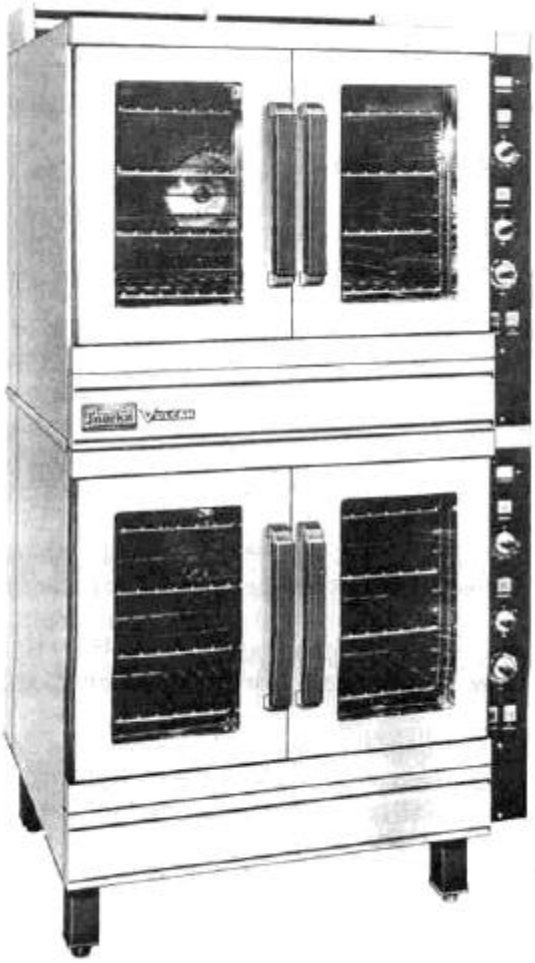
VULCAN

INSTALLATION, SERVICE & PARTS MANUAL FOR SNORKEL GAS CONVECTION OVEN MODELS: SG-22, SG-2SM, SG-1010, SG-10SM ELECTRONIC IGNITION MODELS: SG-22E, SG-2SME, SG-1010E, & SG-10SME



VULCAN-HART CORPORATION, 3600 NORTH POINT BOULEVARD, BALTIMORE, MARYLAND 21222

IMPORTANT

OPERATING, INSTALLING AND SERVICE PERSONNEL

Operating information for this equipment has been prepared for use by qualified and/authorized operating personnel.

All installation and service on this equipment is to be performed by qualified, certified, licensed and/ authorized installation or service personnel, with the exception of any part marked with a + in front of the part number.

Service may be obtained by contacting the Factory Service Department, Factory Representative or Local Service Agency.

DEFINITIONS

QUALIFIED AND/OR AUTHORIZED OPERATING PERSONNEL

Qualified or authorized operating personnel are those who have carefully read the information in this manual and are familiar with the equipment's functions or have had previous experience with the operation of the equipment covered in this manual.

QUALIFIED INSTALLATION PERSONNEL

Qualified installation personnel are individuals, a firm, corporation or company which either in person or through a representative are engaged in, and are responsible for:

1. The installation of gas piping from the outlet side of the gas meter, or the service regulator when the meter is not provided, and the connection and installation of the gas appliance. Qualified installation personnel must be experienced in such work, be familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction. Reference in the United States of America - National Fuel Gas Code ANSI Z223.1 (Latest Edition). In Canada - Canadian Standard CAN/CGA-B149.1 NAT. GAS (Latest Edition) or CAN/CGA-B149.2 PROPANE GAS (Latest Edition).
2. The installation of electrical wiring from the electric meter, main control box or service outlet to the electric appliance. Qualified installation personnel must be experienced in such work, be familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction. Reference: In the United States of America - National Electrical Code ANSI NFPA No. 70 (Latest Edition). In Canada - Canadian Electric Code Part 1 CSA-C22.1 (Latest Edition).
3. The installation of steam piping from the source of supply to the service inlet of the appliance. Qualified installation personnel must be experienced in such work, be familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction.

QUALIFIED SERVICE PERSONNEL

Qualified service personnel are those who are familiar with Vulcan equipment who have been endorsed by the Vulcan-Hart Corporation. All authorized service personnel are required to be equipped with a complete set of service and parts manuals and stock a minimum amount of parts for Vulcan equipment.

