1	Door Assy. (LH) (W/Window).....	1
18	00-499285-000G2	Door Assy. (LH) (W/O Window).....	1
19	00-499286-000G1	Door Assy. (RH) (W/Window).....	1
20	00-499286-000G2	Door Assy. (RH) (W/O Window).....	1
21	SD-034-62	Self-Tapping Screw 10-32 x 1/2 Hex Washer Hd., Type T.....	4
22	00-358534-00001	Window Assy.....	1
23	00-358532-00001	Panel - Inner Door (W/Window).....	1
24	00-358533-00003	Panel - Inner Door (W/O Window).....	1
25	PS-004-11	Spirol Pin 3/16 x 1-1/4 Heavy.....	1
26	00-343143-00002	Washer.....	2
27	00-347080-00002	Bearing - Door Shaft.....	1
28	00-357837-00001	Seal - Door End.....	1
29	SD-034-22	Self-Tapping Screw 10-16 x 5/8 Phil. Truss Hd., Type AB.....	3
30	00-961535-00001	Stop - Door.....	1
31	00-922154	Screw 1/4-20 x 1 Hex Hd.....	6
32	00-961294-00001	Support - Lower Door.....	1
33	SD-034-22	Self-Tapping Screw 10-16 x 5/8 Phil. Truss Hd., Type AB.....	2



**GAS PIPING AND FLAME CHAMBER**

## GAS PIPING AND FLAME CHAMBER

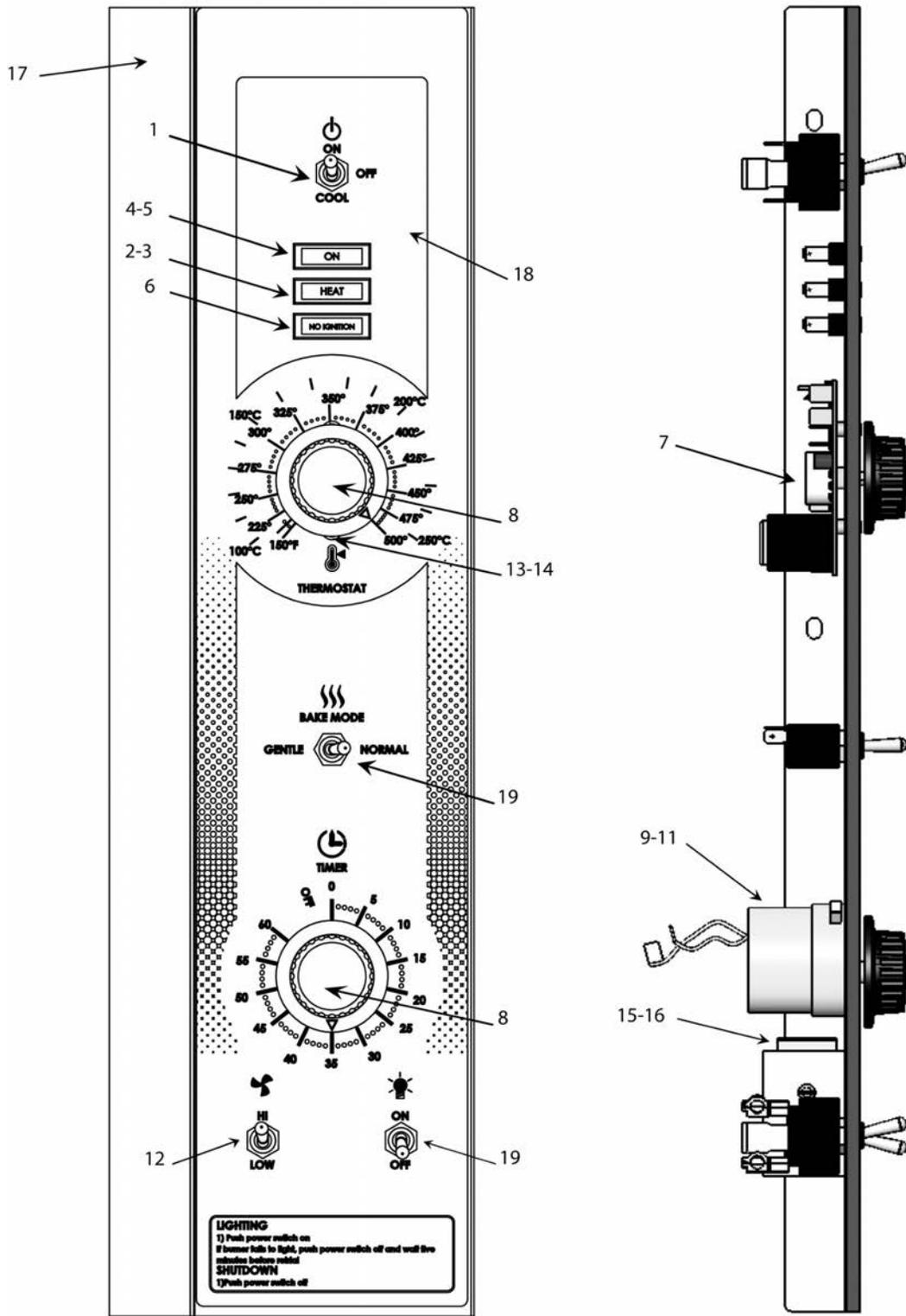
ILLUS.	PART NO.	NAME OF PART	AMT.
PL-55993-1			
1	00-423819-00003	Pipe - Weldment Gas Inlet.....	1
2	00-423828-00006	Tube - Flex (30 In.).....	1
3	00-425433-00001	Fan - Clip.....	4
4	00-424940-00001	Fan - Cooling (120 V.).....	1
5	00-424940-00002	Fan - Cooling (230 V.).....	1
6	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T.....	1
7	00-423820-00001	Deflector - Air (Previous Construction).....	1
8	FP-078-75	Elbow - Pipe 3/8 x 90 Deg.....	1
9	00-959662-00001	Valve - Combination Gas, Convertable (NAT & LP).....	1
10	00-959486-00001	Bracket - Gas Valve.....	1
11	SC-007-93	Mach. Screw 10-24 X 2-1/2 Slotted Rd. Hd.....	1
12	NS-048-22	Nut, Lock SP. 10-24.....	1
13	00-423828-00007	Tube - Flex (18 In.).....	1
14	00-424138-00001	Manifold.....	1
15	SC-113-80	Cap Screw 1/4-20 x 1/2 Hex Hd.....	2
16	00-010901-00029	Orifice - Spud (29 Drill) (NAT) (Sea Level to 2499 Ft.).....	1
17	00-010901-00030	Orifice - Spud (30 Drill) (NAT) (2500 to 3499 Ft.).....	1
18	00-010901-00030	Orifice - Spud (30 Drill) (NAT) (3500 to 4499 Ft.).....	1
19	00-010901-00031	Orifice - Spud (31 Drill) (NAT) (4500 to 6499 Ft.).....	1
20	00-010901-00031	Orifice - Spud (31 Drill) (NAT) (6500 to 8499 Ft.).....	1
21	00-010901-00032	Orifice - Spud (32 Drill) (NAT) (8500 to 10500 Ft.).....	1
22	00-010901-00044	Orifice - Spud (44 Drill) (PRO/BUT) (Sea Level to 2499 Ft.).....	1
23	00-010901-00045	(PRO/BUT) (2500 to 4499 Ft.).....	1
24	00-010901-00047	Orifice - Spud (47 Drill) (PRO/BUT) (4500 to 7499 Ft.).....	1
25	00-010901-00048	Orifice 1 Spud (48 Drill) (PRO/BUT) (7500 to 10500 Ft.).....	1
23	00-417879-00001	Nozzle - Burner.....	1
27	SC-114-27	Mach. Screw 8-32 x 1/2 Phil. Pan Hd.....	2
28	00-959507-00001	Igniter - Burner.....	1
29	00-959508-00001	Burner.....	1
30	00-959379-00001	Cover - Burner Access, Mid (Not Shown).....	AR
31	NS-044-07	Nut Assy. 8-32 Hex Keps.....	1



**ELECTRICAL COMPONENT PANEL**

**ELECTRICAL COMPONENT PANEL**

ILLUS.	PART NO.	NAME OF PART	AMT.
PL-55994-1			
1	00-417934-000G1	Block Assy. - Porcelain.....	1
2	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T.....	1
3	00-411500-00012	Transformer (120 VAC, 24 V., 40 VA).....	1
4	00-411500-00013	Transformer (200-240 VAC, 28 V., 20 VA).....	AR
5	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	2
6	00-423760-00001	Bracket - Ignition Module.....	1
7	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	1
8	00-913102-00292	Control - Spark Ignition Kit Includes 18-22 connector 1/4" insulated.....	1
9	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T.....	2
10	NS-044-07	Nut Assy. 8-32 Hex Keps.....	2
11	FE-024-23	Bushing - Electrical (Snap).....	1
12	00-417856-00001	Lug - Grounding (With Set Screw).....	1
13	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT.....	1
14	00-417934-000G1	Block Assy. - Porcelain.....	1
15	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T.....	1
16	00-416535-00006	Relay - Heating (120 V.).....	1
17	00-416535-00007	Relay - Heating (200-240 V.).....	1
18	SD-034-49	Self-Tapping Screw 8-32 x 1/2 Hex Washer Hd., Type T.....	1
19	00-353589-00001	Probe Temperature (SST) Solid State (Items Not Shown).....	1
20	00-423813-00003	Wire - Ignition (High Voltage) (Items Not Shown).....	1
21	00-428428-000G1	Wire Assy. - Flame Sensor (Items Not Shown).....	1



CONTROL PANEL

**CONTROL PANEL**

ILLUS.	PART NO.	NAME OF PART	AMT.
<b>PL-F45395 CONTROL PANEL</b>			
1	00-340324-00008	Switch -Toggle (D.P.D.T) (ON/OFF/ON).....	1
2	00-354575-00010	Light - Indicator (Clear) 120V. (Heat).....	1
3	00-354575-00009	Light - Indicator (Clear) 250V. (Heat).....	1
4	00-354575-00008	Light - Indicator (Amber) 120V. (ON).....	1
5	00-354575-00007	Light - Indicator (Amber) 250V. (ON).....	1
6	00-354575-00004	Light - Indicator 24V. (No-Ign. ).....	1
7	00-428897-00008	Board - Temperature Control, NCC.....	1
8	00-411242-00001	Knob.....	1
9	00-411690-00001	Timer (120 V.) (60 Hz.) (1-Hr.).....	1
10	00-411690-00002	Timer (200-240 V.) (60 Hz.) (1-Hr.).....	1
11	00-411690-00005	Timer (240 V.) (50 Hz.) (1-Hr.).....	1
12	00-340324-00009	Switch (D.P.D.T.).....	1
13	SC-114-83	Mach. Screw 6-32 x 1/4 Slotted Pan Hd. (SST).....	2
14	WS-028-20	Washer (SST).....	2
15	00-411499-00003	Buzzer (230 V.).....	1
16	00-411499-00004	Buzzer (115 V.).....	1
17	00-959489-000G1	Panel - Control Weldment.....	1
18	00-959654-00001	Overlay - Panel.....	1
19	00-340324-000012	Switch (S.P.S.T.) (ON/OFF) (Bake Mode & Lights).....	AR





# CATALOG OF REPLACEMENT PARTS

## SG SERIES GAS SNORKEL CONVECTION OVENS MODELS SG4D, SG4C, SG6D, SG6C

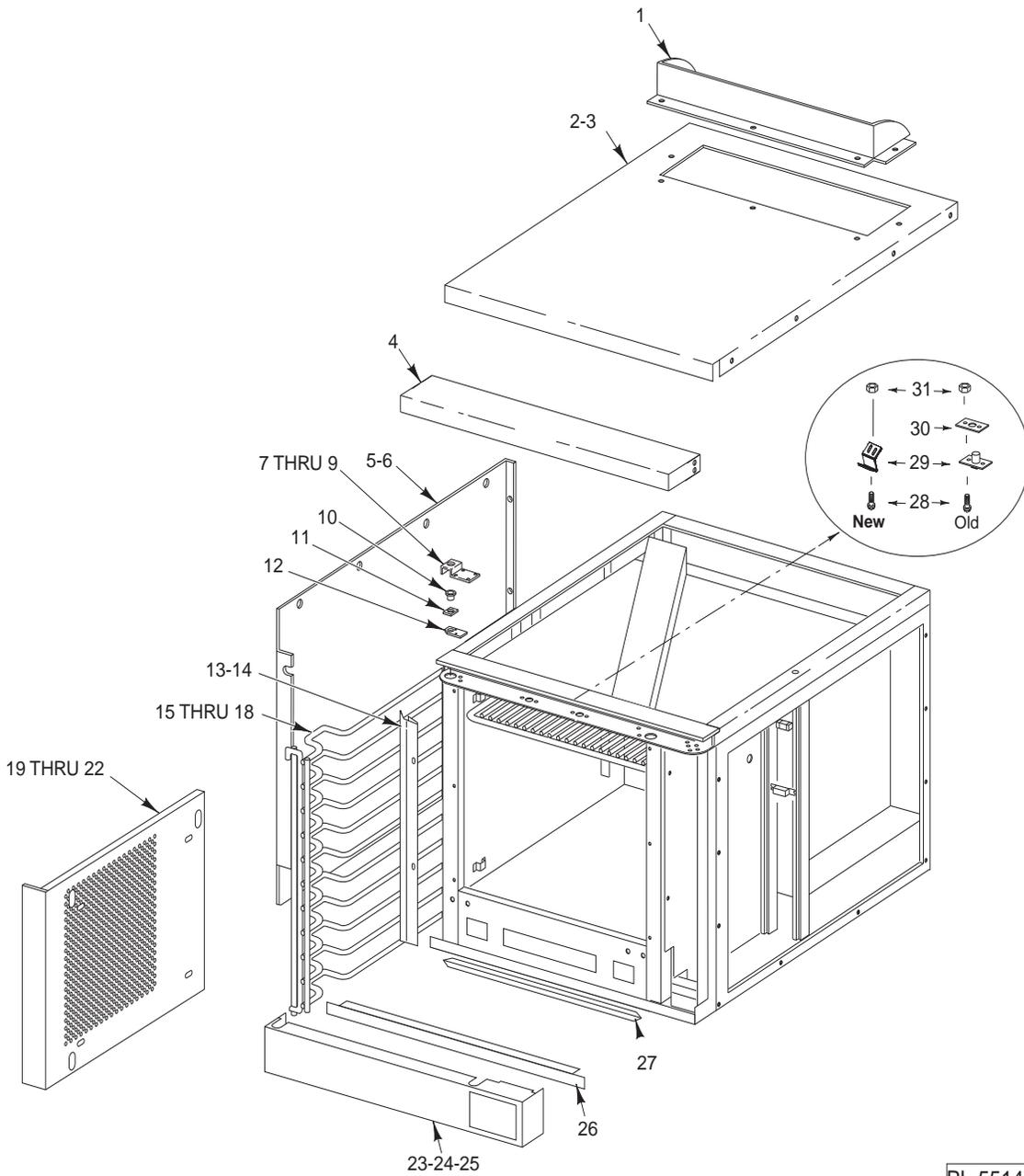
*MODEL*

<i>SG4D</i>	<i>ML-114875</i>
<i>SG4C</i>	<i>ML-114876</i>
<i>SG6D</i>	<i>ML-114877</i>
<i>SG6C</i>	<i>ML-114878</i>

*THIS CATALOG COVERS THE ABOVE  
ML MODELS MANUFACTURED AFTER  
AUGUST 6, 2004.*



**For additional information on Vulcan-Hart or to locate an authorized parts  
and service provider in your area, visit our website at [www.vulcanhart.com](http://www.vulcanhart.com)**

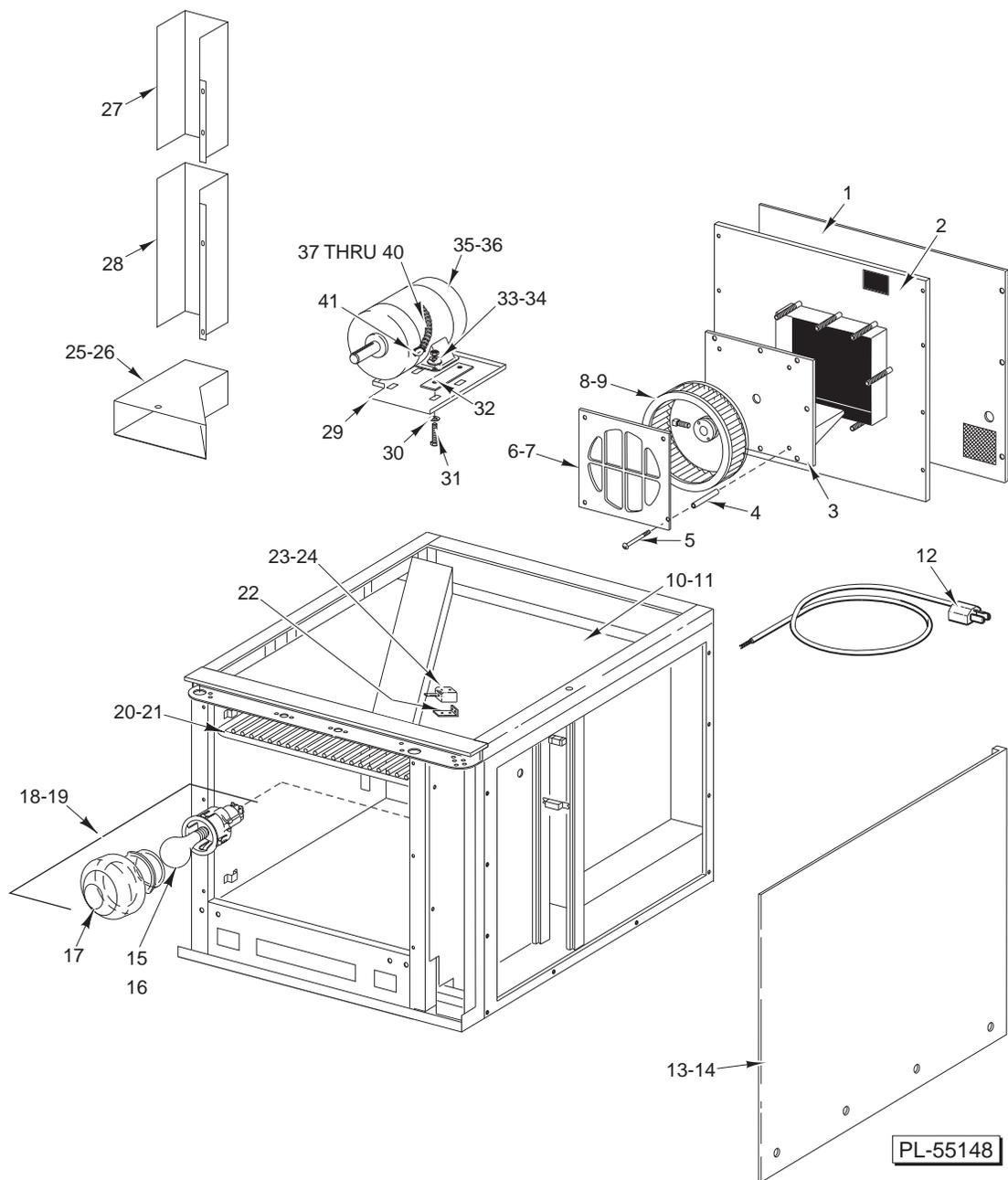


PL-55147A-1

OVEN PANELS

## OVEN PANELS

ILLUS. PL-55147A-1 NO.	PART	NAME OF PART	AMT.
1	00-423815-00001	Guard - Vent .....	1
2	00-421800-00001	Top - Cover Panel (SG4) .....	1
3	00-423683-00001	Top - Cover Panel (SG6) .....	1
4	00-421799-00001	Top - Front .....	1
5	<b>00-499304-00001</b>	<b>Panel - Outer (LH SG4) (New Style) .....</b>	<b>1</b>
	00-421802-00001	Panel - Outer (LH SG4) (Old Style) .....	1
6	00-423685-00001	Panel - Outer (LH SG6) (Old Style) .....	1
7	00-353484-00001	Plate - Retainer .....	2
8	SC-053-41	Mach. Screw 1/4-20 x 1/2 Truss Hd. SST .....	4
9	NS-038-08	Lock Nut 1/4-20 x 1 Hex Hd. ....	4
10	00-347080-00002	Bearing - Door Shaft .....	2
11	00-353482-00001	Spacer .....	2
12	00-353483-00001	Plate - Upper Door Bearing .....	2
13	00-423842-000G1	Door Seal - Sides .....	2
14	00-357507-00001	Door Seal - Horizontal .....	2
15	00-423676-00001	Rack - Support (SG4) (RH) (Prior to November 6, 2003) .....	1
	00-428601-00001	Rack - Support (SG4) (RH) (November 6, 2003 to Present) .....	1
16	00-423676-00002	Rack - Support (SG4) (LH) (Prior to November 6, 2003) .....	1
	00-428601-00002	Rack - Support (SG4) (LH) (November 6, 2003 to Present) .....	1
17	00-423676-00003	Rack - Support (SG6) (RH) (Prior to November 6, 2003) .....	1
	00-428601-00003	Rack - Support (SG6) (RH) (November 6, 2003 to Present) .....	1
18	00-423676-00004	Rack - Support (SG6) (LH) (Prior to November 6, 2003) .....	1
	00-428601-00004	Rack - Support (SG6) (LH) (November 6, 2003 to Present) .....	1
19	00-423183-00001	Liner - Side (SG4) (RH) .....	1
20	00-423183-00002	Liner - Side (SG4) (LH) .....	1
21	00-423682-00001	Liner - Side (SG6) (RH) .....	1
22	00-423682-00002	Liner - Side (SG6) (LH) .....	1
23	<b>00-499299-000G1</b>	<b>Trim - Bottom (New Style) (Incls. Items 24 &amp; 25) .....</b>	<b>1</b>
	00-423766-000G1	Trim - Bottom (Old Style) (Incls. Items 24 (Old Style) & 25) .....	1
24	<b>00-499297-00001</b>	<b>Access Door (New Style) .....</b>	<b>1</b>
	00-423758-00001	Access Door (Old Style) .....	1
25	00-425199-00001	Nylon Door Hinge Pin .....	2
26	00-424865-00001	Cover - Trim .....	1
27	00-357507-00001	Seal - Door (30 1/2 Long) .....	1
28	SC-115-51	Mach. Screw 10-32 x 1/2 Phil. Truss Hd. ....	2
29	<b>00-497585-00001</b>	<b>Strike Plate (New Style) (Mounted on Upper "C" Channel) .....</b>	<b>2</b>
	00-423847-00001	Strike Plate (Old Style) (Mounted on Doors) .....	1
	<b>00-497586-00001</b>	<b>Roller Latch (New Style) (Mounted to Doors) .....</b>	<b>2</b>
	00-347545-00001	Roller Ball Door Latch (Old Style) (Mounted to Upper "C" Channel) .....	1
30	00-423848-00001	Shim - Door Strike (Old Style) .....	AR
31	NS-038-03	Lock Nut - SP 10-32 .....	2