IMPORTANT NOTES FOR ALL VULCAN APPLIANCES

1. These units are produced with the best possible workmanship and material. Proper installation is vital if best performance and appearance are to be achieved. Installer must follow the installation instructions carefully.
2. Information on the construction and installation of ventilating hoods may be obtained from the "Standard for the installation of equipment for the removal of smoke and grease laden vapors from commercial cooking equipment," NFPA No. 96 (latest edition) available from the National Fire Protection Association, Battery March Park, Quincy MA 02269.
3. For an appliance equipped with a flexible electric supply cord, the cord is equipped with a three prong (grounding) plug. This grounding plug is for your protection against shock hazard and should be plugged directly into a properly grounded three prong receptacle. Do not cut or remove the grounding prong from this plug. If the appliance is not equipped with a grounding plug, and electric supply is needed, ground the appliance by using the ground lug provided (refer to the wiring diagram).

(FOR GAS APPLIANCES ONLY)

4. Do not obstruct the air flow into and around the appliance. This air flow is necessary for proper combustion of gases and for ventilation of the appliance. Provisions for ventilation of incoming air supply for the equipment in the room must be in accordance with National Fuel Gas Code ANSI Z223.1 (latest edition).
5. Do not obstruct the flow of flue gases from the flue duct (when so equipped) located on the rear (or sides) of the appliance. It is recommended that the flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel.
6. For an appliance equipped with casters, (1) the installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 (latest edition), and Addenda, Z21.69a (latest edition), and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41 (latest edition), and Addenda, Z21.41 a (latest edition) and Z21.41 b (latest edition), and (2) adequate means must be provided to limit the movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit the appliance movement. If disconnection of the restraint is necessary, reconnect this restraint after the appliance has been returned to its originally installed position.
7. The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.45 k Pa).
8. The appliance must be isolated from the gas supply system by closing its individual manual shutoff valve during any pressure testing of the gas supply system at test pressures equal to or less than 1/2 psig (3.45 k Pa).

CAUTIONS

FOR YOUR SAFETY

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

1. **KEEP THE APPLIANCE FREE AND CLEAR FROM ALL COMBUSTIBLE SUBSTANCES.**
2. **IN THE EVENT A GAS ODOR IS DETECTED, SHUT UNIT(S) DOWN AT THE MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.**
3. **POST IN A PROMINENT LOCATION, INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION MAY BE OBTAINED FROM A LOCAL GAS SUPPLIER.**

CAUTIONS (Continued)

CLEARANCES: FROM THE TERMINATION OF THE APPLIANCE FLUE VENT TO THE FILTERS OF THE HOOD VENTING SYSTEM, AN 18 INCH MINIMUM CLEARANCE MUST BE MAINTAINED.

REFERENCE: ANSI/NFPA 96-1984 4-1.2.2.2. OF THE NATIONAL FIRE PROTECTION ASSOCIATION, INC., BATTERYMARCH PARK, QUINCY, MA 02269. AND NATIONAL BUILDING CODE 1976 SEC. 1015.7b (2) OF THE AMERICAN INSURANCE ASSOCIATION ENGINEERING AND SAFETY SERVICE, 85 JOHN STREET, NEW YORK, N.Y. 10038.

LOADING: BEFORE LOADING THE OVEN SET THE LOAD CONTROL DIAL TO THE PROPER SETTING FOR THE PRODUCT AND THE COOKING LOAD (SEE SEPARATE COOKING CHART).

OPENING OVEN DOORS: BEFORE OPENING THE OVEN DOORS, PUSH THE AUXILIARY FAN SWITCH TO THE "OFF" POSITION.

OPENING OVEN DOORS WILL AUTOMATICALLY CUT "OFF" THE FAN AND THE HEATING ELEMENTS, BUT IF THE FAN SWITCH IS NOT PUSHED TO THE "OFF" POSITION, HOT AIR GATHERED WITHIN THE OVEN CAVITY MAY BE PUSHED OUT WHEN THE DOORS ARE OPENED.