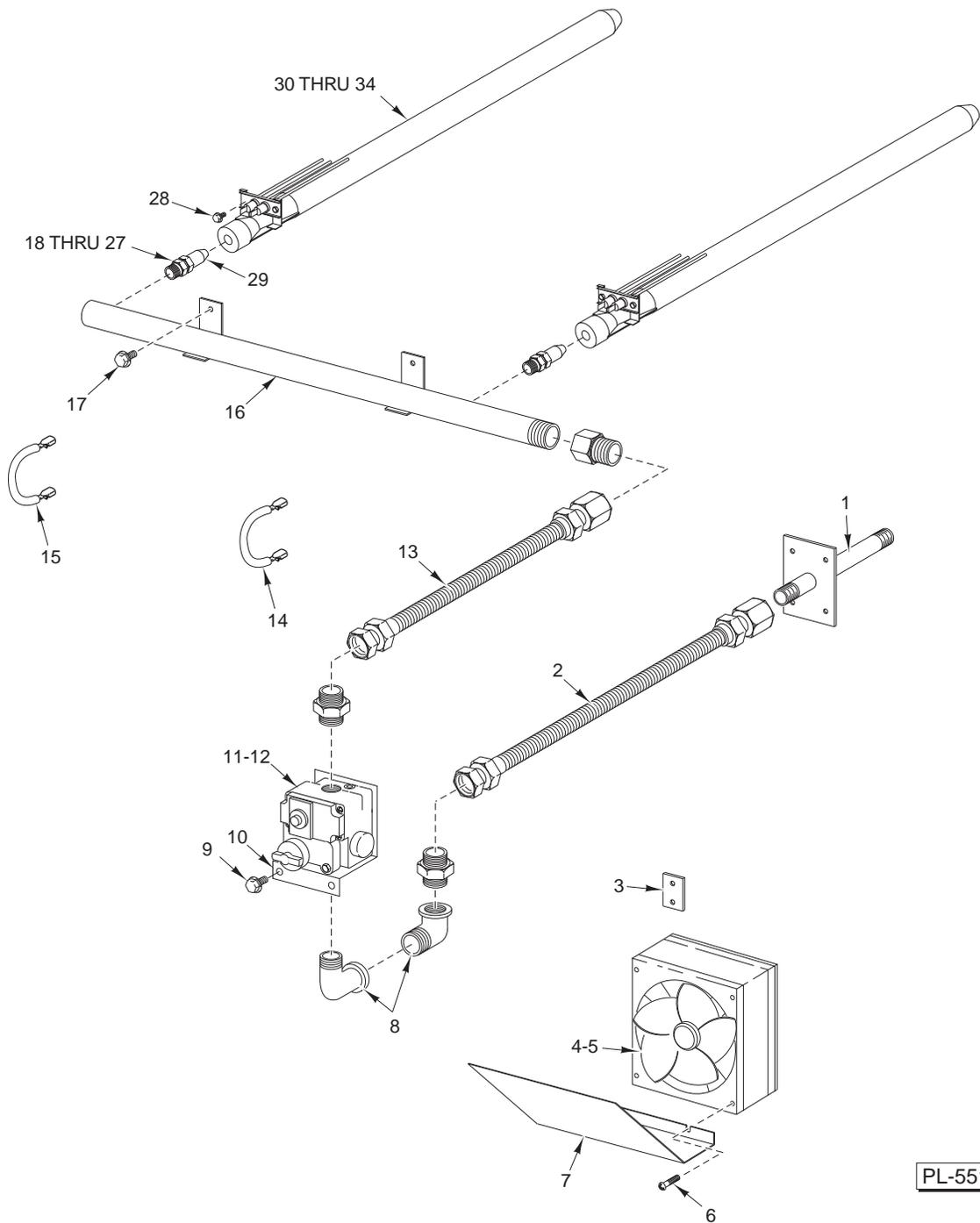


PL-55148

OVEN PANELS AND BLOWER-MOTOR

## OVEN PANELS AND BLOWER-MOTOR

ILLUS. PL-55148	PART NO.	NAME OF PART	AMT.
1	00-421803-00001	Panel - Back Cover .....	1
2	00-423845-000G1	Back - Inner Cavity Panel .....	1
3	00-423289-000G1	Motor Mount .....	1
4	00-411289-00004	Spacer - Fan Housing .....	4
5	SC-120-15	Mach. Screw 1/4 - 20 x 4 Rd. Hd. ....	4
6	00-411136-00004	Cover - Fan (60 Hz.) .....	1
7	00-411136-00003	Cover - Fan (50 Hz.) .....	1
8	00-415780-00003	Wheel - Blower (60 Hz.) .....	1
9	00-415780-00005	Wheel - Blower (50 Hz.) .....	1
10	00-421764-00001	Panel - Top Cavity (SG4) .....	1
11	00-423673-00001	Panel - Top Cavity (SG6) .....	1
12	00-405016-00001	Cord - Electric Supply (120V. Only) (Convection Ovens) .....	1
13	00-421801-00001	Panel - Outer (SG4) (RH) .....	1
14	00-423684-00001	Panel - Outer (SG6) (RH) .....	2
15	00-342766-00001	Light Bulb - Oven (40 Watts) (120 V.) .....	2
16	00-342766-00002	Light Bulb-Oven (240V., 40 Watts) .....	2
17	00-357036-00003	Lens - Oven Lamp .....	2
18	00-357036-00001	Oven Lamp Assy. (40 Watt 120 - 130 V.) .....	2
19	00-357036-00002	Oven Lamp Assy. (40 Watts 250 V.) .....	2
20	00-411265-00011	Rack Assy. (SG4) .....	AR
21	00-411265-00010	Rack Assy. (SG6) .....	AR
22	00-425324-00001	Bracket - Door Switch .....	1
23	00-411496-000F1	Micro Switch (Door)(Convection Ovens Only) (Prior to May 12, 2009) .....	1
	00-499310-000G1	Micro Switch Replacement Kit (Beginning May 12, 2009) (Includes items 22 & 24) .....	1
24	SD-034-47	Self-Tapping Screw 6-32 x 1 Hex Washer Hd., Type T .....	2
25	00-421809-000G1	Flue Vent Assy. ....	1
26	SD-034-45	Self-Tapping Screw 6-32 x 3/8 Rd. Hd., Type T .....	2
27	00-424876-00001	Stacking Flue (Lower) (Part of Stacking Kits) .....	1
28	00-424875-00001	Stacking Flue (Upper) (Part of Stacking Kits) .....	1
29	00-345523-00001	Baffle - Motor .....	1
30	WS-029-46	Washer .....	4
31	SC-113-65	Cap Screw 5/16-18 x 1 1/4 Hex Hd. ....	4
32	00-358723-00001	Spacer - Steel .....	2
33	WS-029-46	Washer .....	4
34	NS-046-86	Nut Assy. 5/16-18 "KEPS" Hex .....	4
35	00-358516-00001	Motor 1/3 Hp (2 Speed)(115, 50/60 Hz., 1 Ph.) .....	1
36	00-358516-00002	Motor 1/3 Hp. (2 Speed)(208-230, 50/60 Hz., 1 Ph.) .....	1
37	FE-006-05	Lock Nut 1/2 .....	1
38	00-414540-00B35	Conduit 3/8 x 35" Lg. (Convection Ovens Only) .....	1
39	00-342285-00001	Bushing - Plastic .....	2
40	FE-002-03	Connector - Conduit 3/8 TS Straight (Convection Ovens Only) .....	1
41	FE-002-52	Connector - Conduit (90 Deg. - 3/8 Squeeze) (Convection Ovens Only) .....	1
**	00-423430-000G1	Scoop - Air .....	1
**	00-413627-000G1	Tube - Snorkel Assembly .....	1
**	00-346357-00001	Hi-Limit .....	1
**	00-346358-00002	Hi-Limit Assy. ....	1
**	NOT SHOWN		

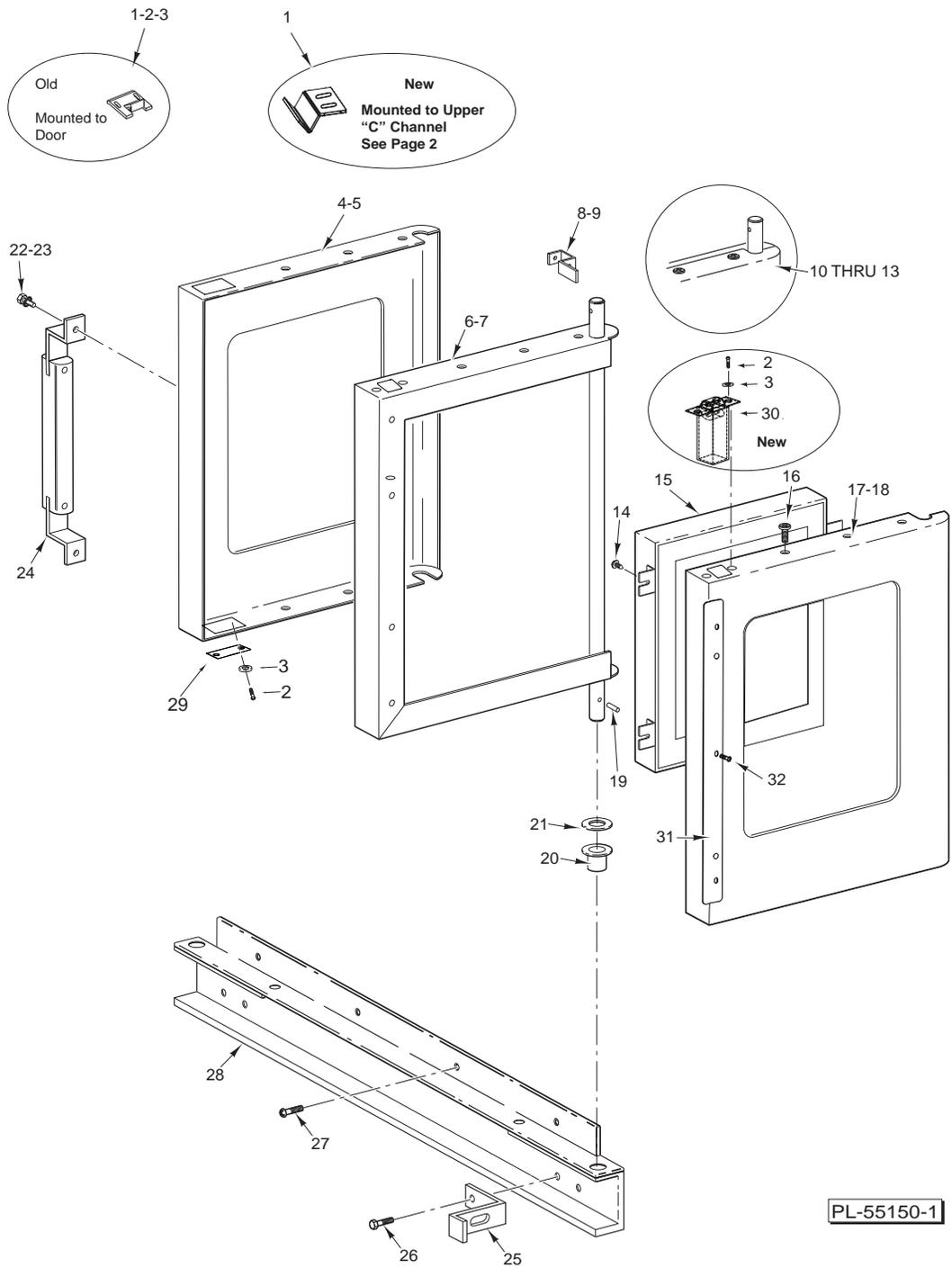


PL-55149

**GAS PIPING AND FLAME CHAMBER**

## GAS PIPING AND FLAME CHAMBER

ILLUS. PL-55149	PART NO.	NAME OF PART	AMT.
1	00-423819-00001	Pipe - Weldment Gas Inlet .....	1
2	00-423828-00001	Tube - Flex (30") .....	1
3	00-425433-00001	Fan - Clip .....	1
4	00-424940-00001	Fan - Cooling (120 V.) .....	1
5	00-424940-00002	Fan - Cooling (230 V.) .....	1
6	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	2
7	00-423820-00001	Deflector - Air .....	1
8	FP-013-17	Elbow - Street 1/2 x 90 Deg. ....	2
9	SC-113-80	Cap Screw 1/4-20 x 1/2 Hex Hd. ....	4
10	00-424728-00001	Bracket - Gas Valve .....	1
11	00-410841-00018	Valve - Gas Control (NAT) (Prior to April 25, 2005) .....	1
	00-497271-00007	Valve - Gas Combo (NAT) (Starting April 25, 2005) .....	1
12	00-410841-00019	Valve - Gas Control (PRO/BUT) (Prior to April 25, 2005) .....	1
	00-497271-00008	Valve - Gas Combo (PRO) (Starting April 25, 2005) .....	1
13	00-423828-00002	Tube - Flex (18") .....	1
14	00-423813-00002	Wire - Ignition (High Voltage) (RH) .....	1
15	00-423813-00001	Wire - Ignition (High Voltage) (LH) .....	1
16	00-423655-00001	Manifold .....	1
17	SC-113-80	Cap Screw 1/4-20 x 1/2 Hex Hd. ....	2
18	00-010901-00036	Orifice - Spud (Nat. Gas)(Sea Level to 2499 Ft.) .....	1
19	00-010901-00038	Orifice - Spud (Nat. Gas) (2500 to 3499 Ft.) .....	1
20	00-010901-00040	Orifice - Spud (Nat. Gas) (3500 - 4499 Ft.) .....	1
21	00-010901-00041	Orifice - Spud (Nat. Gas) (4500 - 6499 Ft.) .....	1
22	00-010901-00042	Orifice - Spud (Nat. Gas) (6500 - 8499 Ft.) .....	1
23	00-010901-00043	Orifice - Spud (Nat. Gas) (8500 - 10500 Ft.) .....	1
24	00-010901-00052	Orifice - Spud (L.P.) (Sea Level to 2499 Ft.) .....	1
25	00-010901-00053	Orifice - Spud (L.P.) (2500 - 4499 Ft.) .....	1
26	00-010901-00054	Orifice - Spud (L.P.) (4500 - 6499 Ft.) .....	1
27	00-010901-00055	Orifice - Spud (L.P.) (6500 - 7499 Ft.) .....	1
28	SD-034-49	Self-Tapping Screw 8-32 x 1/2 Hex Washer Hd., Type T .....	4
29	00-417879-00001	Nozzle - Pilot Burner .....	2
30	00-423767-000G1	Burner & Igniter Assy. (Incls. Items 28, 31 & 33) (SG4) .....	2
31	00-423667-00001	Burner Assy. (SG4) .....	2
32	00-423667-00002	Burner Assy. (SG6) .....	2
33	00-423754-00001	Ignitor - Burner .....	2
34	00-423767-000G2	Burner and Igniter Assy. (Incls. Items 28, 32 & 33) (SG6) .....	2
**	414724-060HI	Low Voltage Wire - Flame Sensor (LH) .....	1
**	414724-032HI	Low Voltage Wire - Flame Sensor (RH) .....	1
**	NOT SHOWN		



**DOOR ASSEMBLY**

## DOOR ASSEMBLY (INDEPENDENTLY OPENING DOORS)

ILLUS. PL-55150-1	PART NO.	NAME OF PART	AMT.
1	<b>00-497585-00001</b>	<b>Strike Plate (New Style) (Attaches to Upper "C" Channel Assy.) (See Pg. 2)</b> .....	2
	00-423847-00001	Strike - Door (Old Style) (Mounted to Door) .....	1
2	SC-117-73	Screw, Roller Latch, Plate .....	4
3	WL-019-35	Lockwasher .....	4
4	00-358600-00001	Shell - Outer Door (R.H. & L.H.) (W/Window) .....	1
5	00-358600-00002	Shell - Outer Door (R.H. & L.H.) (W/O Window) (Not Shown) .....	1
6	00-421905-000G1	Frame Assy. - Door (R.H.) .....	1
7	00-421904-000G1	Frame Assy. - Door (L.H.) .....	1
8	00-424163-00001	Lever - Door Switch .....	1
9	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	1
10	<b>00-499285-000G1</b>	<b>Door Assy. (W/Window) (LH) (Independent Doors) (New Style)</b> .....	1
	00-358529-00005	Door Assy. (W/Window) (LH) (Independent Doors) (Old Style) .....	1
11	<b>00-499285-000G2</b>	<b>Door Assy. (Solid) (LH) (Independent Doors) (New Style)</b> .....	1
	00-358529-00006	Door Assy. (Solid) (LH) (Independent Doors) (Old Style) .....	1
12	<b>00-499286-000G1</b>	<b>Door Assy. (W/Window) (RH) (Independent Doors) (New Style)</b> .....	1
	00-358530-00003	Door Assy. (W/Window) (RH) (Independent Doors) (Old Style) .....	1
13	<b>00-499286-000G2</b>	<b>Door Assy. (Solid) (RH) (Independent Doors) (New Style)</b> .....	1
	00-358530-00004	Door Assy. (Solid) (RH) (Independent Doors) (Old Style) .....	1
14	SD-034-62	Self-Tapping Screw 10-32 x 1/2 Hex Washer Hd., Type T .....	4
15	00-358534-00001	Window Assy. ....	1
16	SD-034-22	Mach. Screw .....	8
17	00-358532-00001	Shell - Inner Door (W/Window)(LH & RH) .....	1
18	00-358533-00003	Shell - Inner Door (Solid)(LH & RH) .....	1
19	PS-004-11	Spirol Pin 3/16 x 1 1/4 .....	1
20	00-347080-00002	Bearing - Door Shaft .....	1
21	00-343143-00002	Washer .....	2
22	SC-041-01	Cap Screw 1/4-20 x 3/4 Hex Hd .....	2
23	WL-019-37	Lockwasher 1/4 Int. ....	2
24	00-357929-00004	Handle (Beginning Feb. 11, 2008) .....	1
	00-357929-00002	Handle (Prior to Feb. 11, 2008) .....	1
25	<b>00-499263-00001</b>	<b>Door Stop (New Style)</b> .....	1
	00-424158-00001	Door Stop (Old Style) .....	1
26	SC-113-90	Mach. Screw 1/4-20 x 3/4 Hex Hd. ....	2
27	SC-022-40	Mach. Screw 1/4-20 x 3/4 Phil. Flat Hd. ....	4
28	<b>00-499300-000G1</b>	<b>Channel - Door Sill Weldment (New Style)</b> .....	1
	00-357846-00001	Channel - Door Sill Weldment (Old Style) .....	1
29	<b>00-499264-00001</b>	<b>Cover, Cutout (New Style)</b> .....	1
30	<b>00-497586-00001</b>	<b>Roller Latch (New Style) (Mounted to Top of Door)</b> .....	2
	00-347545-00001	Ball Door Latch (Old Style) (Mounted to Upper "C" Channel) .....	1
31	00-357837-00001	Door Seal - End .....	1
32	SC-113-78	Mach. Screw .....	3
**	00-423842-000G1	Door Seal - Sides .....	1
**	00-357507-00001	Door Seal - Horizontal .....	2

\*\* NOT SHOWN

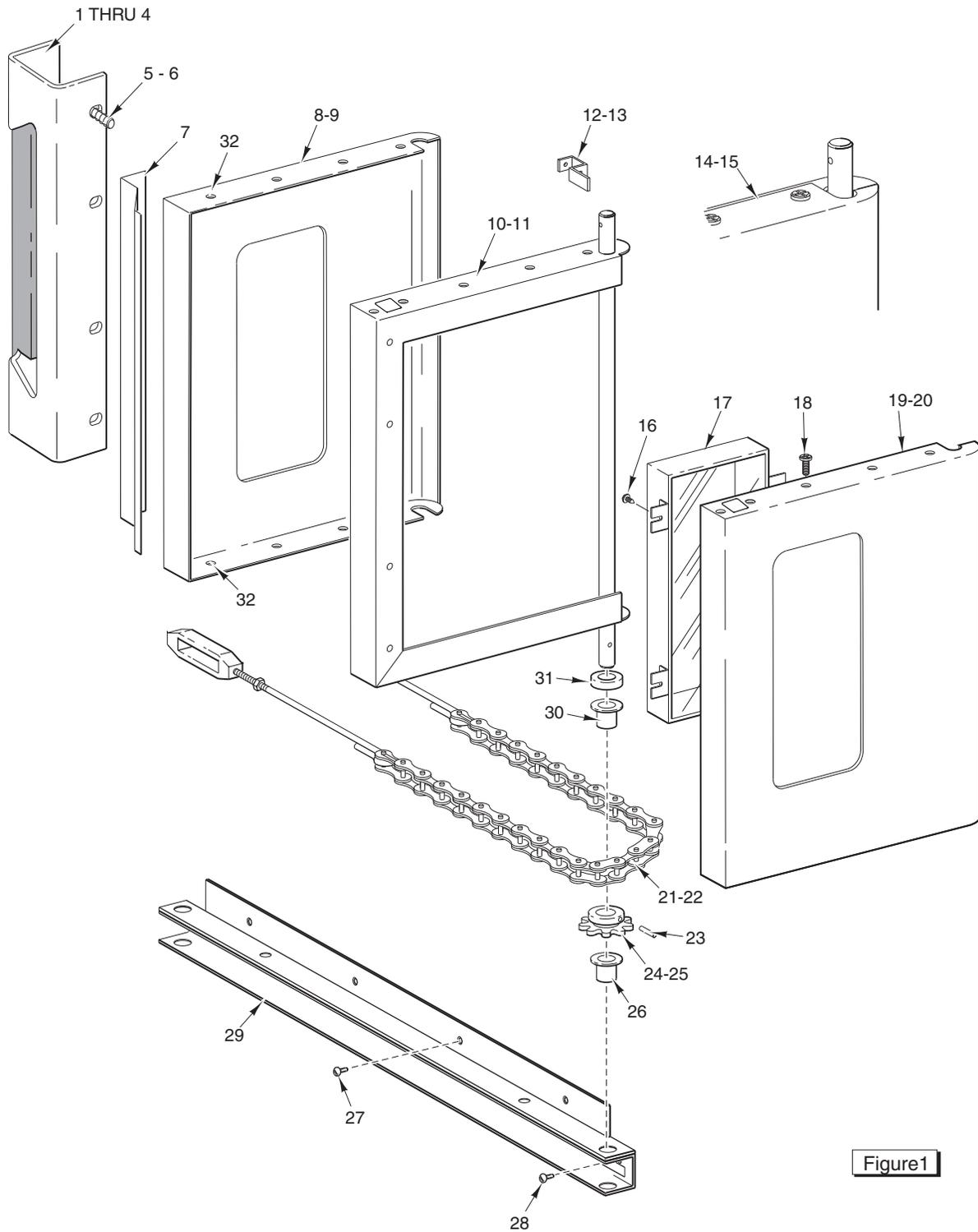
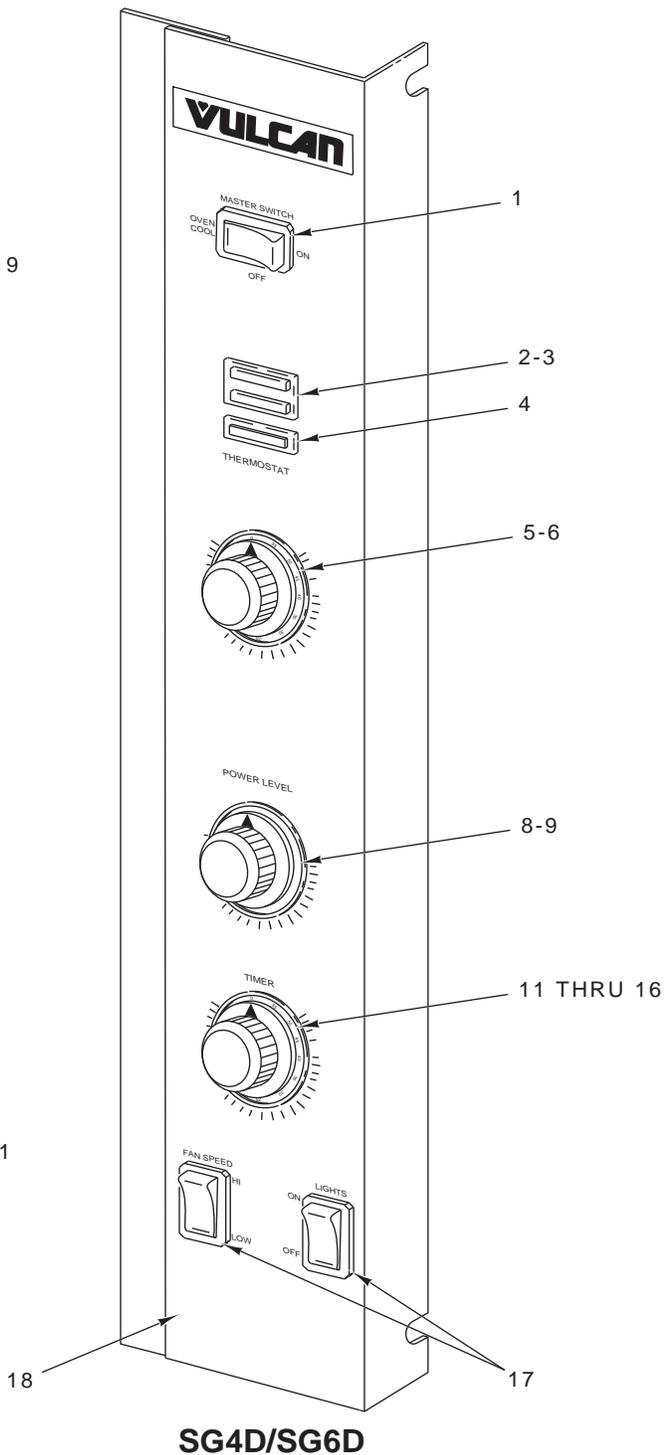
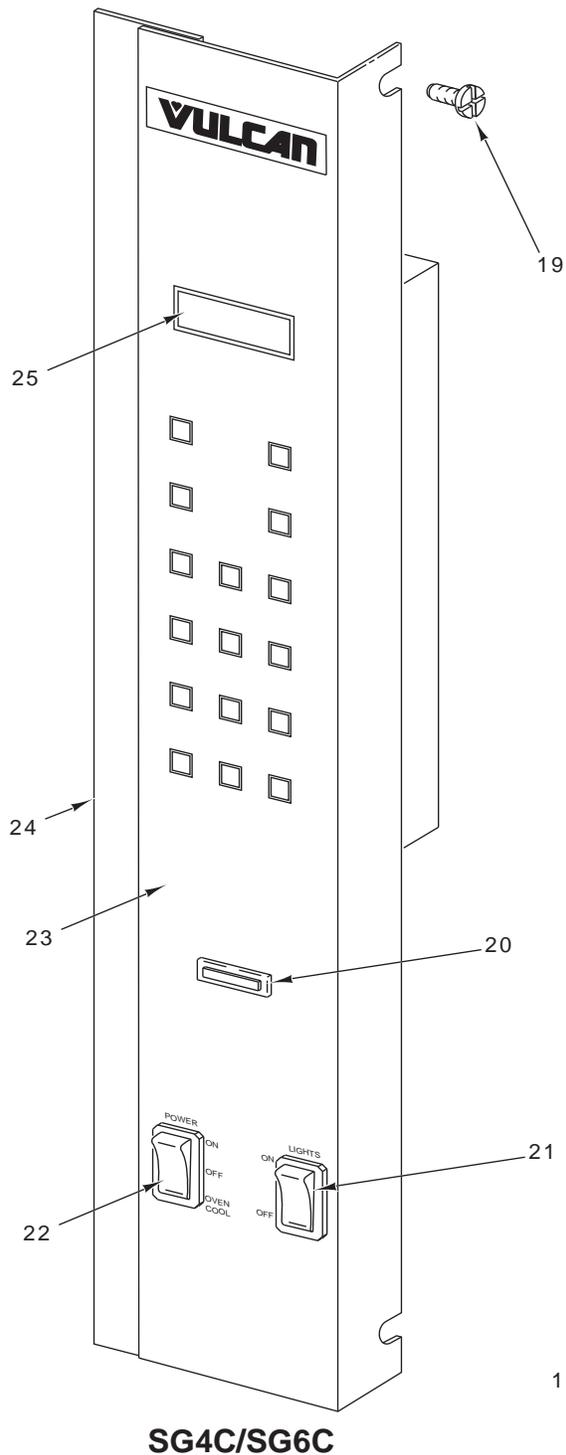