CAUTION: **DO NOT** STAND DIRECTLY IN FRONT OF THE OVEN WHILE OPENING DOORS

WHEN OPENING THE DOORS, THE OPERATOR SHOULD PULL DOOR HANDLES OPEN WHILE SIMULTANEOUSLY STEPPING BACK AWAY FROM THE FRONT OF THE UNIT.

LOAD THE OVEN AS QUICKLY AS POSSIBLE TO CONSERVE HEAT. CENTER PANS ON THE RACKS.

HI LIMIT: IS A PROTECTIVE DEVICE WHICH SENSES THE TEMPERATURE OF THE UNIT TO PREVENT APPLIANCE OVERHEATING.

THE HI LIMIT OPERATES INDEPENDENTLY AND WILL AUTOMATICALLY CAUSE UNIT SHUTDOWN SHOULD THE PRIMARY CONTROL FAIL.

IF THIS SITUATION OCCURS, **DO NOT** ATTEMPT TO BYPASS THE HI LIMIT. SHUT UNIT DOWN AND CONTACT A SERVICE AGENCY.

VULCAN SNORKEL™ GAS CONVECTION OVEN
INSTALLATION, SERVICE and PARTS MANUAL INDEX

Vulcan Snorkel™ is produced with the best possible workmanship and material. Proper usage and maintenance will result in many years of satisfactory performance.

The manufacturer suggests that you thoroughly read this entire manual and carefully follow all of the instructions provided.

The rating plate stating the model number, serial number, gas type, voltage and amperage is located inside the lower front cover of the unit on the right hand side.

Motors in Vulcan convection ovens are permanently lubricated and require no additional maintenance.

WARNING: Back and sides of unit must be installed 6" from combustible construction.

The vent of this appliance should be checked every 6 months for restrictions.

A complete set of wiring diagrams are packed separately in the unit.

A wiring decal is located inside the control panel compartment.

GENERAL THEORY OF OPERATION

Figure 1 shows the air distribution and the path of the flue products in the Vulcan Snorkel™ oven. There are two tubular sheet metal burners which operate in an insulated combustion chamber with minimum air requirements. The flame chamber collects the heat generated by the burners and directs it through the heat exchanger tubes which are within the cooking compartment. The heated flue products are collected in a box above the oven compartment and directed to the blower inlet through the Snorkel tube. The oven compartment is heated indirectly via the heat exchanger tubes and directly with the flue products drawn into the oven by the Snorkel tube. A circulating fan also distributes heat throughout the oven evenly. The two vents in the top of the oven compartment evacuate moisture and also vent the oven flue products.

The blower and solenoid operate independently of each other. The blower operates as long as the doors and closed or the auxiliary fan switch is actuated. The solenoid is controlled by the thermostat and the Load Control. The thermostat must be On and the thermostat and the load control set to an operating position for the solenoid to come On and supply heat the oven. Either the thermostat or load control switch in the "Off" position will shut off the solenoid.

In order to provide protection against a pilot outage hazzard, a valve controls the main flow of gas to the burner. As long as a pilot flame is present, the valve will remain open. In the absence of pilot heat, the valve closes, eliminating gas to the burner. Each burner has its own valve which allows them to operate independently of each other.

A snap acting door switch, mechanically linked with the right hand door, shuts off both the heat and the blower when the door is opened and will automatically reset when the door is closed.

In ovens equipped with optional auxiliary fan switch, the door inter-lock can be over-ridden by depressing the "Auxiliary Fan Switch." The oven over-ride affects the blower only (not the heat) and is intended for rapid cooling of the oven interior.

Under "Component Description and Replacement" section the detailed function of each component is explained.