Figure1

**DOOR ASSEMBLY  
(SIMULTANEOUSLY OPENING DOORS)**

**DOOR ASSEMBLY  
(SIMULTANEOUSLY OPENING DOORS)**

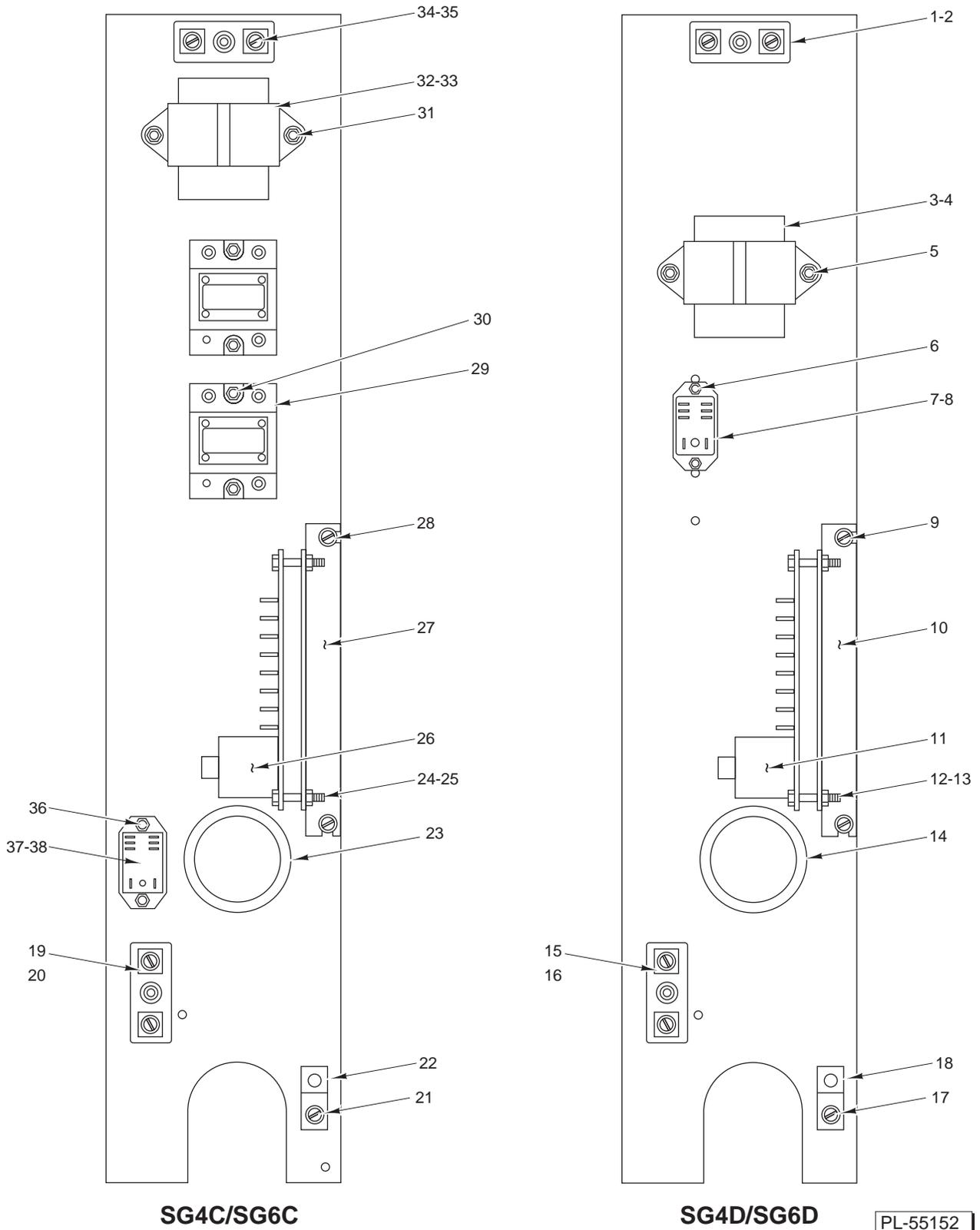
ILLUS. Figure 1	PART NO.	NAME OF PART	AMT.
1	00-356562-00001	Door - Handle .....	1
2	00-356563-00003	Red Handle - Front Grip .....	1
3	00-356563-00004	Red Handle - Rear Grip .....	1
4	SC-113-98	Mach. Screw 10-24 x 1/2 Hex Washer Hd. ....	3
5	SC-041-01	Cap Screw 1/4-20 x 3/4 Hex Hd. (SST) .....	4
6	WL-019-37	Lockwasher 1/4 Internal .....	4
7	00-356550-00001	Latch - Friction .....	1
8	00-421913-00001	Shell - Outer Door (R.H.) (W/Window) .....	1
	00-421913-00002	Shell - Outer Door (R.H.) (W/O Window) .....	1
9	00-421913-00003	Shell - Outer Door (L.H.) (W/Window) .....	1
	00-421913-00004	Shell - Outer Door (L.H.) (W/O Window) .....	1
10	00-421905-000G1	Frame Assy. - Door (R.H.) .....	1
11	00-421904-000G1	Frame Assy. - Door (L.H.) .....	1
12	00-424163-00001	Lever - Door Switch .....	1
13	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	1
14	<b>00-499289-000G1</b>	<b>Door Assy. (W/Window) (LH) (Chain Doors) (New Style) .....</b>	<b>1</b>
	00-424730-00001	Door Assy. (W/Window) (LH) (Chain Doors) (Old Style) .....	1
	<b>00-499289-000G2</b>	<b>Door Assy. (Solid) (LH) (Chain Doors) (New Style) .....</b>	<b>1</b>
	00-424730-00002	Door Assy. (Solid) (LH) (Chain Doors) (Old Style) .....	1
15	<b>00-499290-000G1</b>	<b>Door Assy. (W/Window) (RH) (Chain Doors) (New Style) .....</b>	<b>1</b>
	00-424731-00001	Door Assy. (W/Window) (RH) (Chain Doors) (Old Style) .....	1
	<b>00-499290-000G2</b>	<b>Door Assy. (Solid) (RH) (Chain Doors) (New Style) .....</b>	<b>1</b>
	00-424731-00002	Door Assy. (Solid) (RH) (Chain Doors) (Old Style) .....	1
16	SD-034-62	Self-Tapping Screw 10-32 x 1/2 Hex Washer Hd., Type T .....	4
17	00-358534-00001	Window Assy. ....	1
18	SD-034-22	Mach. Screw .....	9
19	00-358532-00001	Shell - Inner Door (LH & RH) (W/Window) .....	1
20	00-358533-00003	Shell - Inner Door (LH & RH) (W/O Window) .....	1
21	00-343608-00002	Chain Assy. ....	1
22	00-352667-00001	Cable .....	1
23	PS-004-11	Spiral Pin 3/16 x 1 1/4 .....	2
24	00-342166-00001	Sprocket .....	1
25	SC-047-28	Set Screw 1/4-28 x 3/8 Hex Hdls., Cup Pt. ....	2
26	00-347080-00002	Bearing - Door Shaft .....	2
27	SC-022-40	Mach. Screw 1/4-20 x 3/4 Phil. Flat Hd. ....	4
28	SC-113-90	Mach. Screw 1/4-20 x 3/4 Hex Hd. ....	2
29	<b>00-499300-000G1</b>	<b>Channel - Door Sill Weldment (New Style) .....</b>	<b>1</b>
	00-357846-00001	Channel - Door Sill Weldment (Old Style) .....	1
30	00-347080-00002	Bearing - Door Shaft Warmer .....	2
31	00-343143-00002	Washer .....	2
32	SC-117-73	Mach. Screw 10-32 x 5/8 .....	2
	00-520228	Adhesive - Loctite 242 (Use W/Item 25) (50 cc Bottle) .....	AR



PL-55151-1A

## CONTROL PANEL

ILLUS. PL-55151-1A	PART NO.	NAME OF PART	AMT.
1	00-358628-00001	Switch - Rocker (3 Position) .....	1
2	00-354575-00001	Light Indicator (On/Heat) (200-240V) .....	1
3	00-354575-00002	Light - Indicator (On/Heat)(110-120V.) .....	1
4	00-354575-00004	Light - Indicator (No Ignition) .....	1
5	00-411242-00001	Knob .....	1
6	00-428897-00001	Controller - Temperature (500 Deg F), NCC .....	1
8	00-411242-00001	Knob .....	1
9	00-428897-00002	Control, Pot and Wires, NCC .....	1
11	00-411242-00001	Knob .....	1
12	00-411690-00001	Timer (110-120 V.)(1 Hr.) (60 Hz) .....	1
13	00-411690-00002	Timer (200-240 V.)(1 Hr.) (60 Hz) .....	1
14	00-411690-00003	Timer (110-120 V.) (5 Hr.) (60 Hz.) .....	1
15	00-411690-00004	Timer (240 V.) (5 Hr.) (60 Hz.) .....	1
16	00-411690-00005	Timer 240V (1 Hr)(50Hz) .....	1
17	00-358628-00002	Switch - Rocker (2 Position) .....	2
18	00-428968-00001	Overlay - Panel .....	1
19	SD-037-02	Self-Tapping Screw 10-16 x 1/2 Hex Washer Hd., Type AB .....	3
20	00-354575-00004	Light - Indicator (No Ignition) .....	1
21	00-358628-00002	Switch - Rocker (2 Position) .....	1
22	00-358628-00001	Switch - Rocker (3 Position) .....	1
23	00-424843-00001	Overlay - Panel .....	1
24	<b>00-499301-000G1</b>	<b>Panel - Control Assy. (New Style) Computer (Watlow Control) .....</b>	<b>1</b>
	00-424842-000G1	Panel - Control Assy. (Old Style) .....	1
25	00-424846-00001	Controller .....	1
**	00-411499-00003	Buzzer (240 V.) (SG4D/SG6D) .....	1
**	00-411499-00004	Buzzer (120 V.) (SG4D/SG6D) .....	1
**	00-423918-00001	Electronic Beeper (SG4C/SG6C) .....	1
**	00-353589-00001	Probe (SG4D/SG6D) .....	1
**	00-920883-00003	Probe (SG4C/SG6C) .....	1
**	NOT SHOWN		



**SG4C/SG6C**

**SG4D/SG6D**

PL-55152

**ELECTRICAL COMPONENT PANEL**

## ELECTRICAL COMPONENT PANEL

ILLUS. PL-55152	PART NO.	NAME OF PART	AMT.
1	00-417934-000G1	Porcelain - Block Assy. ....	1
2	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	1
3	00-411500-00012	Transformer (120 V., A.C., 28 V., 20 VA) .....	1
4	00-411500-00013	Transformer (200-240 V.A.C., 28 V., 20 VA) .....	1
5	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT .....	2
6	SD-034-49	Self-Tapping Screw 8-32 x 1/2 Hex Washer Hd., Type T .....	1
7	00-416535-00006	Relay - Heating (120 V) .....	1
8	00-416535-00007	Relay - Heating (200-240 V) .....	1
9	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT .....	1
10	00-423760-00001	Bracket - Ignition Module .....	1
11	00-423756-00003	Control - Dual Spark Ignition .....	1
12	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	2
13	NS-044-07	Nut Assy. 8-32 Hex Keps .....	2
14	FE-024-23	Bushing - Electrical (Snap) .....	1
15	00-417934-000G1	Porcelain - Block Assy. ....	1
16	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	1
17	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT .....	1
18	00-417856-00001	Lug - Grounding (With Set Screw) .....	1
19	00-417934-000G1	Porcelain - Block Assy. ....	1
20	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	1
21	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT .....	1
22	00-417856-00001	Lug - Grounding (With Set Screw) .....	1
23	FE-024-23	Bushing - Electrical (Snap) .....	1
24	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	2
25	NS-044-07	Nut Assy. 8-32 Hex Keps .....	2
26	00-423756-00003	Control - Dual Spark Ignition .....	1
27	00-423760-00001	Bracket - Ignition Module .....	1
28	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT .....	1
29	00-821875-00002	Relay - Solid State (50Amp) .....	2
30	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	4
31	SD-032-07	Self-Tapping Screw 10-24 x 1/2 Hex Washer Hd., Type TT .....	2
32	00-421758-000G1	Transformer (120 V) .....	1
33	00-421758-000G2	Transformer (208-240 V) .....	1
34	00-417934-000G1	Porcelain - Block Assy. ....	1
35	SD-034-52	Self-Tapping Screw 8-32 x 1 Hex Washer Hd., Type T .....	1
36	SD-034-49	Self-Tapping Screw 8-32 x 1/2 Hex Washer Hd., Type T .....	2
37	00-416535-00006	Relay - Heating (120 V) .....	1
38	00-416535-00007	Relay - Heating (200-240 V) .....	1

RECOMMENDED SPARE PARTS

PART NO.	NAME OF PART	AMT.
00-353589-00001	Thermocouple D-Models .....	2
00-920883-00003	Thermocouple C-Models .....	2
00-410841-00018	Combo Valve (Nat. Gas) (Robertshaw) .....	2
00-410841-00019	Combo Valve (LP Gas) (Robertshaw) .....	2
00-497271-00007	Combo Valve (Nat. Gas) (White Rogers) .....	2
00-497271-00008	Combo Valve (LP Gas) (White Rogers) .....	2
00-424940-00001	Cooling Fan 120V .....	2
00-424940-00002	Cooling Fan 240V .....	2
00-423756-00003	Dual Spark Ignition Control .....	2
00-346357-00001	High Limit (550 Degree) .....	2
00-416535-00006	Heat Relay (D-Model 120V) .....	2
00-416535-00007	Heat Relay (D-Model 208/240V) .....	2
00-499310-000G1	Micro Switch Replacement Kit .....	2
00-421758-000G1	Transformer (120V/24V) .....	2
00-421758-000G2	Transformer (240V/24V) .....	2
00-411690-00001	1-hour Timer (120V) .....	2
00-411690-00002	1-hour Timer (240V) .....	2
00-411503-000G1	Infinite Switch (120V) (Prior to August 6, 2004) .....	2
00-411503-00003	Infinite Switch (208V) (Prior to August 6, 2004) .....	2
00-411503-00002	Infinite Switch (240V) (Prior to August 6, 2004) .....	2
00-428897-00002	Control Pot & Wires, NCC (After August 6, 2004) .....	2
00-411242-00001	Knob .....	2
00-428897-00001	Solid State Temperature Control (D-Model) (After August 6, 2004) .....	2
00-353613-00002	Solid State Temperature Control (D-Model) .....	2
00-355903-00003	Solid State Temperature Control (C-Model) .....	2
00-358628-00001	Master Switch .....	2
00-358628-00002	Light/Fan Speed Switch .....	2
00-821875-00002	Solid State Heat Relay (C-Model) (50-amp) .....	2
00-821875-00001	Solid State Fan Relay (C-Model) (10-amp) .....	2
00-423754-00001	Ignitor/Flame Sensor (Built In) .....	2
<b>00-497585-00001</b>	<b>Door Strike (New Style) .....</b>	<b>2</b>
00-423847-00001	Door Strike (Old Style) .....	2
<b>00-497586-00001</b>	<b>Roller Latch (New Style) .....</b>	<b>2</b>
00-347545-00001	Door Catch (Old Style) .....	2
00-357036-00001	Lamp Assy. (120V) .....	2

# VULCAN

## INSTALLATION & OPERATION MANUAL

### SG SERIES GAS SNORKEL™ CONVECTION OVENS

#### MODELS

SG4D	ML-114875
SG4C	ML-114876
SG6D	ML-114877
SG6C	ML-114878



For additional information on Vulcan-Hart or to locate an authorized parts and service provider in your area, visit our website at [www.vulcanhart.com](http://www.vulcanhart.com)

VULCAN-HART  
DIVISION OF ITW FOOD EQUIPMENT GROUP, LLC

P.O. BOX 696, LOUISVILLE, KY 40201-0696  
TEL. (502) 778-2791

[WWW.VULCANHART.COM](http://WWW.VULCANHART.COM)

FORM 35624 REV. B (12-07)  
(Formerly F-31024 & F-33220)

## IMPORTANT FOR YOUR SAFETY

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

### IMPORTANT

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

### FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

**⚠ WARNING** Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

# Installation, Operation and Care of MODEL SG4D, SG4C, SG6D & SG6C GAS SNORKEL™ CONVECTION OVENS

**PLEASE KEEP THIS MANUAL FOR FUTURE USE**

## GENERAL

Vulcan Gas Snorkel™ Convection Ovens are produced with quality workmanship and material. Proper installation, usage and maintenance of your oven will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

Models SG4D and SG6D feature a solid state temperature control, 1-hour dial timer with buzzer, two-speed 1/3 HP (0,25 kw) blower motor and porcelain interior as standard equipment. Each SG4D and SG4C oven is equipped with a 60,000 BTU/hr. burner.

Models SG4C and SG6C are equipped with electronic time and temperature controls, two-speed 1/3 HP (0,25 kw) blower motor, a roast-and-hold feature, and porcelain interior as standard equipment. Each SG6D and SG6C oven is equipped with a 60,000 BTU/hr. burner.

Models SG6D and SG6C have a deeper oven cavity.

Models SG44D, SG44C, SG66D, and SG66C consist of two single ovens and are supplied with a stacking kit for mounting one oven on top of the other.

All ovens are equipped with a power level control which permits variation of the heat input between 22% and 100% of full input.

All standard 120 volt ovens require single phase electrical service and are equipped with a 3 prong grounding plug.

Oven doors open independently and all ovens are furnished with 5 racks.

Available options are simultaneous oven door opening, a 5-hour timer, 208/240 volt electrical service with hard wire connection direct to the terminal block supplied with the oven, additional oven racks, and an open stand with lower storage rack.

## FEATURES

Model	Thermostat (Each Oven)	Timer (Each Oven)	Stack Kit	Roast & Hold	Legs
SG4D/SG6D	Solid State	1-Hour Dial			25 <sup>3</sup> / <sub>4</sub> " (654 mm)
SG44D/SG66D	Solid State	1-Hour Dial	X		8" (203 mm)
SG4C/SG6C	Electronic	Electronic		X	25 <sup>3</sup> / <sub>4</sub> " (654 mm)
SG44C/SG66C	Electronic	Electronic	X	X	8" (203 mm)

# INSTALLATION

Before installing, verify that the electrical service and type of gas supply (natural or propane) agree with the specifications on the rating plate located behind the top trim panel on the front of the oven. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or Vulcan-Hart immediately.

## UNPACKING

This oven was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking, check for possible shipping damage. If the oven is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Carefully unpack oven and place in a work-accessible area as near to its final installed position as possible.

Do not use the doors or their handles to lift the oven.

## LOCATION

The equipment area must be kept free and clear of combustible substances.

When installed, minimum clearance from combustible construction must be 1" (25 mm) at the left side 4" (102 mm) at the right side, and 6" (152 mm) at the rear. Minimum clearance from noncombustible construction must be 0" at the left side, 4" at the right side and 6" (152 mm) at the rear. The oven may be installed on combustible floors.

The installation location must allow adequate clearances for servicing and proper operation.

The oven must be installed so that the flow of combustion and ventilation air will not be obstructed. Adequate clearance for air openings into the combustion chamber must be provided. Make sure there is an adequate supply of air in the room to allow for that required for combustion of gas at the oven burners.

Do not permit fans to blow directly at the oven. Wherever possible, avoid open windows next to the oven. Avoid wall-type fans which create air cross currents within the room.

## INSTALLATION CODES AND STANDARDS

Vulcan ovens must be installed in accordance with:

### In the United States of America:

1. State and local codes.
2. National Fuel Gas Code, ANSI/Z223.1/NFPA #54 (latest edition). Copies may be obtained from The American Gas Association, Inc., Accredited Standards Committee Z223 @ 400 N. Capital St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471.

**NOTE: In the Commonwealth of Massachusetts,**

All gas appliances vented through a ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.

3. *Vapor Removal From Cooking Equipment*, NFPA-96 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02169-7471.
4. National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02169-7471.

**In Canada:**

1. Local codes.
2. CSA B149.1 Natural Gas and Propane Installation Code.
3. CSA C22.1 Canadian Electric Code (latest edition).

The above are available from the Canadian Standard Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.

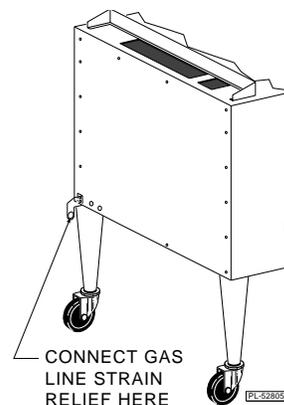
**INSTALLING BASIC OVEN**

The basic oven must be installed on legs, casters or mounted on a modular stand. Installations on concrete bases or other supports restricting air circulation underneath the oven is not advisable and may void the warranty.

**Ovens Mounted on Casters**

Ovens mounted on casters must use a flexible connector (not supplied by Vulcan) that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI-Z21.41 • CSA 6.9. In addition, adequate means must be provided to limit movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit appliance movement. Attach the restraining device at the rear of the oven as shown in Fig. 1.