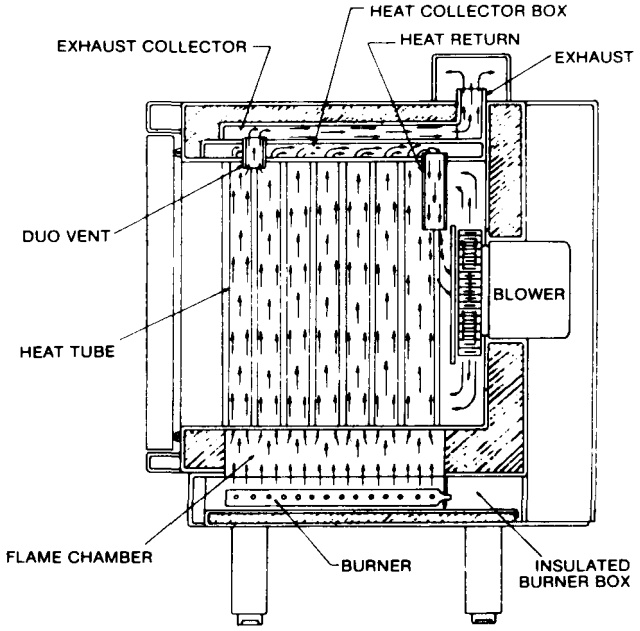


Figure 1

INSTALLATION INSTRUCTIONS

This appliance when installed must be electrically grounded in accordance with National Electrical Code ANSI C1-1981.

Vulcan ovens are produced with the best possible workmanship and material. Proper installation is vital if best performance is to be achieved. Please follow these instructions carefully.

1. Remove crating with care. Remove all wood blocking, packing material and accessories.

2. Each unit is factory equipped and electrically connected for use with type of gas and electric supply indicated on rating plate behind the lower panel- Check the type of gas and electric supply available.

3. SG-22 & SG-1010 units are shipped in two sections with a 7" leg stand mounted on the bottom unit. Position bottom unit as near to the final location as possible.

4. Pipe joint compounds used when connecting appliances to gas should be resistant to the action of propane gas.

5. Pipe joints should be tested for leaks with a soap and water solution before operating the unit.

6. Mount the upper section on top of the lower section from the front of units. Allow the upper section to overhang the lower unit at the front by approximately 8 inches. Refer to Detail A.

SG-2SMT AND SG-10SMT ADD-A-SECTION INSTRUCTIONS

PART A

PREPARING THE SG-2SMT UNIT FOR STACKING.

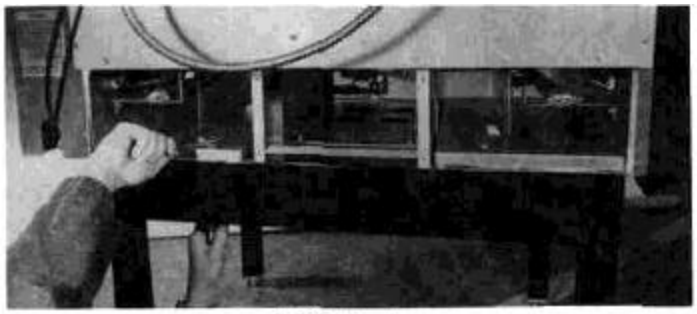
(T in SMT indicates Top oven in double deck convection oven. B in SMB indicates Bottom oven in double deck convection oven)

TOOLS REQUIRED FOR THIS PROCEDURE:

6" adjustable wrench, 1/4" socket drive, 7/16" hex head socket, 6" long 1/4" driver extension, 5/16" hex head socket and flat head screwdriver.

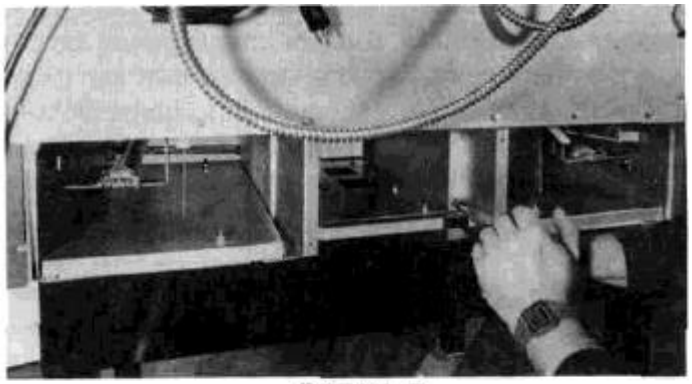
1. Disconnect the unit from the gas and the power supply and remove two rear lower aluminized access panels. Remove panels using a 5/16" hex head socket. Also remove S/S lower front cover. To remove the front cover, slip a flat edged screwdriver behind the panel and pop the panel off.