If disconnection of the restraint is necessary, turn off the gas supply before disconnection. Reconnect this restraint prior to turning the gas supply on and returning the oven to its installation position.



**Fig. 1**

Separate instructions for installing casters to the oven are included with the casters.

Note: If the oven is installed on casters and is moved for any reason, it is recommended that the oven be leveled front to back and side to side for even baking.

### Assembling the Legs to the Oven

The legs must be installed on the bottom of the oven. Position oven on its back, taking care not to scratch or damage it. The gas pipe connection protrudes beyond the back; provide for this when the oven is tipped back by resting it on suitable spacers (2 x 4's [51 x 102 mm], etc.).

Attach each of the four leg assemblies to the bottom of the oven with the 24 bolts and lockwashers (6 per leg). Carefully raise the oven to its normal position.

### Assembling the Stand to the Oven

Attach each of the four leg assemblies to the bottom of the oven with the 24 bolts and lockwashers (6 per leg). Carefully raise the oven to its normal position.

Attach the undershelf to the legs with 8 bolts and lockwashers (2 per leg).

Install the rack guides into the shelf at desired locations (for pan or flat rack), then attach the rack supports to the top end of the rack guides. Attach rack supports to the leg assembly by removing one middle bolt and reattaching back through the end holes in the rack support. (Fig. 2)

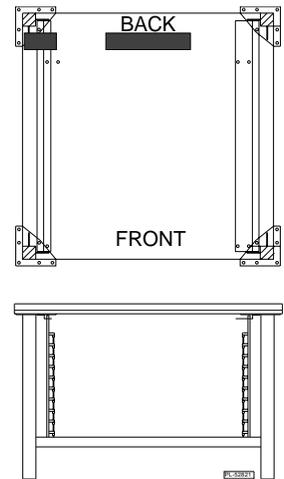


Fig. 2

### ASSEMBLING STACKED OVENS

Unpack the ovens and stack kit. Position the oven to be used as the bottom oven on its back for access to the oven bottom, taking care not to scratch or damage it. The gas pipe protrudes beyond the back; provide for this when the oven is tipped back by resting it on suitable spacers (2 x 4's [51 x 102 mm], etc.). Attach the four leg assemblies with the 24 bolts and lockwashers (6 per leg).

Place the lower oven (with legs/casters) on the floor and remove two  $\frac{7}{16}$ " (11 mm) diameter knockouts on each side of the top cover. Remove vent guard and discard it.

Move the oven (with legs/casters) to the installed position and place upper oven on top of lower oven using the locating studs.

Remove the rear panel from the TOP oven. Install the two-piece stacking common flue (Fig. 3) with the four screws provided. Replace the top oven rear panel.

Connect the piping between the top oven and bottom oven. Pipe compound must be suitable for the type of gas being used (natural or propane).

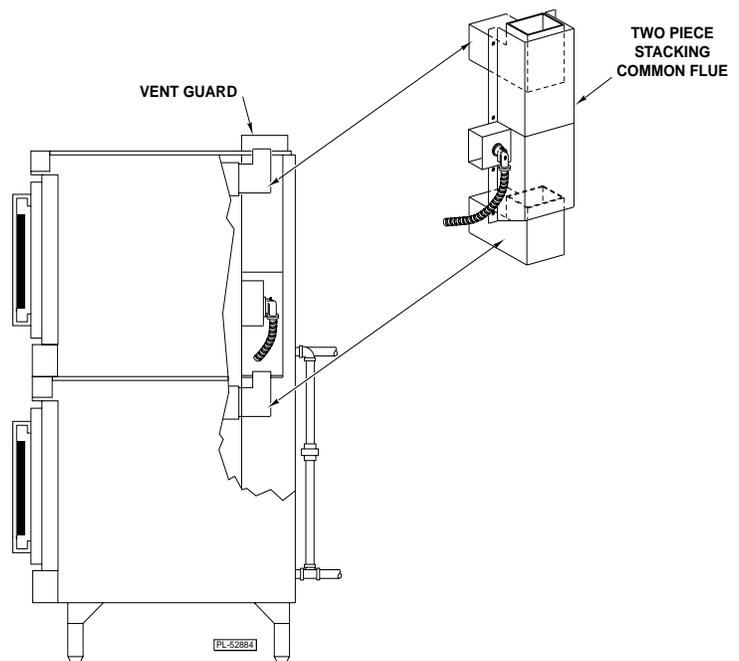


Fig. 3

The manual gas valve, located behind the small door in the lower front panel, should remain off until all electrical and gas connections are made and the ovens are ready to be used.

## LEVELING

Ensure that the oven racks are level in the final installed position. If the oven is installed on legs, turn the adjustable feet in or out to level the oven front-to-back and side-to-side.

## ELECTRICAL CONNECTIONS

**⚠ WARNING** Electrical and grounding connections must comply with the applicable portions of the National Electrical Code and/or other local electrical codes.

**⚠ WARNING** Appliances equipped with a flexible electric supply cord are provided with a three-prong grounding plug. It is imperative that this plug be connected into a properly grounded three-prong receptacle. If the receptacle is not the proper grounding type, contact an electrician. Do not remove the grounding prong from this plug.

The SG series ovens are equipped with a 120 volt / 60 Hz. / 1 phase cord and plug.

Refer to the Installation Codes and Standards section of this manual.

A schematic decal is located on the inside of the right side panel.

### GAS AND ELECTRICAL DATA

MODEL	GAS DATA				ELECTRICAL DATA
	INPUT BTU/HR		MANIFOLD PRESSURE		AMP LINE
	Natural	Propane	Natural	Propane	120 Volts
SG4D/C SG6D/C	60,000	60,000	3.5" (0.87 kPa)	10" (2.49 kPa)	9 Amps
SG44D/C SG66D/C	120,000	120,000	3.5" (0.87 kPa)	10" (2.49 kPa)	18 Amps

## **GAS CONNECTIONS**

Gas supply connections and any pipe joint compound must be resistant to the action of propane gases.

Location of the gas inlet is at the rear of the oven. Codes require that a gas shutoff valve must be installed in the gas line ahead of the oven.

Connect gas supply after leveling the oven. The gas supply line must be at least the equivalent of  $\frac{3}{4}$ " (19mm) iron pipe. Make sure the pipes are clean and free of obstructions, dirt, or pipe joint compound.

The ovens are equipped with fixed burner orifices which match with installation elevation.

The oven is provided with a regulator integral to the gas solenoid valve and requires no external regulator.

Natural gas pressure regulators are preset for 3.5" W.C. (Water Column) (0.87 kPa); propane gas pressure regulators are preset for 10" W.C. (2.49 kPa).

**⚠ WARNING** Prior to lighting, check all joints in the gas supply for leaks. Use soap and water solution. Do not use an open flame.

**A. Check all joints prior to the gas valve (solenoid) before lighting unit.**

**B. Check all joints beyond gas valve (solenoid) after unit is lit.**

After piping has been checked for leaks, all piping receiving gas should be fully purged to remove air.

## **TESTING THE GAS SUPPLY SYSTEM**

When gas supply pressure exceeds  $\frac{1}{2}$  psig (3.45 kPa), the oven and its individual shutoff valve must be disconnected from the gas supply piping system.

When gas supply pressure is  $\frac{1}{2}$  psig (3.45 kPa) or less, the oven should be isolated from the gas supply system by closing its individual manual shutoff valve.

## **ADJUSTMENTS**

### **Air Adjustment**

Although main burner air is adjusted before shipment, it should be checked at the time of installation. Excessive air will cause flames to lift off a burner when cold or may cause flash-back during normal cycling of oven, particularly when propane gas is used.

Insufficient air will cause flames to burn with a yellow tip and result in carbon accumulation in the flame chamber and heat exchanger tubes.

Contact your local Vulcan-Hart servicer if required.

## **VENT SYSTEM**

**DO NOT** obstruct the flow of flue gases from the flue located on the rear of the oven. It is recommended that the flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel.

Ovens may use an optional down draft diverter flue method. This optional down draft diverter must be purchased from the oven manufacturer and vented to the outside; otherwise, the installation of any such device will void all oven certifications and warranties. When the diverter is supplied, it may be connected to a Type "B" vent.

From the termination of the flue to the filters of the hood venting system, a minimum clearance of 18" (457mm) must be maintained.

Information on the construction and installation of ventilating hoods may be obtained from the standard for "Vapor Removal from Cooking Equipment," NFPA No. 96 (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

# OPERATION

**⚠ WARNING** The oven and its parts are hot. Use care when operating, cleaning or servicing the oven.

## CONTROLS — MODELS SG4D AND SG6D (Fig. 4)

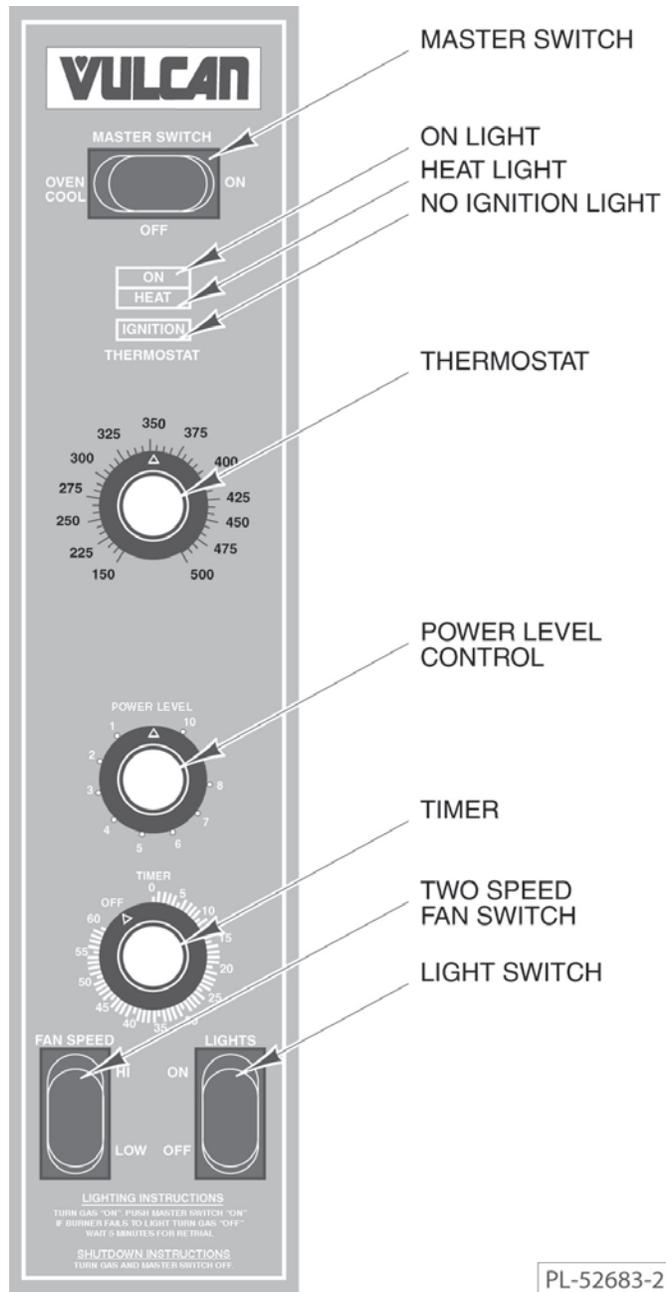


Fig. 4

- Master Switch** — ON — turns oven control circuits on.  
OFF — turns oven control circuits off.  
OVEN COOL — allows the fan motor to run with the doors ajar to speed oven cooling.
- On Light (Amber)** — Lit when Master Switch is positioned at ON.
- Heat Light (White)** — Comes on and goes off when the burner cycles on and off.
- No Ignition Light (Red)** — Comes on if burner fails to ignite. When lighting the oven, the No Ignition Light flashes.
- Thermostat** — Controls oven temperature during cooking operation.
- Power Level Control** — A potentiometer which permits variation of the heat input between 22% and 100% of full input.

Dial Setting	Percent of Full Input
10	100%
9	77%
8	73%
7	68%
6	60%
5	53%
4	45%
3	37%
2	28%
1	22%

- One-Hour Timer** — Use to set cooking cycle time. Alarm sounds continuously when elapsed time counts down to 0; oven does not turn off. Turn timer to OFF position to stop alarm. When oven is not in use, keep timer at OFF position.
- Two-Speed Fan Switch** — Adjusts air velocity in the oven.
- Light Switch** — Turns lights in the oven on or off.

## BEFORE FIRST USE

Before using the oven for the first time, it must be "burned in" to release any odors that might result from heating the new surfaces in the chamber.

- Using a clean damp cloth, wipe the inside of the oven, including the racks.
- Close the oven doors, push the Master Switch to ON, turn the Thermostat to 300°F (149°C), and allow the oven to cycle for 6 to 8 hours before pushing the Master Switch OFF.

## **LIGHTING THE SG4D AND SG6D OVENS**

1. Turn the main gas supply ON.
2. Turn the gas control valve (located behind the small door on the lower front panel) ON.
3. Push the Master Switch to ON and turn Thermostat to its maximum setting. Both the ON and HEAT lights should come on. If HEAT light is not on, make sure the oven door(s) are closed.
4. If the oven fails to light, the red No Ignition light will be lit and remain on. Push Master Switch to OFF. Turn gas off.
5. Wait 5 minutes before repeating Steps 1 through 4.

If the oven does not light after three trials, turn off the main gas valve and call a qualified servicer.

## **USING THE SG4D AND SG6D OVENS**

### **Preheating**

1. Select the proper rack arrangement for the product to be cooked. (See RACK ARRANGEMENTS in this manual.)
2. Make sure the doors are closed.
3. Push Master Switch to ON. The amber ON light will come on, indicating that power to the oven is on.
4. Set the Power Level Control to 10.
5. Set the two-speed Fan Switch to the desired setting.
6. Set Thermostat as desired. The Heat light will come on and remain on until the oven reaches set temperature (approximately 10 to 15 minutes for settings from 300°F (149°C) to 400°F (204°C). Refer to COOKING GUIDELINES in this manual for suggested temperatures and times for various products.
7. Prepare product and place in suitable pans. When the white Heat light goes off, the oven has reached the desired preheat temperature.

### **Cooking**

1. Open doors and load the product into the oven. Place pans in the center of the racks. Close doors.
2. Set power level to desired baking setting.
3. Set the Timer. After the preset time lapses, turn timer to OFF position to stop alarm.
4. When product is done, open doors and carefully remove cooked product from the oven. Wipe up any spills.

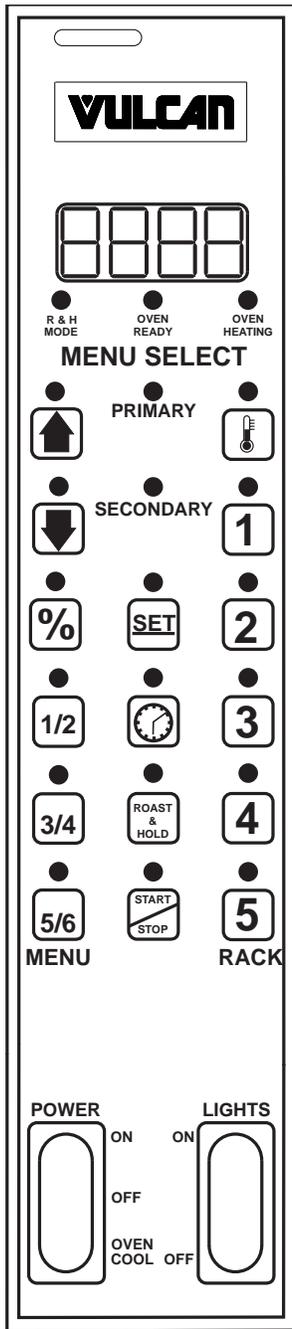
### **End of Day**

1. Push Master Switch to OVEN COOL. Leave door ajar while the fan is on to cool the oven.
2. When oven has cooled sufficiently, push Master Switch to OFF.
3. Turn gas valve (located behind panel) OFF and clean oven.
4. Leave door open overnight or when oven is not in use for an extended period of time.

### **Extended Shutdown**

Repeat Steps 1 through 3 above. Unplug oven and shut off manual gas valve.

## CONTROLS — Models SG4C and SG6C Built after October 1999



PL-53504



Always displays [HR:Min] when setting the Time.  
 Displays [HR:Min] if the countdown time is more than 1 Hour.  
 Displays [Min:Sec] if the countdown time is less than 1 Hour.  
 Displays Temperature in °F.



R & H  
MODE

Indicates the oven is in the Roast and Hold Mode.



OVEN  
READY

Indicates the oven is preheated and ready for cooking.



OVEN  
HEATING

Indicates the oven is preheating.



PRIMARY

Primary indicates Menu Items 1, 3, or 5.



SECONDARY

Secondary indicates Menu Items 2, 4, or 6.



Up arrow increases; Down arrow decreases — a displayed Time or Temperature value if arrow keys are lit.



Adjusts the oven heating rate or Power Level from 20 to 100 %.



TEMPERATURE: Use with SET to set the oven Temperature.



SET: Use with Time or Temperature.



TIME: Use with SET to manually set the cooking Time.



Selects Roast and Hold mode; also selects Low Fan Speed.



Press once to start; press a second time to stop.



Select Menu Cook Times. Press once for Primary (1, 3, or 5).  
 Press a second time for Secondary (2, 4, or 6). See next page.



Rack Buttons select individual Menu / Rack # Cook Times — once programmed.

## MANUALLY SETTING THE COOK TIME, TEMPERATURE, AND POWER LEVEL

### To Set the Cook Time

- Press the SET button. Press the TIME button. *Tine* displays to indicate TIME.
- Use the Up and Down Arrow keys to increase or decrease the displayed Cook Time (HR:min).
- Press the SET button again to save the Time setting in the computer.

### To Set the Temperature

- Press the SET button. Press the TEMPERATURE button; *StPt* displays to indicate Setpoint.
- Use the Up and Down Arrow keys to increase or decrease the displayed Temperature value.
- Press the SET button again to save the Temperature setpoint in the computer.

### To Set the Power Level

- Press the SET button. Press the % button.
- Use the Up and Down Arrow keys to increase or decrease the displayed Power Level value.
- Press the SET button again to save the desired Power Level value in the computer.

### To Start Cooking

- Press the START / STOP button.
- The manual Cook Time counts down to 00:00. Displays [HR:Min] above 1 hour; [min: sec] below.
- The buzzer will sound. To silence the buzzer, press the START / STOP button again.
- \* *The control retains the manual settings for Cook Time, Temperature, and Power Level.*

## TO PROGRAM MENU ITEM and RACK # Cook Times

Factory Preset and Programmable Cook Times are shown in the table, below:

MENU SELECTION	MENU ITEM	FACTORY PRESET MENU ITEM COOK TIME	PROGRAMMABLE VALUES					
			MENU ITEM COOK TIME	RACK 1 COOK TIME	RACK 2 COOK TIME	RACK 3 COOK TIME	RACK 4 COOK TIME	RACK 5 COOK TIME
1 / 2 Primary	1	10 min.						
1 / 2 Secondary	2	15 min.						
3 / 4 Primary	3	20 min.						
3 / 4 Secondary	4	25 min.						
5 / 6 Primary	5	30 min.						
5 / 6 Secondary	6	35 min.						

The Primary indicator light with Menu 1 / 2 selects Menu Item 1 (Factory Preset Cook Time = 10 minutes). The Secondary indicator light with Menu 1 / 2 selects Menu Item 2 (Factory Preset Cook Time = 15 minutes). Similarly, for Menu Buttons 3 / 4 or 5 / 6. Any Menu Item Cook Time can be changed using the procedure below. Rack # Cook Times may be programmed if desired but are not required.

### To Change the Time Setting for any Menu Item (1 – 6)

- To enter program mode, press and hold the Up and Down arrow buttons until ProG displays.
- ❖ Select the Menu Item to be programmed (1 – 6). *Tine* displays to indicate TIME. Use the Up and Down arrow buttons to increase or decrease the Menu Item's COOK TIME. Repeat this step for any other Menu Items.
- Press the START / STOP button; LOC displays. Press the START / STOP button a second time to save the Menu Item(s)' COOK TIME(s).
- Press the START / STOP button once to begin cooking (with the Menu Item's Cook Time). To exit, press the START / STOP button a second time.

### To Program Individual Rack # Cook Times for a Menu Item

- To enter program mode, press and hold the Up and Down arrow buttons until ProG displays.
- Select the Menu Item to be programmed (1 – 6); *Tine* displays to indicate TIME.
- ❖ Then select the Rack # (1 – 5). [*t 1*] indicates Rack #1; [*t 2*] indicates Rack #2; ... [*t 5*] indicates Rack #5. Use the Up and Down arrows to increase or decrease the COOK TIME for any Rack #.
- Press the START / STOP button; LOC displays. Press the START / STOP button a second time to save the Menu / Rack #'s COOK TIME(s).
- To exit program mode, press START / STOP twice.

## Always Set the Temperature Before Setting the Time

- Press the SET button. Press the TEMPERATURE button; *StPt* displays. Use the Up and Down Arrow keys to increase or decrease the Temperature. To save, press the SET button again.

At startup, the display will initially show a *GROWING BAR*. When the oven temperature reaches the Set Point, the set temperature displays. The READY light is lit, the HEAT light goes out, and the oven is ready for you to select the Cook Time, Menu Item Cook Time, or Menu / Rack # Cook Time.

### Starting a Timed Cycle On All Racks

- Open the door, *door* will display.
- Place the desired product on any of the five racks.
- Close the door. The display should return to the set temperature or the *GROWING BAR*.
- Press the Menu Key once for Primary or twice for Secondary to select a Menu Item Cook Time.
- Press the START / STOP button \*.
- The timer will count down the time remaining for the Menu Item Cook Time.
- When the time has counted down to 00:00, the buzzer will sound and all Rack Buttons will flash.
- To silence the buzzer, press the START / STOP button.

\* *Pressing the START / STOP button after making a menu selection will time all racks for the selected menu time.*

### Starting a Timed Cycle Using Programmed Individual Menu / Rack # Cook Time(s)

- After the set Temperature is reached, open the door; *door* displays. Place product(s) in oven.
- Close the door. The display returns to the set Temperature or the *GROWING BAR*.
- Select the Menu Item (once for Primary or twice for Secondary) and the Rack # to select the Menu / Rack # Cook Time. If using simultaneous cook times, select the other Menu / Rack #'s.
- The timer selects the Rack # with the shortest Cook Time and counts down to 00:00.
- The buzzer sounds and the Rack # flashes. To silence the buzzer, press the flashing Rack #.
- Open the door; *door* displays; remove the finished product; close the door.
- The next shortest Cook Time displays, its Rack # flashes and the time counts down to 00:00.
- The buzzer sounds. Press the flashing Rack #. Open the door, *door* displays. Remove the product, close the door. Repeat from ♣ until all Rack #'s are done.

### To Display the Actual Oven Temperature

- Press and hold the Temperature button for 3 seconds to display Actual Oven Temp until released.

### To End a Cooking Cycle

At the end of a cooking cycle, the alarm will sound. To silence the alarm and end a Menu Item cooking cycle, press START / STOP. To silence the alarm and end a Rack # cooking cycle, press the Rack #.

To cancel a cooking cycle which might have been started in error, press and hold the Rack button to be terminated and press START / STOP at the same time.

### Door and Timing

Opening the door while loading additional product will interrupt all timing functions until the door is closed and the timer resumes. For example, if a product time had diminished to 1 minute and the door was opened for 30 seconds and then closed, the timer would still show 1 minute.

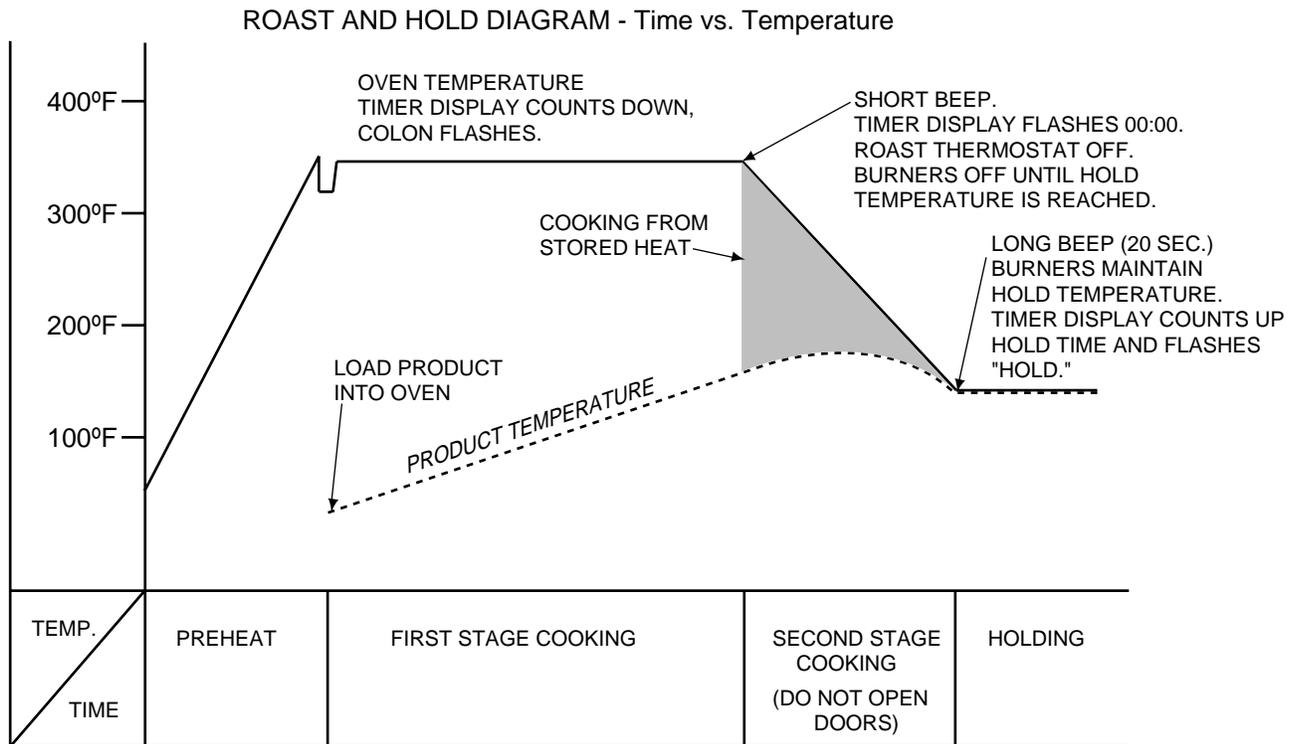
### SETTING THE OVEN FOR ROAST & HOLD

- Press the Roast & Hold button to select Roast & Hold.
- Set the first stage Temperature and the Cook Time as described in: MANUALLY SETTING THE TEMPERATURE AND COOK TIME. Press START / STOP to begin cooking.
- \* *The HOLD Temperature is preset by the computer control at 150°F (66°C).*
- \* *The LOW FAN SPEED is present during Roast & Hold. Use R&H to select LOW FAN SPEED.*

## ROAST AND HOLD OPERATION

Roast and Hold cooks the product in two stages. During First Stage Cooking, the oven temperature is regulated by the Roast thermostat for the amount of time set on the Timer. After the lapsed time counts down to 00:00, Second Stage Cooking begins. During Second Stage Cooking, the burners are off as the temperature in the oven declines to the Hold Temperature. The doors should remain closed during Second Stage Cooking.

When the Hold Temperature is reached, cooking is done. The Time Display counts up the Hold time and flashes "Hold." Temperature in the oven will be maintained at the Hold temperature until the oven is turned off.



PL-51607

## RACK ARRANGEMENTS

**CAPACITY**—All models are supplied with five racks and have a maximum operating capacity of six racks per oven. The eleven-position rack supports provide for maximum flexibility and proper rack spacing.

The following arrangements are recommended. The position numbers are in numerical sequence starting at the bottom (Fig. 5).

### Arrangement #1

Five racks in Positions #2, #4, #6, #8, and #10 for oven broiling, cookies or reconstitution of frozen lunches at maximum capacity. Also recommended position for general baking in sheet pans with products not over 2½" (64 mm) high.

### Arrangement #2

Four racks in Positions #1, #4, #7, and #10 for general baking in sheet pans, muffin pans, pie or cake tins, and pudding pans 3½" (89 mm) high with products not over 4" (102 mm) high. Can also be used for casseroles or meat dishes in #200 series food service pans 12" x 20" x 2½" (305 x 508 x 64 mm).

### Arrangement #3

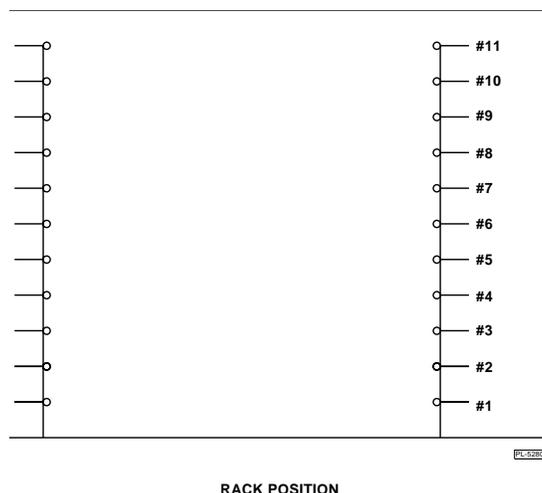
Three racks in Positions #1, #5, and #9 for baking breads or cakes in loaf or tube pans and high meringue pies. Can also be used for casseroles, meat dishes or roasting in pans up to 5½" (140 mm) deep with products up to 6" (152 mm) high.

### Arrangement #4

Two racks in Positions #1 and #6 for roasting turkeys and other roasts up to 7" (178 mm) high.

With the rack in Position #1, there is limited space for a water pan (see cooking chart in this manual).

When mixed loads or partial loading is regular practice, some users have developed other rack arrangements to suit their particular needs.



RACK POSITION

Fig. 5

## CONSERVING ENERGY

- Turn off unused equipment.
- Adjust menu patterns and cooking/baking schedules for optimum equipment use.
- Reduce thermostat settings in slack periods since gas equipment heats up and recovers quickly.
- Preheat only to required cooking temperature for specific food — not higher.
- Do not open the oven door unless absolutely necessary.
- Keep area around the oven door clean and free of food particles.
- Any obstruction that prevents the door from closing completely will adversely affect oven efficiency.

## COOKING GUIDELINES

Recommended temperatures, times, number of racks, and power level control settings are intended as a guide only. Adjustments must be made to compensate for variations in recipes, ingredients, preparation, and personal preference in product appearance.

The oven does not require special recipes. Excellent results can be obtained from any good commercial recipe with reduced cooking times.

## RECOMMENDED TEMPERATURES, TIMES, AND POWER LEVEL SETTINGS FOR ROASTING

Meat roasting is most satisfactory at temperatures of 225°F to 325°F (107°C to 162°C) for beef, lamb, poultry, and ham; 325°F (162°C) for fresh pork as recommended by USDA and American Meat Institute.

A pan, approximately 12" x 20" x 1" (305 x 508 x 25 mm), full of water may be placed in the oven bottom. This water supplies humidity to reduce shrinkage. Water should be added if necessary during roasting.

Roasting pans should be no deeper than necessary to hold drippings, usually 2" to 2½" (51 to 64 mm).

Cooking time and shrinkage may vary with roasting temperature, cut, grade of meat, and degree of doneness. Smaller cuts will generally show greater time savings than larger cuts at a given temperature.

To determine appropriate cooking time, use a reliable meat thermometer and refer to your state, city or local jurisdiction code requirements on internal cooking temperatures for meat products.

### ROASTING TEMPERATURE CHART

PRODUCT	TEMP		POWER LEVEL SETTINGS	
	°F	°C	SG4/6D	SG4/6C
<b>Standing Rib Roast</b> — Oven Ready	250	121	10	100%
<b>Rolled Rib Roasts</b> — 20 to 22 lb. (9.1 to 10 kg)	275	135	10	100%
<b>Veal Roast</b> — 15 lb. (6.8 kg)	300	148	10	100%
<b>Turkeys</b> — 15 to 20 lb. (6.8 to 9.1 kg)	300	148	10	100%
<b>Meat Loaf</b> — 8 to 10 lb. (3.6 to 4.5 kg)	350	176	10	100%

## RECOMMENDED TEMPERATURES, TIMES, AND POWER LEVEL SETTINGS FOR BAKING

PRODUCT	TEMP.		TIME IN MINUTES	NO. OF RACKS	POWER LEVEL SETTINGS	
	°F	°C			SG4/6D	SG4/6C
<b>Cakes</b>						
Sheet Cakes 18x26x1" (457x660x25 mm) Pan						
Scaled 4½ to 6 lb. (2.0-2.7 kg) per pan	325-360	162-182	20 to 23	5	7 to 4	68 to 45%
Scaled 6 to 7½ lb. (2.7-3.4 kg) per pan	335-350	168-177	22 to 25	4	6 to 4	60 to 45%
Sheet Cakes 18x26x2" (457x660x51 mm) Pan	300-325	149-162	25 to 35	4	6 to 4	60 to 45%
Equals (2) 12x18x2" (305x457x51 mm) pans						
Scaled 10 to 12 lb. (4.5-5.4 kg) per 18x26x2" (457x660x51 mm) pan, or 5 to 6 lb. (2.3-2.7 kg) per 12x18x2" (305x457x51 mm) pan	300-325	149-162	25 to 35	3	6 to 4	60 to 45%
<b>Angel or Sponge Cakes</b>						
Sheet Pans 18x26x1" (457x660x25 mm)						
Scaled 5 to 6 lb. (2.3-2.7 kg) per pan	300-325	149-162	15 to 20	4	3	37%
<b>Loaf or Tube Pans</b>	315-340	157-171	20 to 30	3-4	4 to 1	45 to 22%
<b>Cupcakes</b>	350-400	177-204	6 to 12	4	6 to 4	60 to 45%
<b>Frozen Fruit Pies</b>	350-375	177-190	30 to 45	4	6 to 4	60 to 45%
				3	4	45%
<b>Pumpkin or Custard Pies</b>	300-350	149-177	30 to 45	4	6 to 4	60 to 45%
				3	4 to 3	45 to 37%
<b>Cobblers</b>						
12x18x2" (305x457x51 mm) or	350-400	177-204	30 to 45	4	6	60%
12x20x2½" (305x508x64 mm) Pans				3	4	45%
<b>Meringue Pies</b>	350-425	177-218	6 to 10	4	6 to 4	60 to 45%
				3	6 to 4	60 to 45%
				2	6 to 4	60 to 45%
<b>Fruit Turnovers</b>						
18x26x1" (457x660x25 mm) Pans	350-375	177-190	15 to 25	5	6 to 4	60 to 45%
				4	6 to 4	60 to 45%
				3	4 to 3	45 to 37%
<b>NOTE:</b> Pies and cobblers; fruit, custard, and pumpkin pies in pie pans should be placed on 18x26x1" (457x660x25 mm) pans for baking.						
<b>Cookies</b>						
Rolled or Pressed	350-400	177-204	6 to 12	5	6 to 3	60 to 37%
				4	4 to 3	45 to 37%
				3	3	37%
Drop	350-400	177-204	6 to 15	5	6 to 4	60 to 45%
				4	4 to 3	45 to 37%
				3	3	37%
<b>Brownies</b>						
	350	177	12 to 20	5	6 to 4	60 to 45%
				4	4 to 3	45 to 37%

**RECOMMENDED TEMPERATURES, TIMES, AND POWER LEVEL SETTINGS FOR BAKING,  
Cont'd.**

PRODUCT	TEMP.		TIME IN MINUTES	NO. OF RACKS	POWER LEVEL SETTINGS	
	°F	°C			SG4/6D	SG4/6C
<b>Yeast Breads</b> NOTE: Yeast breads should be fully proofed for best results.						
<b>Rolls</b> — 1 oz. (28 g)	350-400	177-204	5 to 10	4	6 to 4	60 to 45%
					3	4
1½ to 2½ oz. (45-71 g)	350-400	177-204	8 to 15	4	6 to 4	60 to 45%
				3	4 to 3	45 to 37%
<b>Loaf Bread</b> — 1 lb. (0.45 kg)	325-375	162-190	20 to 40	3(30)Pans	4	45%
				2(20)Pans	3	37%
<b>Sweet Rolls &amp; Danish Pastry</b>	325-375	162-190	5 to 15	4	6 to 4	60 to 45%
				3	4 to 3	45 to 37%
<b>Biscuits</b> — Rolled ½" (13 mm) Thick	350-400	177-204	5 to 15	4	6 to 4	60 to 45%
				3	4 to 3	45 to 37%
<b>Muffins</b>	325-375	162-190	6 to 18	4	4	45%
				3	4 to 3	45 to 37%
<b>Corn Bread</b> 18x26x1" (457x660x25 mm) Pan, 5-7 lb. (2.3-3.2 kg) per pan	335-400	168-204	10 to 20	4	6 to 4	60 to 45%
<b>Corn Muffins</b>	335-385	168-196	10 to 20	4	6 to 4	60 to 45%
				3	4 to 3	45 to 37%

**REHEATING PREPARED FOODS**

<b>Frozen French Fries</b>	400-450	204-232	6 to 8	4	8 to 6	73 to 60%
				2 to 3	7 to 4	68 to 45%
<b>Frozen TV Dinners</b>	350-400	177-204	10 to 12	4 to 5	10 to 6	100 to 60%
				2 to 3	7 to 4	68 to 45%
<b>Frozen Entrees</b> — ¾" to 1" (19 to 25 mm) Thick	300-350	149-177	10 to 20	2 to 5	10 to 6	100 to 60%
<b>Frozen Meals</b> — 8 oz. (227 g) Foil Pkg.	350-400	177-204	20 to 30	2 to 5	10	100%

## OVEN BROILING OR FRYING

PRODUCT	TEMP.		TIME IN MINUTES	NO. OF RACKS	POWER LEVEL SETTINGS	
	°F	°C			SG4/6D	SG4/6C
<b>Fish Sticks &amp; Portions</b>						
Frozen Breaded — 1 oz. (28 g)	350-400	177-204	6 to 10	4	8 to 6	73 to 60%
2 1/2 to 3 oz. (71-85 g)	350-375	177-190	8 to 15	2 to 3 4 2 to 3	7 to 4 7 to 6 6 to 4	68 to 45% 68 to 60% 60 to 45%
<b>Chicken Pieces</b>						
Broiled or Oven Fried						
2 to 2 1/2 lb. (0.91-1.13 kg) bird	375-425	190-218	8 to 15	4 to 5 2 to 3	8 to 6 7 to 4	73 to 60% 68 to 45%
2 1/2 to 3 lb. (1.13-1.36 kg) bird	350-400	177-204	15 to 25	4 2 to 3	7 to 6 6 to 4	68 to 60% 60 to 45%
<b>Lobsters</b> — 1 to 1 1/2 (0.45-0.68 kg) lb.	400-450	204-232	8 to 14	2 to 4	10 to 6	100 to 60%
<b>Lobster Tails</b> — Frozen						
1/2 to 3/4 lb. (0.23-0.34 kg)	350-400	177-204	10 to 15	2 to 4	8 to 6	73 to 60%
<b>Hamburger Patties</b>						
8 per lb. (0.45 kg), Med. to Well Done	400-450	204-232	5 to 6	4 to 6 2 to 3	8 to 7 7 to 6	73 to 68% 68 to 60%
6 per lb. (0.45 kg)	400-450	204-232	7 to 10	4 to 6 2 to 3	10 to 8 8 to 7	100 to 73% 73 to 68%
4 per lb. (0.45 kg)	375-450	190-232	8 to 12	4 to 6 2 to 3	10 8 to 7	100% 73 to 68%

## CASSEROLES

<b>Food Service Pans</b>						
2" to 3" (51-76 mm) deep	325-375	162-190	15 to 25			
3" to 4" (76-102 mm) deep	325-375	162-190	20 to 35	2 to 4	7 to 4	68 to 45%
<b>Ramekins or Foil Pans</b>	350-400	177-204	5 to 6	4 to 5	10 to 7	100 to 68%
Up to 1 1/2" (38 mm) deep				2 to 4	7 to 6	68 to 60%
Frozen			10 to 15			

## MISCELLANEOUS PRODUCTS

<b>Baked Potatoes</b>						
120 count per 50 lb. (23 kg)	400-450	204-232	20 to 25	2 to 5	8 to 6	73 to 60%
100 count per 50 lb. (23 kg)	400-450	204-232	25 to 40	2 to 5	7 to 6	68 to 60%
80 count per 50 lb. (23 kg)	400-425	204-218	30 to 45	2 to 5	7 to 4	68 to 45%
<b>Pizzas</b> — Frozen or With						
Prebaked Crust	425-475	218-246	5 to 10	4 2 to 3	8 to 6 6 to 4	73 to 60% 60 to 45%
<b>"Grilled" Cheese Sandwiches</b>	400-425	204-218	8 to 10	4 2 to 3	8 to 6 7 to 4	73 to 60% 68 to 45%

## NOTES ON SPECIAL PROCEDURES FOR BAKING

**Yeast Bread:** Cooking starts immediately in the convection oven. Yeast breads do not usually rise as much in a convection oven as in a conventional oven. Therefore, it is usually necessary to allow fuller proof, 2<sup>1</sup>/<sub>2</sub> to 3 times increase in volume for best results.

**Pies:** When baking pies in your convection oven, 3 or 4 pies should be put on an 18x26" (457 x 660 mm) sheet or bun pan. This procedure helps the bottom crust to bake, makes handling easier, and reduces the possibility of boilover spoiling the appearance of the pies on the lower racks.

## HIGH LIMIT SWITCH

All ovens are equipped with a high limit switch which senses the temperature of the oven to prevent overheating. The high limit switch operates independently and will automatically shut the oven down should the primary control fail. If this situation occurs, DO NOT attempt to bypass the high limit. Shut the oven down and contact your local Vulcan authorized service agency.

## CLEANING

**⚠ WARNING** Disconnect the electrical power to the machine and follow lockout / tagout procedures.

Allow the oven to cool before cleaning.

### Snorkel Tube

The Snorkel tube opening should never be blocked. If usage of aluminum foil is a common practice during the operation of this oven, be sure to periodically check the Snorkel tube for foil particles. The Snorkel tube should be kept clean at all times for proper operation of the oven. Clean this tube with standard oven cleaner at least once a week. Be sure to thoroughly clean all cleansing solution off the tube before using the oven again. It is also recommended that the oven be run at 400°F (204°C) for 20 minutes before using to burn off any cleaning solution that was not thoroughly rinsed from the tube.

### Daily

Exterior stainless steel oven panels should be cleaned with a damp cloth. Stubborn soil may be removed with detergent. (DO NOT USE DAWN®.) Rinse thoroughly and wipe dry with a soft clean cloth.

Clean porcelain oven interior daily with soap or detergent and water. Rinse thoroughly and wipe dry with a soft clean cloth.

Nickel plated racks and rack supports may be removed for cleaning.

For burned-on foods and grease which resist simple soap and water cleaning, an abrasive cleanser (scouring powder) mixed into a paste may be used. Apply with stainless steel wool or sponge, always rubbing with the "grain." This treatment is equally effective for "heat tint" (slightly darkened areas caused by oxidation). Again, remember to rub in the direction of the polish lines. Rinse with clear water and dry with a soft cloth.

Do not use scouring powder on the glass window; it will scratch and fog the glass.

After processing some foods at low temperatures, odors may linger in the oven. These odors may be cleared by setting the thermostat at 500°F (260°C) and the power level control at 10 and allowing the oven to run unloaded for 30 to 45 minutes.

# MAINTENANCE

**⚠ WARNING** The oven and its parts are hot. Use care when operating, cleaning or servicing the oven.

**⚠ WARNING** Disconnect the electrical power to the machine and follow lockout / tagout procedures.

## LUBRICATION

The fan motor comes with sealed bearings and requires no lubrication.

## VENT

Periodically check the flue, when the oven is cool, to be sure it is free of obstructions.

## REPLACING LAMPS

- Allow oven to cool.
- Remove all racks by pulling forward, lifting up and out.
- Unscrew glass dome from light body.
- Replace the bulb.
- Reassemble glass dome and racks.

## SERVICE AND PARTS INFORMATION

To obtain service and parts information concerning this model, contact the Vulcan-Hart Service Agency in your area (refer to our website, [www.vulcanhart.com](http://www.vulcanhart.com) for a complete listing of Authorized Service and Parts depots).

When calling for service, the following information must be available: model number, serial number, manufacture date (MD) and voltage.

## TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	CORRECTION
Uneven browning or overcooking at edges of pans.	<ol style="list-style-type: none"> <li>1. Power level control setting too high.</li> <li>2. Too many racks used.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce power level control setting (see Cooking Guidelines in this manual).</li> <li>2. Reduce number of racks used.</li> </ol>
Product pulling to edge of pan or spilling.	<ol style="list-style-type: none"> <li>1. Oven out of level.</li> <li>2. Sheet pans warped.</li> </ol>	<ol style="list-style-type: none"> <li>1. Level oven, on the racks, from side to side and front to back. The rack should check dead level side to side and from level to <math>\frac{1}{8}</math>" (3 mm) low at the front from front to back.</li> <li>2. Keep pans used for baking batter separate from general purpose pans. If any pan shows a tendency to warp, remove it from the baking group.</li> </ol>
Product overbrowning before done or shrinking and overbrowning at edges.	Power level control setting too high.	Reduce power level control setting (see Cooking Guidelines in this manual).
Excessive shrinkage.	<ol style="list-style-type: none"> <li>1. Failure to maintain water in oven.</li> <li>2. Roasting temperature too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place pan of water (approx. 12"x20"x1" (305x508x25 mm) in bottom of oven.</li> <li>2. Reduce temperature.</li> </ol>
No Ignition Light remains lit for more than 20 seconds after 3 trials (Models SG4D and SG6D), (Models SG4C and SG6C).		<ol style="list-style-type: none"> <li>1. Turn oven off for 5 minutes before attempting to relight.</li> <li>2. Check gas supply valves to be sure they are open.</li> <li>3. Check electrical power source and connections.</li> </ol>

# DÉPANNAGE

CORRECTIF	CAUSE	PROBLÈME
<p>1. Réduire le réglage du commutateur de puissance (se reporter au GUIDE DE CUISSON).</p> <p>2. Réduire le nombre de grilles.</p>	<p>1. Réglage du commutateur de puissance trop élevé.</p> <p>2. Trop grand nombre de grilles.</p>	<p>Brûlissage inégal ou cuisson excessive au bord des plaques.</p>
<p>1. Nivelier le four latéralement et d'avant vers l'arrière en déposant un niveau sur les grilles. Celles-ci doivent être parfaitement droites d'une côté à l'autre et 3 mm (1/8 po) plus basses à l'avant qu'à l'arrière.</p> <p>2. Séparer les plaques à pâtisseries des plaques tout usage. Si une plaque a tendance à gauchir, ne plus l'utiliser.</p>	<p>1. Four dénivélé.</p> <p>2. Tôles gauches.</p>	<p>Aliments d'un côté de la plaque ou qui renversent.</p>
<p>Réduire le réglage du commutateur de puissance (se reporter au GUIDE DE CUISSON).</p>	<p>Réglage du commutateur de puissance trop élevé.</p>	<p>Brûlissage excessif avant la fin de la cuisson ou flétrissement et brunissage excessifs sur le bord.</p>
<p>1. Déposer un bac d'eau d'environ 305 x 508 x 25 mm (12 x 20 x 1 po) dans le fond du four.</p> <p>2. Réduire la température.</p>	<p>1. Manque d'eau dans le four.</p> <p>2. Température de rôtissage trop élevée.</p>	<p>Flétrissement excessif.</p>
<p>1. Éteindre le four pendant 5 minutes avant de le rallumer.</p> <p>2. Vérifier que les robinets de gaz sont ouverts.</p> <p>3. Vérifier l'alimentation et les raccordements électriques.</p>		<p>Le voyant DÉFAILLANCE ALLUMAGE demeure allumé pendant plus de 20 secondes après trois tentatives (modèles SG4D et SG6D), (modèles SG4C et SG6C).</p>

Des odeurs peuvent persister dans le four suite à la cuisson d'aliments à basse température. Pour les éliminer, régler le thermostat à 260 °C (500 °F) et le commutateur de puissance à 10, puis laisser fonctionner le four à vide de 30 à 45 minutes.