2. Using a 6" adjustable wrench and a 7/16" socket, remove four screws (2 rear, 2 front) attaching the leg stand to two burner insulation pans. Remove and discard pans. (See Detail A)

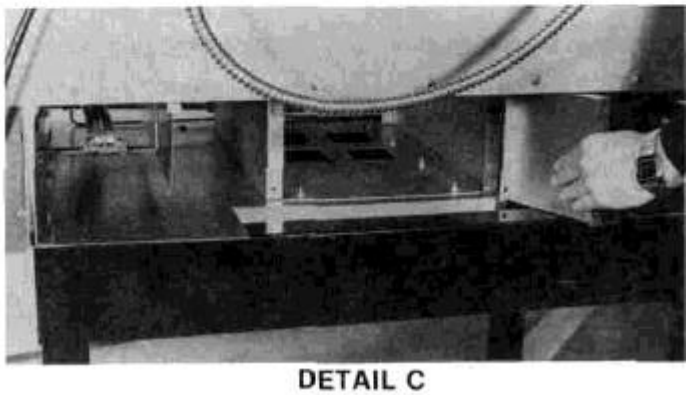


DETAIL A

3. Using a 5/16" socket, remove the four bottom baffles (2 front, 2 rear). (See Details B and C)



DETAIL B

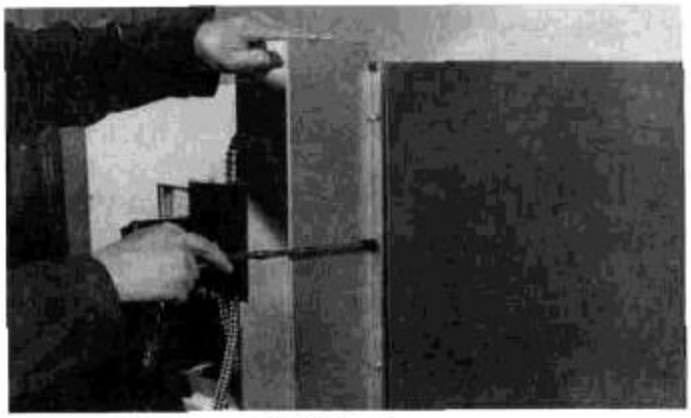


DETAIL C

SG-2SMT & SG-10SMT ADD-A-SECTION INST. (Continued)

4. Using a 5/16" socket, remove three 5/16" hex head screws from the upper right hand back of the unit. Install flue extension piece (a) to body back using six 5/16" hex head screws. Do not fully tighten the three screws on the right hand side of the flue extension. Loosen the two 5/16" screws located on the lower right hand back of the unit. (See Detail D)

PHOTO a

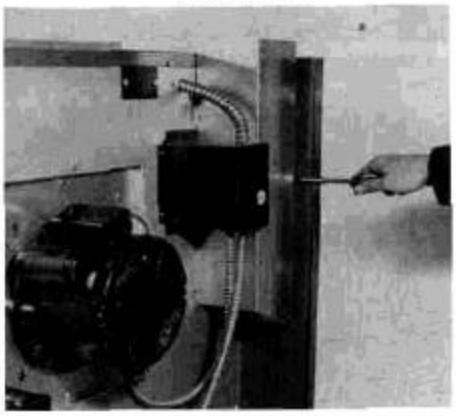


DETAIL D

5. Locate the back right hand side extensions piece (b). Assemble by sliding the slotted right hand side extensions between the body back and body side. Tighten body back using the 5/16" screws shown in Detail E. Assemble the left hand extension piece (b1) in the same manner.

PHOTO b

PHOTO b1



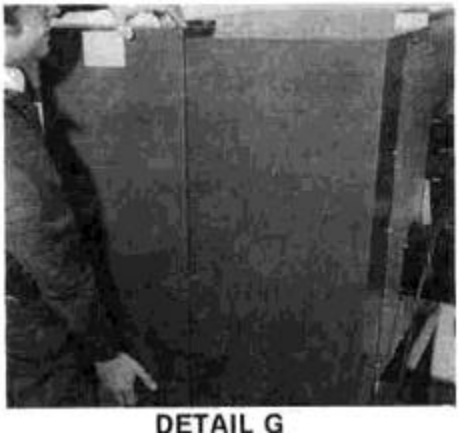
DETAIL E

SG-2SMT & SG-10SMT ADD-A-SECTION INST. (Continued)