## ENTRETIEN

**AVERTISSEMENT :** LE FOUR ET SE COMPOSANTS SONT CHAUDS. EXERCER UNE EXTRÊME PRUDENCE LORS DE SON UTILISATION OU ENTRETIEN.

**AVERTISSEMENT :** COUPER L'ALIMENTATION ÉLECTRIQUE DE L'APPAREIL ET SUIVRE LES PROCÉDURES DE VERROUILLAGE ET D'ÉTIQUETAGE.

### LUBRIFICATION

Le moteur du ventilateur est pourvu de roulements scellés ne nécessitant aucune lubrification.

### CONDUIT D'ÉVACUATION

Vérifier périodiquement le conduit d'évacuation lorsqu'il est froid pour s'assurer qu'il n'est pas obstrué.

### REMPLACEMENT DES LAMPES

- Laisser le four refroidir.
- Enlever toutes les grilles en les tirant vers soi et en les soulevant.
- Dévisser le dôme de la lampe.
- Remplacer l'ampoule.
- Remettre le dôme et les grilles en place.

### SERVICE DE L'ENTRETIEN ET PIÈCES DE RECHANGE

Pour tout entretien ou renseignement sur les pièces de ce modèle, communiquer avec le service de l'entretien Vulcan-Hart le plus près. (Pour une liste complète de nos succursales de service de l'entretien et de pièces autorisées, visiter notre site Web à l'adresse : [www.vulcanhart.com](http://www.vulcanhart.com)).

Lors d'une demande de service, fournir les renseignements suivants : le numéro de modèle, le numéro de série, la date de fabrication et l'alimentation électrique.

## MODES DE CUISSON SPÉCIAUX

**Pain au levain** : La cuisson commence immédiatement dans le four à air pulsé. Habituellement, le pain au levain ne lève pas autant dans un four à air pulsé que dans un four conventionnel. Il faut donc laisser la pâte atteindre 2 1/2 à 3 fois son volume pour de meilleurs résultats.

**Tartes** : Pour la cuisson de tartes dans un four à air pulsé, les mettre par groupe de trois ou quatre dans une tôle de 457 x 660 mm (18 x 26 po) ou dans un moule à brioches. Ainsi, les fonds de tarte cuisent mieux, les tartes sont plus faciles à manipuler, les risques de débordement sur les tartes de grilles inférieures s'en trouvent réduits et les produits conservent leur apparence savoureuse.

## THERMOSTAT DE SÉCURITÉ

Tous les fours de la série SG sont pourvus d'un thermostat de sécurité qui contrôle la température du four pour empêcher qu'il surchauffe. Ce thermostat fonctionne de façon indépendante et interrompt automatiquement le fonctionnement du four en cas de défaillance du thermostat principal. Le cas échéant, NE PAS tenter d'y apporter quelque modification. Éteindre le four et communiquer avec le service de l'entretien Hobart le plus près.

## NETTOYAGE

**AVERTISSEMENT** : COUPER L'ALIMENTATION ÉLECTRIQUE DE L'APPAREIL ET SUIVRE LES PROCÉDURES DE VERROUILLAGE ET D'ÉTIQUETAGE.

Laisser le four refroidir avant de le nettoyer.

### Tube Snorkel

L'ouverture du tube Snorkel ne doit pas être obstruée. Si on utilise souvent du papier aluminium pour la cuisson, vérifier périodiquement qu'aucune particule d'aluminium ne se trouve dans le tube. Garder celui-ci propre en tout temps pour en assurer le bon fonctionnement. Au moins une fois par semaine, le nettoyer au récurrent à four standard. S'assurer qu'il ne reste aucun résidu de la solution de nettoyage dans le tube avant d'utiliser le four à nouveau. Aussi, il est recommandé de faire fonctionner le four à vide à 204 °C (400 °F) pendant 20 minutes avant de l'utiliser pour faire disparaître toute trace de nettoyage demeuré dans le tube.

### Nettoyage quotidien

Nettoyer les panneaux extérieurs en acier inoxydable au moyen d'un chiffon humide. Employer un détergent pour enlever les tâches tenaces (NE PAS UTILISER LA MARQUE « DAWN »). Rincer à fond et essuyer au moyen d'un chiffon doux et propre.

Nettoyer les parois en porcelaine de l'enceinte de cuisson à l'eau chaude savonneuse. Rincer à fond et essuyer au moyen d'un chiffon propre et doux.

Les crémaillères et les grilles nickelées s'enlèvent aux fins de nettoyage.

Dans le cas de tâches rebelles de récure ou de graisse qui résistent à l'eau et au savon, il peut s'avérer nécessaire d'utiliser une pâte de nettoyage abrasif (poudre à récure). Appliquer cette pâte au moyen d'un tampon en acier inoxydable ou d'une éponge en prenant soin de toujours frotter dans le sens du « grain ». Ce traitement est tout aussi efficace pour les tâches de décoloration (zones légèrement noircies par l'oxygène). Toujours frotter dans le sens des lignes du revêtement. Rincer à l'eau claire et essuyer au moyen d'un chiffon doux.

Ne pas utiliser de poudre à récure sur le hublot de la porte de four, car elle risque d'érafler ou d'embuer la vitre.

**FRITURE ET GRILLAGE AU FOUR**

PRODUIT	TEMPÉRATURE (°F)	TEMPS DE CUISSON EN MINUTES	NOMBRE DE GRILLES	RÉGLAGES D'INTENSITÉ	
				SG4/6D	SG4/6C
Bâtonnets et portions de poisson - Surgelés panés de 28 g (1 oz) - 71 à 85 oz (2 1/2 à 3 oz)	177 à 204 (350 à 400)	6 à 10	4	8 à 6	73 à 60 %
Morceaux de poulet - cuits sur le gril ou au four - 0,91 à 1,13 kg (2 à 2 1/2 lb) - 1,13 à 1,36 kg (2 1/2 à 3 lb)	191 à 218 (375 à 425) 177 à 204 (350 à 400)	8 à 15 15 à 25	4 à 5 4	8 à 6 7 à 4 6 à 4	73 à 60 % 68 à 45 % 68 à 60 % 60 à 45 %
Homards (0,45 à 0,68 kg [1 à 1 1/2 lb])	204 à 232 (400 à 450)	8 à 14	2 à 4	10 à 6	100 à 60 %
Queues de homard (surgelées, 0,23 à 0,34 kg [1/2 à 3/4 lb])	177 à 204 (350 à 400)	10 à 15	2 à 4	8 à 6	73 à 60 %
Fricadelles de boeuf - 8 par 0,45 kg (1 lb), à point à bien cuit - 6 par 0,45 kg (1 lb) - 4 par 0,45 kg (1 lb)	204 à 232 (400 à 450) 204 à 232 (400 à 450) 191 à 232 (375 à 450)	5 à 6 7 à 10 8 à 12	4 à 6 4 à 6 4 à 6	8 à 7 10 à 8 8 à 7 10	73 à 68 % 68 à 60 % 100 à 73 % 73 à 68 % 100 % 73 à 68 %

**CASSEROLES**

Plats de service - 51 à 76 mm (2 à 3 po) de profondeur - 76 à 102 mm (3 à 4 po) de profondeur	163 à 191 (325 à 375) 163 à 191 (325 à 375)	15 à 25 20 à 35	2 à 4	7 à 4	68 à 45 %
Ramequins ou plats en aluminium - Jusqu'à 38 mm (1 1/2 po) de profondeur	177 à 204 (350 à 400)	5 à 6	4 à 5	10 à 7	100 à 68 %
- Surgelés		10 à 15	2 à 4	7 à 6	68 à 60 %

**ALIMENTS DIVERS**

Pommes de terre au four - 120 par 23 kg (50 lb) - 100 par 23 kg (50 lb) - 80 par 23 kg (50 lb)	204 à 232 (400 à 450) 204 à 232 (400 à 450) 204 à 218 (400 à 425)	20 à 25 25 à 40 30 à 45	2 à 5 2 à 5 2 à 5	8 à 6 7 à 6 7 à 4	73 à 60 % 68 à 60 % 68 à 45 %
Pizzas - surgelées ou pâte précuite	218 à 246 (425 à 475)	5 à 10	4	8 à 6 6 à 4	73 à 60 % 60 à 45 %
Sandwichs au fromage fondant	204 à 218 (400 à 425)	8 à 10	4	8 à 6 7 à 4	73 à 60 % 68 à 45 %

**TEMPÉRATURES, TEMPS DE CUISSON ET INTENSITÉS RECOMMANDÉS POUR LES PÂTISSERIES (suite)**

PRODUIT	TEMPÉRATURE (°C)	TEMPS DE CUISSON EN MINUTES	NOMBRE DE GRILLES	RÉGLAGES D'INTENSITÉ	
				SG4/6D	SG4/6C
Pains au levain (Bien fermenter la pâte pour de meilleurs résultats)					
Petits pains - 28 g (1 oz)	177 à 204 (350 à 400)	5 à 10	4	6 à 4	60 à 45 %
45 à 71 g (1 1/2 à 2 1/2 oz)	177 à 204 (350 à 400)	8 à 15	4	6 à 4	60 à 45 %
Miches de pain - 0,45 kg (1 lb)	163 à 191 (325 à 375)	20 à 40	3 moules (30) 2 moules (20)	4 3	45 % 37 %
Brioche et pâtisseries danoises	163 à 191 (325 à 375)	5 à 15	4	6 à 4	60 à 45 %
Biscuits - roulés de 13 mm (1/2 po) d'épaisseur	177 à 204 (350 à 400)	5 à 15	4	6 à 4	60 à 45 %
Muffins	163 à 191 (325 à 375)	6 à 18	4	4	45 %
Pain de maïs Moule de 2,2 à 3,2 kg (5 à 7 lb) et 457 x 660 x 25 mm (18 x 26 x 1 po)	168 à 204 (335 à 400)	10 à 20	4	6 à 4	60 à 45 %
Moule de 3,6 à 9,1 kg (8 à 20 lb) et 457 x 660 x 51 mm (18 x 26 x 2 po)	168 à 204 (335 à 400)	15 à 25	4	6 à 4	60 à 45 %
Muffins à la farine de maïs	168 à 196 (335 à 385)	10 à 20	4	6 à 4	60 à 45 %

**RÉCHAUFFAGE DE PLATS CUISINÉS**

Frites surgelées	204 à 232 (400 à 450)	6 à 8	4	8 à 6	73 à 60 %
Repas rapides surgelés « TV Dinners »	177 à 204 (350 à 400)	10 à 12	4 à 5	10 à 6	100 à 60 %
Entrées surgelées (19 à 25 mm [3/4 à 1 po] d'épaisseur)	149 à 177 (300 à 350)	10 à 20	2 à 5	10 à 6	100 à 60 %
Repas surgelés (227 g [8 oz] enveloppés dans l'aluminium)	177 à 204 (350 à 400)	20 à 30	2 à 5	10	100 %

**TEMPÉRATURES, TEMPS DE CUISSON ET INTENSITÉS  
RECOMMANDÉS POUR LES PÂTISSERIES**

RÉGLAGES D'INTENSITÉ	SG4/6D	SG4/6C	PRODUIT	TEMPÉRATURE (°F)	TEMPS DE CUISSON EN MINUTES	NOMBRE DE GRILLES	RECOMMANDÉS	
							TEMPÉRATURE (°C)	TEMPS DE CUISSON EN MINUTES
			<b>Gâteaux</b> Plaque à gâteaux de 457 x 660 x 25 mm (18 x 26 x 1 po) - Poids : 2,0 à 2,7 kg (4 1/2 à 6 lb) par plaque - Poids : 2,7 à 3,4 kg (6 à 7 1/2 lb) par plaque Plaque à gâteaux de 457 x 660 x 51 mm (18 x 26 x 2 po) ou 2 plaques de 305 x 457 x 51 mm (12 x 18 x 2 po) - Poids : 4,5 à 5,4 kg (10 à 12 lb) par plaque de 457 x 660 x 51 mm (18 x 26 x 2 po) - Poids : 2,2 à 2,7 kg (5 à 6 lb) par plaque de 305 x 457 x 51 mm (12 x 18 x 2 po)					
			<b>Gâteaux des anges ou de Savoie</b> Plaques de 457 x 660 x 25 mm (18 x 26 x 1 po) - Poids : 2,2 à 2,7 kg (5 à 6 lb) par plaque					
			<b>Moules tubulaires ou à pain</b>					
			<b>Petits gâteaux</b>					
			<b>Tartes aux fruits congelés</b>					
			<b>Tartes à la crème ou à la citrouille</b>					
			<b>Tourtes aux fruits</b> 305 x 457 x 51 mm (12 x 18 x 2 po) ou 305 x 508 x 64 mm (12 x 20 x 2 1/2 po)					
			<b>Tartes meringuées</b>					
			<b>Chaussons aux fruits</b> 457 x 660 x 25 mm (18 x 26 x 1 po)					
<p><b>NOTA :</b> Tartes et tourtes aux fruits : cuire les garnitures en conserve ou pour tartes à la crème et à la citrouille dans des plaques de 457 x 660 x 25 mm (18 x 26 x 1 po).</p>								
			<b>Biscuits</b> Roulés ou aplatis					
			A la cuillère					
			<b>Carres au chocolat</b>					

REGLAGES D'INTENSITE		TEMPERATURE °C (°F)		PRODUIT
SG4/6C	SG4/6D			
100 %	10	121 (250)	10	Côtes de boeuf - prêtes à aller au four 10 kg (22 à 22 lb) Côtes de boeuf désossées - 9,1 à
100 %	10	135 (275)	10	Rôti de veau - 6,8 kg (15 lb)
100 %	10	149 (300)	10	Dindes - 6,8 à 9,1 kg (15 à 20 lb)
100 %	10	149 (300)	10	Pain de viande - 3,6 à 4,5 kg (8 à 10 lb)

### TEMPERATURES DE RÔTISSAGE

Pour déterminer le temps de cuisson approprié, utiliser un thermomètre à viande fiable et se référer aux exigences des codes de votre état, ville ou juridiction locale sur les températures de cuisson des viandes.

Le temps de cuisson et le flétrissement varient selon la température de rôtissage, la coupe et la catégorie de viande ainsi que le degré de cuisson. À une même température, les petits morceaux de viande cuisent en général plus rapidement que les gros morceaux.

Les plats à rôtir ne doivent pas excéder la profondeur requise pour contenir la graisse, soit de 51 à 64 mm (2 à 2 1/2 po) en général.

Placer un plat rempli d'eau d'environ 305 x 508 x 25 mm (12 x 20 x 1 po) dans le four. L'eau dégage de l'humidité et réduit le flétrissement. En ajouter pendant le rôtissage, au besoin.

Selon le ministère de l'Agriculture des États-Unis et l'American Meat Institute, les températures de rôtissage doivent varier idéalement entre 107 et 163 °C (225 et 325 °F) pour le boeuf, l'agneau, la volaille et le jambon et entre 163 et 177 °C (325 et 350 °F) pour le porc.

### TEMPERATURES, TEMPS DE CUISSON ET INTENSITÉS RECOMMANDÉES POUR LE RÔTISSAGE

Les fours de la série SG ne requièrent aucune recette spéciale. Utiliser n'importe quelle recette commerciale en prenant soin cependant de réduire la température de cuisson.

Les températures, le temps de cuisson, le nombre de grilles et le réglage de l'intensité sont suggérés à titre d'exemples seulement. Les adapter aux recettes, aux ingrédients, à l'installation et aux goûts personnels.

### CONSEILS D'UTILISATION

- Éteindre le four lorsqu'il se sert pas.
- Modifier les menus et horaires de cuisson pour l'utilisation optimale de l'appareil.
- Réduire le réglage du thermostat pendant les périodes tranquilles puisque les appareils au gaz chauffent rapidement.
- Préchauffer l'appareil à la température de cuisson requise seulement et non à une température supérieure.
- Ne pas ouvrir la porte du four sauf si cela s'avère absolument nécessaire. Observer la cuisson par le hublot.
- Garder la porte et les surfaces environnantes propres et exemptes de toute particule de nourriture.
- Tout corps qui empêche la porte de fermer complètement entravera inévitablement l'efficacité du four.

### CONSERVATION DE L'ÉNERGIE

## ARRANGEMENT DES GRILLES

**CAPACITÉ** - Tous les modèles sont pourvus de cinq grilles, mais peuvent cuire un maximum de six grilles d'aliments par four. La crémalière à onze positions permet une plus grande variété d'utilisations du four.

On recommande les arrangements de grilles énumérés ci-dessous. Les positions des grilles dans le four sont numérotées en ordre, à partir du bas (Fig. 6).

### Arrangement n° 1

Un maximum de cinq grilles aux positions 2, 4, 6, 8 et 10 pour les grillades, la cuisson de biscuits ou la remise en température de repas surgelés. Cet arrangement est également recommandé pour la cuisson sur des tôles de produits ne dépassant pas 64 mm (2 1/2 po) de hauteur.

### Arrangement n° 2

Quatre grilles aux positions 1, 4, 7 et 10 pour la cuisson en général de plaques à pâtisseries, moules à muffins, moules à tarte ou à gâteau et bols à pudding de 89 mm (3 1/2 po) de profondeur et dont la hauteur du produit ne dépasse pas 102 mm (4 po). Cet arrangement est également possible lors de l'utilisation de cocottes, de plats à rôtir ou de plats de services alimentaires de 305 x 508 x 64 mm (12 x 20 x 2 1/2 po) de la série 200.

### Arrangement n° 3

Trois grilles aux positions 1, 5 et 9 pour la cuisson de pains, de gâteaux dans des moules à pain ou à cheminée et de tartes meringuées élevées. Cet arrangement est également possible pour l'utilisation de cocottes, de plats à rôtir et de casseroles jusqu'à 140 cm (5 1/2 po) de profondeur dont les produits ne dépassent pas 152 mm (6 po) de hauteur.

### Arrangement n° 4

Deux grilles aux positions 1 et 6 pour le rôtissage de dindes ou de rôtis ne dépassant pas 178 mm (7 po) de hauteur.

Lorsqu'une grille se trouve à la position n° 1, il y a de la place pour un bac d'eau (se reporter au guide de cuisson plus loin).

Dans certaines cuisines où l'on procède régulièrement à la cuisson de différents produits en même temps, on a recours à divers arrangements de grilles choisis en fonction des besoins.

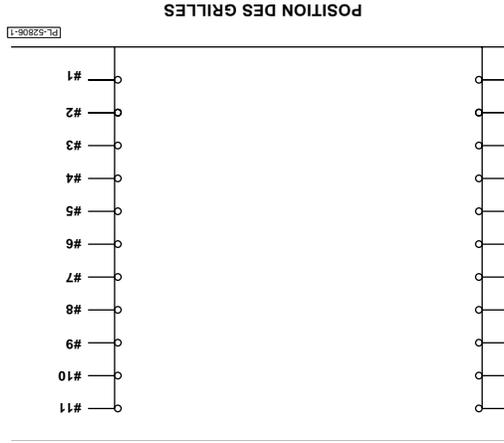
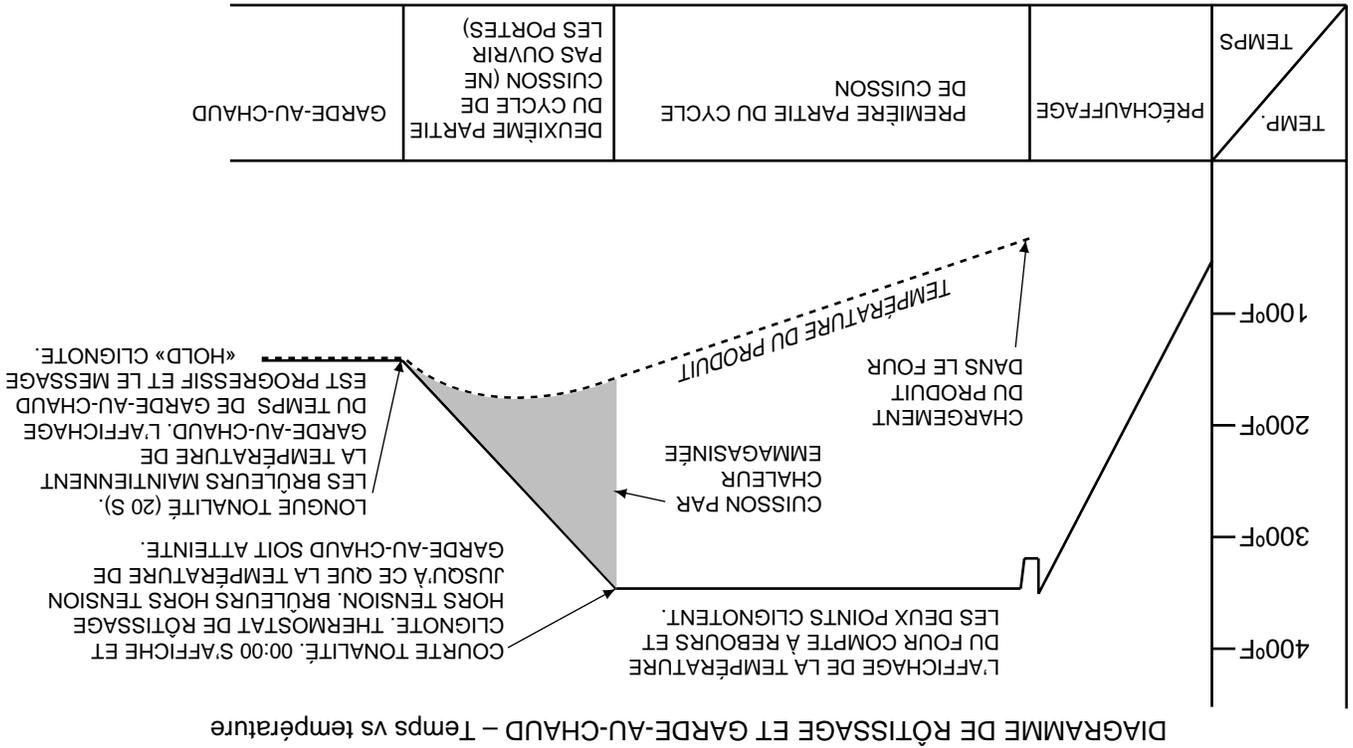


Fig. 6

PL-51607-1



En mode RÔTISSAGE ET GARDE-AU-CHAUD, la cuisson s'effectue en deux parties. Au cours de la première, le thermostat de rôtissage régule la température du four le temps réglé au moyen de la minuterie. Lorsque ce temps est écoulé, c'est-à-dire que l'affichage indique 00:00, la deuxième partie du cycle de cuisson s'amorce. Au cours de cette portion, les brûleurs sont éteints et la température de l'enceinte diminue jusqu'à la température de garde-au-chaud. Laisser les portes fermées pendant cette deuxième partie du cycle.

Lorsque la température de garde-au-chaud est atteinte, la cuisson est terminée. L'affichage du temps de garde-au-chaud est progressif et le message « Hold » clignote. La température de garde-au-chaud est maintenue jusqu'à ce que ce que l'on éteigne le four.

### MODE RÔTISSAGE ET GARDE-AU-CHAUD

- Appuyer sur la touche ROAST & HOLD pour sélectionner le mode RÔTISSAGE ET GARDE-AU-CHAUD.
- Régler la première étape de température et de temps de cuisson apparaissant sous le titre : RÉGLAGE MANUEL DE LA TEMPÉRATURE ET DU TEMPS DE CUISSON. Appuyer sur la touche START / STOP (marche-arrêt) pour commencer la cuisson.
- La température en mode GARDE-AU-CHAUD est pré-réglée par la commande de l'ordinateur à 66 °C (150 °F).
- La BASSE VITESSE DU VENTILATEUR est présente pendant le cycle RÔTISSAGE ET GARDE-AU-CHAUD. Utiliser la touche R & H (rôtissage et garde-au-chaud) pour sélectionner la BASSE VITESSE DU VENTILATEUR.