6. Return and face the front of unit. Remove four 5/16" hex screws holding the front right hand body side cover. (See Detail F)

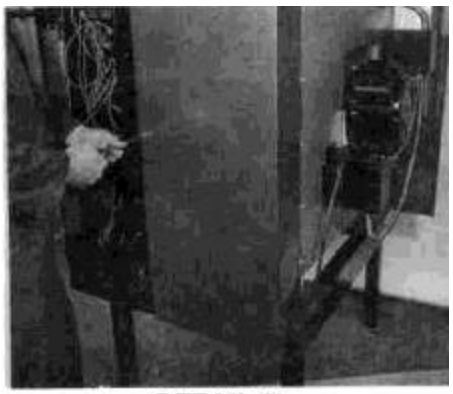
DETAIL F

7. Remove front right hand side body cover by holding the cover at the top and bottom while lifting upward, then pull straight out, away from oven. (See Detail G)



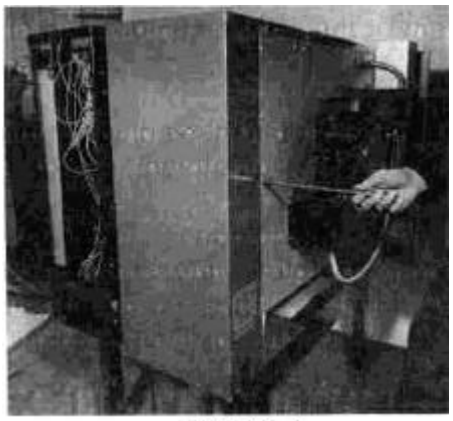
DETAIL G

8. While still facing the front of unit, remove six 5/16" screws from the back right hand body side cover. (See Detail H)



DETAIL H

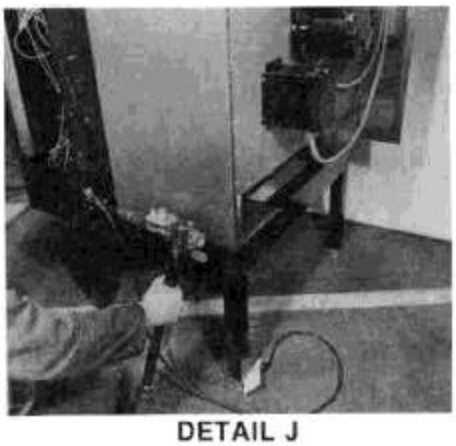
9. Return to the back of the unit and face it. Loosen four 5/16" left hand body back hex head screws and (See Detail I) remove the right hand body side cover (Now to your left) to expose unit's manifold piping and electrical connection.



DETAIL I

10. Remove the shut-off valve from the manifold pipe assembly and connect tee and union manifold assembly (c) to the unit regulator. (See Detail J)

PHOTO c



DETAIL J

SG-2SMT & SG-10SMT ADD-A-SECTION INST. (Continued)

11. Using a 5/16" socket, remove the side flue deflector from the top of the unit. (See Detail K)

DETAIL K

12. Remove the two remaining 7/16" bolts from the bottom of the leg stand. Allow the unit to rest unbolted on the stand until stacking is required.

PART B.
PREPARING THE SMB UNIT FOR STACKING.

TOOLS REQUIRED FOR THIS PROCEDURE:

5/16" hex head socket, 1/4" socket driver and 6" x 1/4" socket drive extension.

1. Assemble aluminized flue housing (d) to SMB body top using (8) 5/16" hex head screws. (See Detail L)

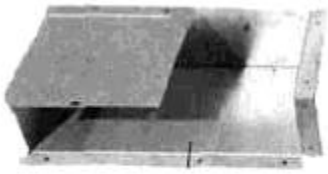
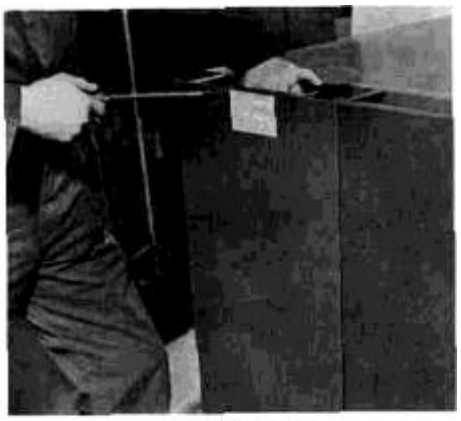