### RÉGLAGE DU FOUR EN MODE RÔTISSAGE ET GARDE-AU-CHAUD

Ouvrir la porte pour ajouter un autre produit interrompt toutes les fonctions de minutage jusqu'à la fermeture de la porte et au redémarrage de la minuterie. Par exemple, si un temps de produit est réduit d'une minute et que la porte est ouverte pendant 30 secondes puis refermée, la minuterie indique encore 1 minute.

### Porte et minuterie

Pour annuler un cycle de cuisson qui aurait démarré par erreur, appuyer et maintenir enfoncée la touche de grille à annuler, tout en appuyant en même temps sur la touche START / STOP (marche-arrêt).

À la fin d'un cycle de cuisson, l'avertisseur retentit. Pour l'éteindre et terminer un cycle de cuisson d'un article de menu, appuyer sur la touche START / STOP (marche-arrêt). Pour éteindre l'avertisseur et terminer un cycle de cuisson d'un numéro de grille, appuyer sur la touche de grille, appuyer sur la touche de numéro de grille.

### Fin d'un cycle de cuisson

- Appuyer et maintenir enfoncée la touche de température pendant 3 secondes pour afficher la température réelle du four.

### Affichage de la température réelle du four

- Pour entrer en mode programmation, appuyer et maintenir enfoncées les touches avec flèches jusqu'à ce que l'afficheur indique PROG.
- Sélectionner un article de menu à programmer (1 à 6); l'afficheur indique *Time* pour le TEMPS.
- ❖ Sélectionner ensuite le numéro de grille (1 à 5). [t 1] indique la grille #1; [t 2] la grille #2; t 5 la grille #5. Se servir des touches avec flèches pour augmenter ou diminuer le TEMPS DE CUISSON pour tout numéro de grille.
- Appuyer sur la touche START / STOP (marche-arrêt); l'afficheur indique LOC. Appuyer une seconde fois sur la touche START / STOP (marche-arrêt) pour sauvegarder le menu TEMPS DE CUISSON du numéro de grille.
- 5. Pour quitter le mode programmation, appuyer deux fois sur la touche START / STOP (marche-arrêt).
- Enlever le produit, fermer la porte. Répéter les étapes de ❖ jusqu'à ce que tous les numéros de grilles aient été programmés.

### Démarrage d'un cycle minuité en utilisant un menu individuel programmé et un temps de cuisson pour chaque numéro de grille

- Lorsque la température réglée est atteinte, ouvrir la porte; l'afficheur indique *door* (porte). Placer le ou les produits dans le four.
- Fermer la porte. L'affichage retourne à la température réglée ou à la *BARRE CROISSANTE*.
- Sélectionner l'article de menu (une fois pour Primaire ou deux fois pour Secondaire) et le numéro de grille pour sélectionner le menu et le temps de cuisson du numéro de grille. Pour utiliser simultanément les temps de cuisson, sélectionner un autre menu et numéro de grille.
- La minuterie sélectionne le numéro de grille ainsi que le temps de cuisson le plus court et le compte à rebours indique 00:00.
- L'avertisseur retentit et le numéro de grille clignote. Pour éteindre l'avertisseur, appuyer sur le numéro de grille qui clignote.
- Ouvrir la porte; l'afficheur indique *door* (porte); enlever le produit cuit; fermer la porte.
- ❖ Le prochain temps de cuisson le plus court s'affiche, le numéro de grille clignote et le compte à rebours indique 00:00. L'avertisseur retentit. Appuyer sur le numéro de grille qui clignote. Ouvrir la porte; l'afficheur indique *door* (porte).
- Enlever le produit, fermer la porte. Répéter les étapes de ❖ jusqu'à ce que tous les numéros de grilles aient été programmés.

### Démarrage d'un cycle minuité pour toutes les grilles

Au démarrage, l'afficheur indiquera une *BARRE CROISSANTE*. Lorsque la température atteinte la température de cuisson, la température réglée s'affiche. Le voyant READY (prêt) est allumé, le voyant HEAT (chauffage) s'éteint et il est temps de sélectionner le temps de cuisson, le temps de menu ou le temps de cuisson du numéro de grille.

- Appuyer sur la touche SET (réglage). Appuyer sur la touche TEMPÉRATURE; l'afficheur indique *StPt*. Se servir des touches avec flèches pour augmenter et diminuer la température. Pour sauvegarder, appuyer de nouveau sur la touche SET (réglage).

### Toujours régler la température avant de régler le temps

- Appuyer sur la touche SET (réglage). Appuyer sur la touche TEMPÉRATURE; l'afficheur indique *StPt*. Se servir des touches avec flèches pour augmenter et diminuer la température. Pour sauvegarder, appuyer de nouveau sur la touche SET (réglage).
- 5. Pour quitter le mode programmation, appuyer deux fois sur la touche START / STOP (marche-arrêt).
- Appuyer sur la touche START / STOP (marche-arrêt); l'afficheur indique LOC. Appuyer une seconde fois sur la touche START / STOP (marche-arrêt) pour sauvegarder le menu TEMPS DE CUISSON du numéro de grille.

### Programmation du temps de cuisson pour un numéro de grille individuel d'un article de menu

## RÉGLAGE MANUEL DE LA TEMPÉRATURE ET DU TEMPS DE CUISSON

### Pour régler le temps de cuisson

- Appuyer sur la touche SET (réglage). L'afficheur indique *Time* pour le TEMPS.
- Se servir des touches avec flèches pour augmenter ou diminuer le temps de cuisson affiché (H:min).
- Appuyer de nouveau sur la touche SET pour sauvegarder le réglage du temps dans l'ordinateur.

### Pour régler la température

- Appuyer sur la touche SET (réglage). Appuyer sur la touche TEMPÉRATURE; l'afficheur indique *Temp* pour la température de cuisson.
- Se servir des touches avec flèches pour augmenter ou diminuer la valeur de la température affichée.
- Appuyer de nouveau sur la touche SET (réglage) pour sauvegarder la température de cuisson dans l'ordinateur.

### Pour régler le niveau de puissance

- Appuyer sur la touche SET (réglage). Appuyer sur la touche %.
- Se servir des touches avec flèches pour augmenter ou diminuer la valeur du niveau de puissance.
- Appuyer de nouveau sur la touche SET (réglage) pour sauvegarder la valeur du niveau de puissance dans l'ordinateur.

### Pour commencer la cuisson

- Appuyer sur la touche START / STOP (marche-arrêt).
- Le compte à rebours du temps de cuisson manuel indique 00:00. L'afficheur indique [H:Min] si plus d'une heure; [min:sec] si moins d'une heure.
- L'avertisseur réentend. Pour l'éteindre, appuyer de nouveau sur la touche START / STOP (marche-arrêt).
- \* La commande retient les réglages manuels pour le temps de cuisson, la température et le niveau de puissance.

## PROGRAMMATION DU TEMPS DE CUISSON POUR ARTICLES DE MENU ET NUMÉROS DE GRILLES

Les pré-réglages en usine et les temps de cuisson programmables sont indiqués ci-dessous :

VALEURS PROGRAMMABLES					ARTICLES DE MENU													
1/2 Primaire	1	10 min																
1/2 Secondaire	2	15 min																
3/4 Primaire	3	20 min																
3/4 Secondaire	4	25 min																
5/6 Primaire	5	30 min																
5/6 Secondaire	6	35 min																

Le voyant Primaire pour le menu 1 / 2 sélectionne Articles de menu 1 (Temps de cuisson pré-réglé en usine = 10 minutes). Le voyant Secondaire pour le menu 1/2 sélectionne Articles de menu 2 (Temps de cuisson pré-réglé en usine = 15 minutes). Même chose pour les touches de menu 3 / 4 ou 5 / 6. Le temps de cuisson pour tout article de menu peut être changé en utilisant la procédure ci-dessous. Les temps de cuisson des grilles peuvent être programmés si on le désire, mais ne sont pas requis.

### Changement du réglage du temps de cuisson pour tout article de menu (1 à 6)

- Pour entrer en mode programmation, appuyer et maintenir enfoncées les touches avec flèches jusqu'à ce que l'afficheur indique *Prog*.
- Sélectionner l'article de menu à programmer (1 à 6). L'afficheur indique *Time* pour le TEMPS. Se servir des touches avec flèches pour augmenter ou diminuer le TEMPS DE CUISSON d'un article de menu. Répéter cette étape pour tous les autres articles de menu.
- Appuyer sur la touche START / STOP (marche-arrêt); l'afficheur indique LOC. Appuyer une seconde fois sur la touche START / STOP (arrêt) pour sauvegarder le TEMPS DE CUISSON d'un article de menu.
- Appuyer une fois sur la touche START / STOP (marche-arrêt) pour commencer la cuisson (avec le temps de cuisson d'un article de menu).
- Appuyer une fois sur la touche START / STOP (arrêt) pour quitter, appuyer une seconde fois sur la touche START / STOP (marche-arrêt).

Affiche toujours [H:Min] lorsqu'on règle le temps. Affiche [H:Min] si le compte à rebours du temps est plus d'une heure. Affiche [Min:Sec] si le compte à rebours du temps est moins d'une heure. Affiche la température en °C (°F).	
Indique que le four est en mode RÔTISSEGE ET GARDE-AU-CHAUD.	
Indique que le four est préchauffé et prêt pour la cuisson.	
Indique que le four préchauffe.	
Indique les articles de menu 1, 3 ou 5.	
Indique les articles de menu 2, 4 ou 6.	
Flèche en haut pour augmenter ou en bas pour diminuer un temps ou une valeur de température affichés (si les touches de flèches sont allumées).	
Règle le degré de chaleur du four ou le niveau de puissance de 20 à 100 %.	
TEMPÉRATURE : Utiliser avec SET (réglage) pour régler la température du four.	
RÉGLAGE : Utiliser avec le temps ou la température.	
TEMPS : Utiliser avec RÉGLAGE pour régler l'heure manuellement.	
Choisit le mode RÔTISSEGE ET GARDE-AU-CHAUD; sélectionne aussi la basse vitesse du ventilateur.	
Appuyer une fois pour mettre en marche et une seconde fois pour arrêter.	
Choisir le temps de cuisson du menu. Appuyer une fois pour les articles de menu primaire (1, 3 ou 5). Appuyer une seconde fois pour les articles de menu secondaire (2, 4 ou 6). Voir page suivante.	
Les touches de grille sélectionnent un menu individuel et le temps de cuisson pour un numéro de grille - une fois qu'il est programmé.	

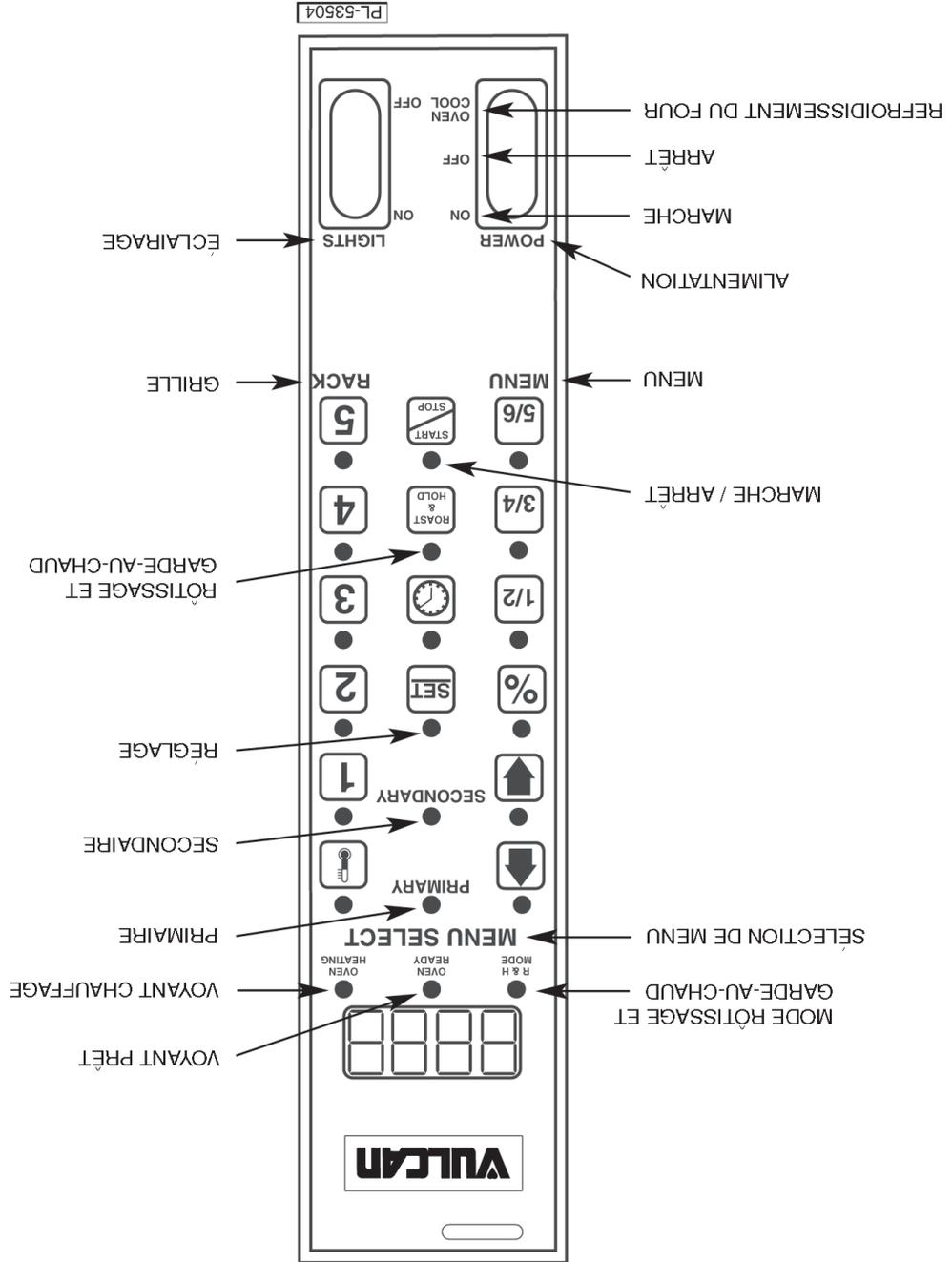


Fig. 5

### À la fin de la journée

1. Mettre l'interrupteur principal à OVEN COOL (refroidissement du four). Laisser les portes entrouvertes pendant que le ventilateur fonctionne pour accélérer le refroidissement.

2. Lorsque le four est suffisamment froid, mettre l'interrupteur principal à OFF (arrêt).

3. Fermer le robinet de gaz derrière le panneau et nettoyer le four.

4. Laisser la porte ouverte durant la nuit ou lorsque le four ne fonctionne pas pour une période de temps prolongée.

### Arrêt prolongé

Reprendre les étapes 1 à 3. Débrancher le four et fermer le robinet de gaz manuel.

1. Ouvrir les portes et déposer le produit dans le four. Placer les bacs au centre des grilles. Fermer les portes.
2. Régler la commande de puissance à la cuisson désirée.
3. Régler la minuterie. Lorsque le temps est écoulé, régler la minuterie à OFF (arrêt) pour éteindre l'avertisseur.
4. Lorsque le produit est cuit, ouvrir les portes et le sortir du four avec précaution. Essuyer tout débordement.

### Cuisson

7. Préparer les aliments et les déposer dans des bacs appropriés. Le voyant blanc CHAUFFAGE s'éteint lorsque le four a atteint la température de préchauffage désirée.
6. Régler le thermostat à la température désirée. Le voyant CHAUFFAGE s'allume et demeure allumé jusqu'à ce que le four atteigne la température désirée (de 10 à 15 minutes environ pour les réglages de 149 à 204 °C [300 à 400 °F]). Se reporter aux GUIDES DE CUISSON pour les temps et températures de cuisson de divers aliments ou plats.
5. Régler l'interrupteur de ventilateur à deux vitesses au réglage désiré.
4. Régler le commutateur de puissance à 10.
3. Mettre l'interrupteur principal à ON (marche). Le voyant ambre MARCHÉ s'allume, indiquant que le four est sous tension.
2. S'assurer que les portes sont fermées.
1. Choisir l'arrangement des grilles approprié au produit (se reporter à la section ARRANGEMENT DES GRILLES).

### Préchauffage

## UTILISATION DES FOURS SG4D ET SG6D

- Si le four ne s'allume pas après trois tentatives, fermer le robinet de gaz principal et communiquer avec un service de l'entretien autorisé.
5. Attendre cinq minutes avant de reprendre les étapes 1 à 4.
  4. Si le four refuse de s'allumer, le voyant rouge DÉFAILLANCE ALLUMAGE s'allume et demeure allumé. Mettre l'interrupteur principal à OFF (arrêt). Couper l'alimentation en gaz.
  3. Mettre l'interrupteur principal à ON (marche) et régler le thermostat à la température la plus élevée. Les voyants MARCHÉ et CHAUFFAGE devraient s'allumer. Si le voyant CHAUFFAGE ne s'allume pas, s'assurer que les portes sont bien fermées.
  2. Ouvrir le robinet de commande du gaz situé derrière la petite porte du panneau de commande inférieur.
  1. Ouvrir le robinet de gaz principal.

## ALLUMAGE DES FOURS SG4D ET SG6D

1. Au moyen d'un chiffon propre et humide, nettoyer les parois de l'enceinte de cuisson y compris les grilles.
2. Fermer les portes du four, mettre l'interrupteur principal à ON (marche), régler le thermostat à 149 °C (300 °F) et faire fonctionner le four de six à huit heures. Éteindre le four par l'interrupteur principal une fois le cycle terminé.
- Avant d'utiliser le four pour la première fois, le faire chauffer jusqu'à ce que toutes les odeurs de matériaux neufs se soient dissipées.

### AVANT UNE PREMIÈRE UTILISATION

- Interrupteur d'éclairage** — Commande l'éclairage du four.
- Interrupteur de ventilateur à deux vitesses** — Permet le réglage de la vitesse de l'air dans le four.
- Minuterie de 1 heure** — Permet le réglage du temps de cuisson. Un avertisseur émet un signal continu lorsque le temps est écoulé, mais le four ne s'éteint pas. Régler la minuterie à OFF (arrêt) pour éteindre l'avertisseur et lorsque le four ne sert pas.
- Réglage** —
- | Réglage | Puissance (%) |
|---------|---------------|
| 1       | 22            |
| 2       | 28            |
| 3       | 37            |
| 4       | 45            |
| 5       | 53            |
| 6       | 60            |
| 7       | 68            |
| 8       | 73            |
| 9       | 77            |
| 10      | 100           |
- Commutateur de puissance** — Un potentiomètre permettant de régler le débit de chaleur de 22 à 100 %.
- Thermostat** — Commande la température du four pendant la cuisson.
- ALLUMAGE (rouge)** — S'allume si le brûleur refuse de s'allumer. Clignote à l'allumage du four.
- Voyant DÉFAILLANCE** — S'allume et s'éteint selon que le brûleur s'allume ou s'éteint.
- Voyant CHAUFFAGE (blanc)** — S'allume lorsque l'interrupteur principal est à la position ON (marche).
- Voyant MARCHÉ (ambre)** — S'allume lorsque l'interrupteur principal est à la position ON (marche).  
sont entrouvertes en vue d'accélérer le refroidissement du four.
- Interrupteur principal** — ON (marche) — pour la mise sous tension des circuits de commande du four.  
OFF (arrêt) — pour la mise hors tension des circuits de commande du four.  
OVEN COOL — permet le fonctionnement du ventilateur lorsque les portes sont entrouvertes en vue d'accélérer le refroidissement du four.

# FONCTIONNEMENT

**AVERTISSEMENT :** LE FOUR ET SES COMPOSANTS SONT CHAUDS. EXERCER UNE EXTRÊME PRUDENCE LORS DE SON UTILISATION OU NETTOYAGE.

COMMANDES DES MODELES SG4D ET SG6D (Fig. 4)

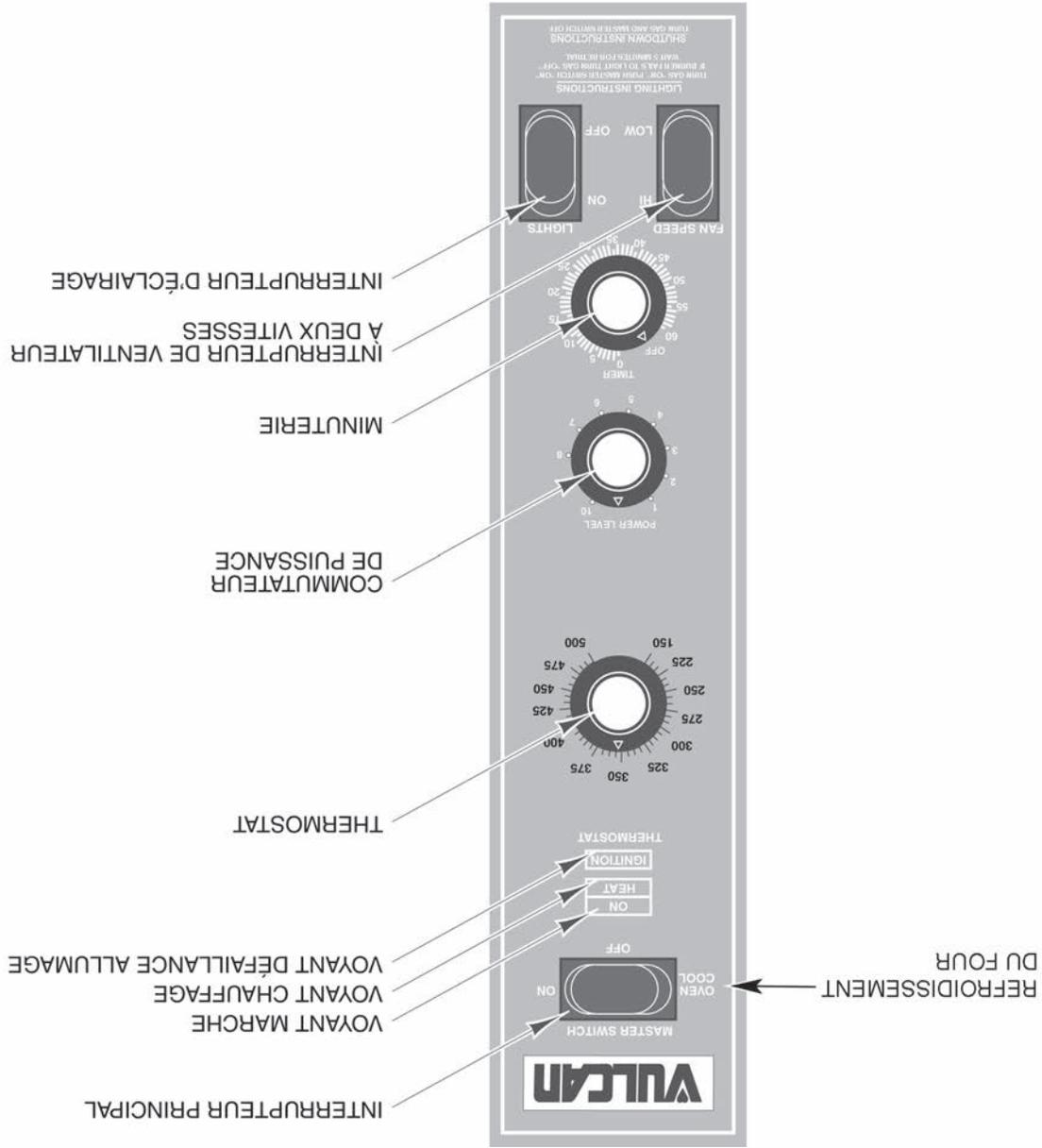


Fig. 4

## SYSTÈME D'ÉVACUATION

**NE PAS** obstruer le débit des gaz brûlés dans le conduit d'évacuation à l'arrière de l'appareil. On recommande l'évacuation des gaz brûlés à l'extérieur de l'immeuble au moyen d'une hotte de ventilation installée par un personnel qualifié.

Le four peut aussi être pourvu d'un coupe-tirage antirefoulement en option qu'on doit se procurer auprès du fabricant du four et qui doit aussi permettre l'évacuation des gaz brûlés à l'extérieur de l'immeuble, faute de quoi toutes les certifications et les garanties seront annulées. Raccorder le coupe-tirage (si le four en est pourvu d'un) à conduit d'évacuation de type B.

Maintenir un dégagement minimum de 457 mm (18 po) entre le conduit d'évacuation de l'appareil et les filtres de la hotte.

Les informations sur la construction et l'installation des hottes de ventilation sont comprises dans la norme NFPA n° 96 (dernière édition) sur l'installation d'équipement pour la dispersion des vapeurs chargées de graisse et de la fumée provenant des appareils de cuisson commerciaux dont on peut se procurer un exemplaire auprès de la National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

## BRANCHEMENT DU GAZ

Les raccords d'alimentation de la conduite de gaz et la pâte à joints de tuyaux doivent résister à l'action du gaz propane.

L'entrée de gaz se trouve à l'arrière du four. Conformément aux exigences des codes, installer un robinet d'arrêt dans la conduite de gaz en amont du four.

Raccorder la conduite de gaz à l'appareil après son nivelage. La canalisation de gaz doit être composée d'un tuyau de fonte d'au moins 19 mm (3/4 po). S'assurer que les tuyaux sont propres et qu'ils ne comportent aucun corps étranger ni trace de saleté ou de pâte à joints.

Le four est muni d'orifices fixes pré-réglés selon l'altitude à laquelle il se trouve.

Il est aussi pourvu d'un régulateur intégré à la vanne électromagnétique de gaz et ne requiert l'ajout d'aucun régulateur externe.

Les régulateurs de pression sont pré-réglés à une pression de 0,87 kPa (3,5 po de colonne d'eau) pour le gaz naturel et de 2,49 kPa (10 po de colonne d'eau) pour le gaz propane.

**AVERTISSEMENT :** AVANT DE PROCÉDER À L'ALLUMAGE, FAIRE CIRCULER DE L'EAU SAVONNEUSE DANS TOUS LES JOINTS DE LA CONDUITE DE GAZ POUR S'ASSURER QU'ILS NE PRÉSENTENT AUCUNE FUITE. NE PAS SE SERVIR D'UNE FLAMME NUE.

Après avoir enrayé toute possibilité de fuite, purger toutes les conduites de gaz pour évacuer tout l'air qui pourrait s'y trouver.

## ESSAIS DE LA CANALISATION DE GAZ

Si la pression de la canalisation de gaz est supérieure à 3,45 kPa (1/2 psig) lors d'essais de pression, débrancher le four et son robinet d'arrêt de la conduite de gaz.

Lorsque la pression d'essai est égale ou inférieure à 3,45 kPa (1/2 psig), isoler l'appareil de la canalisation de gaz en fermant son robinet manuel.

## RÉGLAGES

### Réglage des ouvertures d'approvisionnement d'air

Bien que les ouvertures d'approvisionnement d'air du brûleur principal soient réglées en usine, les vérifier au moment de l'installation. Un trop grand approvisionnement d'air fait décoller la flamme du brûleur s'il est froid ou risque de provoquer une rentrée de flamme pendant le fonctionnement normal du four, particulièrement avec l'utilisation de gaz propane.

Un approvisionnement d'air insuffisant donnera une flamme à bout jaune et provoquera une accumulation de carbone dans la chambre du brûleur et les tubes échangeurs de chaleur.

Communiquer avec le service de l'entrelien Vulcan-Hart le plus près au besoin.

**NIVELAGE**

S'assurer que les grilles du four sont de niveau une fois celui-ci installé. Dans le cas d'un four sur pattes, régler les pieds pour niveler l'appareil d'avant vers l'arrière et latéralement.

**RACCORDEMENT ÉLECTRIQUE**

**AVERTISSEMENT :** LE RACCORDEMENT ÉLECTRIQUE ET LA MISE À LA TERRE DOIVENT ÊTRE CONFORMES AUX NORMES CONCERNÉES DU CODE CANADIEN DE L'ÉLECTRICITÉ OU DE TOUT AUTRE CODE D'ÉLECTRICITÉ EN VIGUEUR.

**AVERTISSEMENT :** LE CORDON D'ALIMENTATION EST POURVU D'UNE FICHE À TROIS BROCHES DONT UNE MISE À LA TERRE. LA PRISE DANS LAQUELLE ELLE EST BRANCHÉE DOIT ÊTRE CORRECTEMENT MISE À LA TERRE. SI ELLE NE L'EST PAS, COMMUNIQUER AVEC UN ÉLECTRICIEN. NE PAS ENLEVER LA BROCHE DE MISE À LA TERRE.

Se référer à la section Codes d'installation et Normes de ce manuel.

Se reporter au schéma de câblage apposé à l'intérieur du panneau de droite.

**CARACTÉRISTIQUES ÉLECTRIQUES ET DE GAZ**

DONNÉES ÉLECTRIQUES	DONNÉES DE GAZ		DÉBIT (BTU/h)	MODÈLE
	PRESSION D'ALIMENTATION	INTENSITÉ (A)		
120 V	Propane	Naturel	Propane	Naturel
9	2,49 kPa (10 po de colonne d'eau)	0,87 kPa (3,5 po de colonne d'eau)	60 000	SG4D/C SG6D/C
18	2,49 kPa (10 po de colonne d'eau)	0,87 kPa (3,5 po de colonne d'eau)	120 000	SG44D/C SG66D/C

## SUPERPOSITION DE FOURS

Déballez le four et le nécessaire de superposition. Couchez le four inférieur sur le dos en prenant soin de ne pas appuyer celui-ci sur des entretoises appropriées (51 x 102 mm [2 x 4 po] par exemple) pour ne pas endommager le raccord. Fixez les quatre pattes au four au moyen des 24 boulons et rondelles-freins fournis (6 par patte).

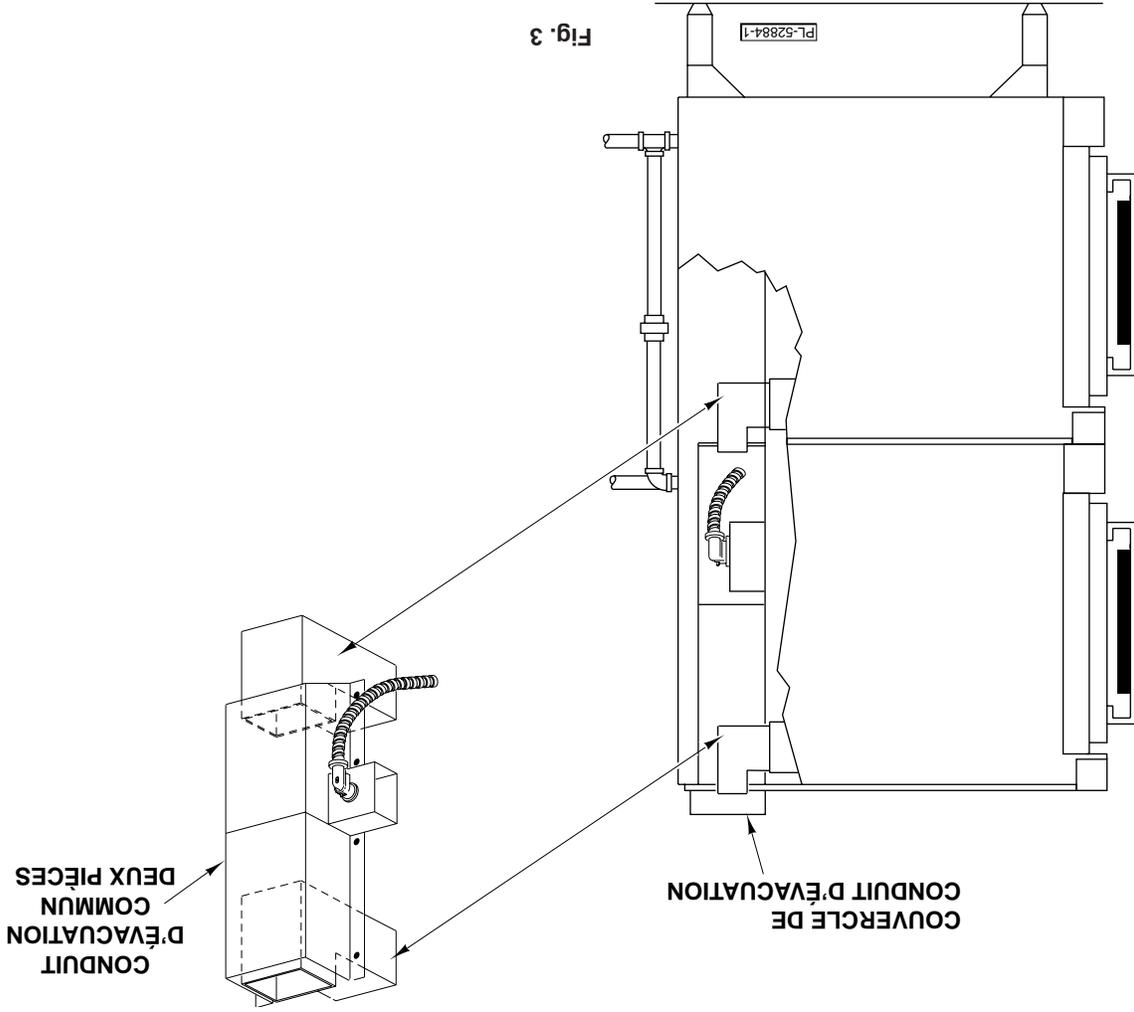
Déposer le four inférieur (avec pattes et roulettes) sur le plancher et enlever les deux débouchures de 11 mm (7/16 po) de diamètre de chaque côté du couvercle supérieur. Enlever et jeter le couvercle du conduit d'évacuation.

Mettre le four (avec pattes et roulettes) à l'emplacement prévu et y déposer le four supérieur en prenant soin de l'aligner avec les goujons de positionnement.

Enlever le panneau arrière du four SUPÉRIEUR. Installer le conduit d'évacuation commun deux pièces (Fig. 3) au moyen des quatre vis fournies. Remettre le panneau arrière du four en place.

Raccorder la tuyauterie entre les fours supérieur et inférieur. La pâte à joints de tuyaux doit convenir au type de gaz utilisé (naturel ou propane).

Le robinet de gaz manuel situé derrière la petite porte du panneau inférieur doit demeurer fermé tant que tous les raccordements électriques n'auront pas été faits et les fours vérifiés ou utilisés.



## Assemblage des pattes

Poser les pattes en dessous du four. Coucher le four sur le dos en prenant soin de ne pas l'égratigner ou l'endommager. Puisque le raccord de la conduite d'alimentation en gaz fait saillie au dos du four, appuyer celui-ci sur des entretoises appropriées (51 x 102 mm [2 x 4 po] par exemple) pour ne pas endommager le raccord.

Fixer les quatre pattes en dessous du four au moyen des 24 boulons et rondelles-freins (6 par patte). Relever celui-ci avec soin.

## Assemblage du four sur le support

Fixer les quatre pattes en dessous du four au moyen des 24 boulons et rondelles-freins (6 par patte). Relever celui-ci avec soin.

Fixer la tablette aux pattes au moyen de 8 boulons et rondelles-freins (2 par patte).

Installer les guides-crémallières aux endroits désirés sur la tablette (pour bac ou plaque), puis les crémallières dans les guides. Fixer les crémallières aux pattes après avoir enlevé un des boulons du centre et remettre celui-ci en place par les trous d'extrémité de la crémallière (Fig. 2).

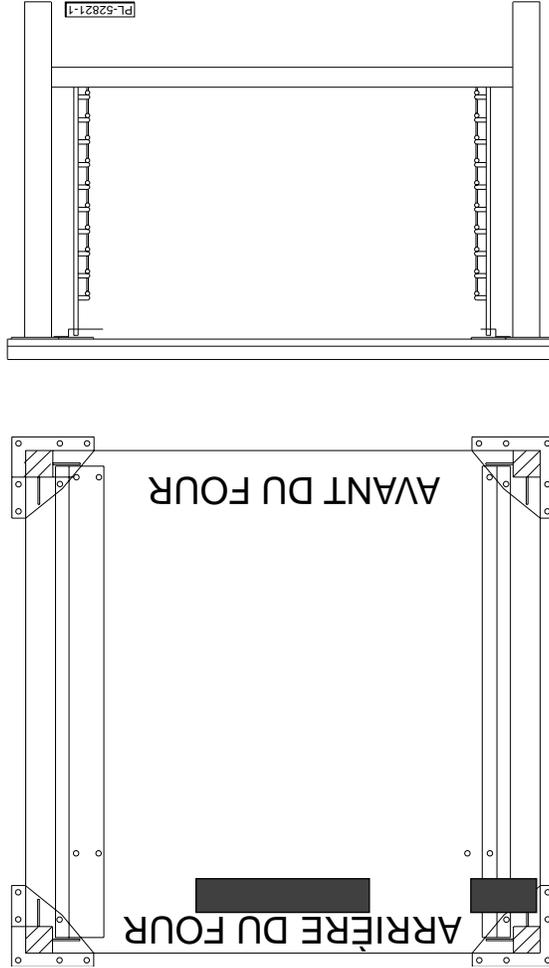


Fig. 2

## CODES D'INSTALLATION ET NORMES

L'installation des fours Vulcan doit se faire selon les codes suivants :

1. Codes locaux.
  2. Norme ANSI-Z223.1 (dernière édition) du National Fuel Gas Code dont on peut se procurer un exemplaire auprès de l'American Gas Association, 1515 Wilson Blvd., Arlington, VA 22209.
  3. Norme ANSI/NFPA n° 70 (dernière édition) du National Electrical Code dont on peut se procurer un exemplaire auprès de la National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
- Au Canada :**
1. Codes locaux.
  2. Code d'installation des appareils fonctionnant au gaz naturel et propane CSA B149.1.
  3. Code canadien de l'électricité CSA C22.1 dont on peut se procurer un exemplaire à l'Association canadienne de normalisation, 5060 Spectrum Way, bureau 100, Mississauga, Ontario, Canada L4W 5N6.

## INSTALLATION DU FOUR DE BASE

Installer le four de base sur des pattes, des roulettes ou un support modulaire. Il n'est pas recommandé de l'installer sur une base en béton ou un support qui restreint la circulation de l'air en dessous du four, faute de quoi la garantie sera annulée.

### Appareils sur roulettes

Les appareils sur roulettes doivent être munis d'un tuyau de raccordement flexible (non fourni par Vulcan) conforme à la norme ANSI Z21.69 • CSA 6.16 sur les tuyaux de raccordement des appareils au gaz mobiles et d'un raccord à débranchement rapide satisfaisant les exigences de la norme ANSI Z21.69 • CSA 6.16 sur les dispositifs à débranchement rapide d'appareils au gaz (normes ANSI-Z21.41 • CSA 6.9 pour les États-Unis). En plus, munir le four d'une chaîne de retenue pour la conduite d'alimentation en gaz de façon à limiter le mouvement de l'appareil sans devoir compter sur le tuyau de raccordement ou le raccord à débranchement rapide, ni même sur la tuyauterie pour le garder immobile. Fixer la chaîne de retenue à l'arrière du four (Fig. 1).

NOTA: Si cet appareil est installé sur des roulettes, utiliser les roulettes fournis ainsi qu'un connecteur conforme à la norme ANSI Z21.69 • CSA 6.16 et un raccord à débranchement rapide conforme à la norme ANSI Z21.4 • CSA 6.9. Il doit aussi être installé avec un dispositif de retenue de façon à éviter une transmission de tension vers le connecteur, selon les instructions du fabricant.

Le point de raccordement du dispositif de retenue est situé derrière l'appareil tel qu'illustré à la Fig. 1.

Fermer le robinet de gaz principal avant de détacher le dispositif de retenue. Le rattachement et remettre l'appareil à sa position normale avant d'ouvrir le robinet de gaz principal.

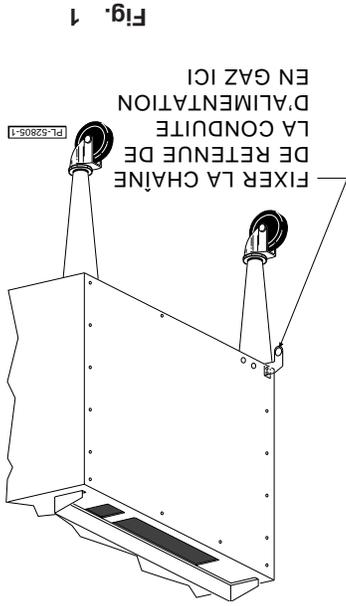


Fig. 1

## INSTALLATION

Avant de procéder à l'installation, s'assurer que l'alimentation électrique de l'immeuble et le type de gaz (naturel ou propane) correspondent aux spécifications de la plaque signalétique apposée derrière le panneau de garnissage supérieur sur le devant du four. S'ils ne correspondent pas, ne pas installer l'appareil. Communiquer sans tarder avec votre détaillant Vulcan-Hart.

### DÉBALLAGE

Avant de quitter l'usine, cet appareil a été inspecté soigneusement. Le transporteur est entièrement responsable de la marchandise jusqu'à la livraison. Immédiatement après avoir déballé l'appareil, vérifier s'il n'a pas été endommagé lors du transport. En cas de dommages, conserver le matériel d'emballage et aviser le transporteur dans les 15 jours suivant la date de réception.

Déballer le four avec soin et le placer à proximité de l'emplacement prévu et à un endroit suffisamment espace pour en faciliter l'entretien.

Ne pas soulever le four par les portes ou les poignées.

### EMPLACEMENT

Aucune substance combustible ne doit se trouver à proximité de l'appareil.

Observer un dégagement minimal de toute construction combustible de 25 mm (1 po) du côté gauche du four, de 102 mm (4 po) du côté droit et de 152 mm (6 po) derrière. Dans le cas d'une construction incombustible, observer un dégagement minimal de 102 mm (4 po) du côté droit du four et de 152 mm (6 po) derrière. Aucun dégagement n'est requis du côté gauche du four.

Peut s'installer sur un plancher combustible.

Installer le four dans un endroit suffisamment espace pour en faciliter l'utilisation et l'entretien.

Installer le four de manière à ne pas obstruer l'air nécessaire à la combustion et à la ventilation. Observer un dégagement suffisant autour des ouvertures d'approvisionnement d'air de la chambre de combustion. S'assurer d'une ventilation suffisante dans le local pour permettre la combustion des gaz.

Veiller à ce que les ventilateurs ne soufflent pas directement sur l'appareil et, dans la mesure du possible, ne pas ouvrir les fenêtres à proximité de l'appareil ni utiliser des ventilateurs muraux qui produisent des courants d'air.

# Installation, fonctionnement et entretien FOURS À AIR PULSÉ AU GAZ SNORKEL<sup>MD</sup> SG4D, SG4C, SG6D ET SG6C

## DOCUMENT À CONSERVER EN CAS DE BESOIN.

### GÉNÉRALITÉS

Les fours à air pulsé au gaz Snorkel<sup>MD</sup> de VULCAN sont fabriqués avec le plus grand soin et à partir des meilleurs matériaux. Leur installation, utilisation et entretien appropriés permettent d'en obtenir un rendement optimal pendant de nombreuses années.

Il est recommandé de lire le manuel au complet et de suivre attentivement toutes les instructions.

Les fours à air pulsé au gaz SG4D et SG6D sont pourvus d'un thermostat à semi-conducteurs, d'une minuterie à cadran de 1 heure et avertisseur, d'un moteur de 0,25 kW (1/3 CV) à deux vitesses et d'une enceinte comme équipement standard. Les fours SG4C et SG6C sont équipés d'un brûleur de 60 000 BTU/h.

Les modèles SG4C et SG6C sont pourvus de commandes électroniques, d'un moteur de 0,25 kW (1/3 CV) à deux vitesses, de la fonction RÔTISSAGE ET GARDE-AU-CHAUD et d'une enceinte en porcelaine comme équipement standard. Les fours SG6D et SG6C sont équipés d'un brûleur de 60 000 BTU/h.

L'enceinte des modèles SG6D et SG6C est plus profonde.

Les modèles SG44D, SG44C, SG66D et SG66C sont constitués de deux fours simples et comprennent un nécessaire de superposition permettant de superposer les fours.

Tous les modèles sont pourvus d'un commutateur de puissance qui permet de régler le débit de chaleur de 22% à 100 % et fonctionnent à un courant monophasé de 120 V.

Tous les fours standard équipés du courant 120 V requièrent un courant monophasé et sont munis d'une fiche à trois broches dont une de mise à la terre.

Ouverture simultanée des portes, minuterie de cinq heures, alimentation électrique de 208/240 V à raccordement de câblage directement à la plaque à bornes fourni avec le four, grilles supplémentaires et support pourvu d'une tablette de rangement au bas sont offerts en option.

Modèle	Thermostat (chaque four)	Minuterie (chaque four)	Nécessaire de superposition	Rôtissage et garde-au- chaud	Pattes mm (po)
SG4D/SG6D	à semi-conducteurs	cadran de 1 heure			654 (25 3/4)
SG44D/SG66D	à semi-conducteurs	cadran de 1 heure	X		203 (8)
SG4C/SG6C	électronique	électronique		X	654 (25 3/4)
SG44C/SG66C	électronique	électronique	X	X	203 (8)

### CARACTÉRISTIQUES

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21	Allumage des fours SG4C et SG6C
21	Utilisation des fours SG4C et SG6C
22	Messages d'erreur – modèles SG4C et SG6C
23	Mode RÔTISSAGE ET GARDE-AU-CHAUD
24	Arrangement des grilles
25	Conservation de l'énergie
25	Conseils d'utilisation
29	Thermostat de sécurité
30	Nettoyage
31	ENTRETIEN
31	Lubrification
31	Conduit d'évacuation
31	Remplacement des lampes
31	Service de l'entretien et pièces de rechange
32	DÉPANNAGE

## MESURES DE SÉCURITÉ IMPORTANTES

CE MANUEL A ÉTÉ PRÉPARÉ À L'INTENTION D'UN PERSONNEL QUALIFIÉ ET AUTORISÉ À INSTALLER DES APPAREILS FONCTIONNANT AU GAZ ET À EFFECTUER LE DÉMARRAGE INITIAL CHEZ LE CLIENT DE MÊME QUE LE RÉGLAGE DES APPAREILS CONCERNÉS DANS CE MANUEL.

AFFICHER À UN ENDROIT VISIBLE LES PREMIERS SOINS À ADMINISTRER À TOUTE PERSONNE AYANT RESPIRÉ LES GAZ QUE CET APPAREIL DÉGAGE. ON PEUT SE PROCURER CES INFORMATIONS CHEZ LE FOURNISSEUR DE GAZ LE PLUS PRÈS.

### IMPORTANT

EN CAS D'ODEURS DE GAZ, ÉTEINDRE L'APPAREIL PAR LE ROBINET D'ARRÊT PRINCIPAL ET COMMUNIQUER AVEC LA COMPAGNIE DE GAZ LA PLUS PRÈS OU AVEC LE FOURNISSEUR DE GAZ ATTIRÉ POUR L'ENTRETIEN.

### AVERTISSEMENT

NE PAS ENTREPOSER NI UTILISER D'ESSENCE NI D'AUTRES VAPEURS OU LIQUIDES INFLAMMABLES DANS LE VOISINAGE DE CET APPAREIL OU DE TOUT AUTRE APPAREIL.

### AVERTISSEMENT

UNE INSTALLATION, UN RÉGLAGE, UNE MODIFICATION, UNE RÉPARATION OU UN ENTRETIEN NON CONFORMES AUX NORMES PEUT ENTRAÎNER DES DOMMAGES MATÉRIELS, DES BLESSURES OU LA MORT. LIRE ATTENTIVEMENT LES NOTICES D'INSTALLATION, DE FONCTIONNEMENT ET D'ENTRETIEN AVANT DE FAIRE L'INSTALLATION OU L'ENTRETIEN DE CET APPAREIL.

EN CAS DE PANNE DE COURANT, NE PAS FAIRE FONCTIONNER CET APPAREIL.

# FOUR À AIR PULSÉ AU GAZ SNORKEL<sup>MD</sup> DE LA SÉRIE SG

### MODELES

ML-114875	SG4D
ML-114876	SG4C
ML-114877	SG6D
ML-114878	SG6C



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