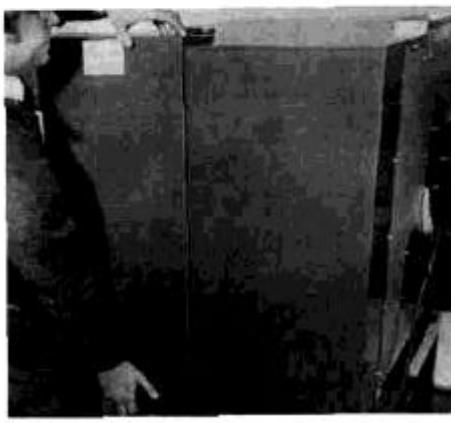
PHOTO d

DETAIL L

2. While facing the front of the unit disassemble three 5/16" hex head screws from the front right hand body side cover. Remove body side cover by placing hands at the top and bottom of cover while lifting upward, and then pull and straighten out away from oven. (See Detail M and Detail G)



DETAIL M



DETAIL G

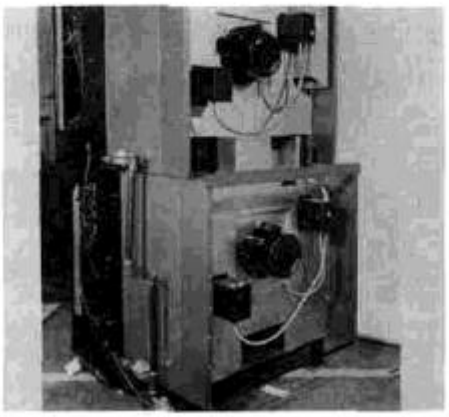
SG-2SMT & SG-10SMT ADD-A-SECTION INST. (Continued)

3. While still facing the front of the unit. Remove six 5/16" hex head screws from the back right hand body side cover.

4. Facing the back of the unit, remove four 5/16" hex head bolts and the right hand body side cover (now on your left) to expose the manifold and electrical connection.

5. Assemble second half of manifold assembly (e) to SMB section as shown in Detail N.

PHOTO e



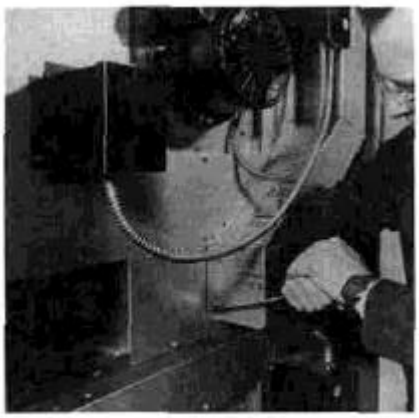
DETAIL N

6. Remove the SMT unit from the stand and carefully stack onto the SMB UNIT. (This operation will require the assistance of three other people.) Be sure to line up parts properly.

7. Place new full width flue deflector on rear top of stacked units as shown in Detail N.

8. Assemble angled aluminized flue duct (f) to the back right hand side of unit using five 5/16" hex head bolts. **DO NOT ASSEMBLE BOLTS TO THE FAR RIGHT HAND SIDE OF FLUE DUCT YET.** (See Detail 0)

PHOTO f



DETAIL O

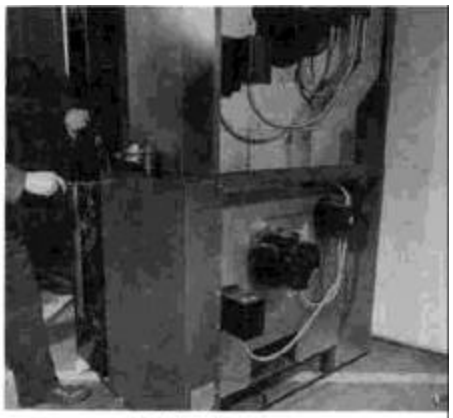
SG-2SMT & SG-10SMT ADD-A-SECTION INST. (Continued)

9. Bolt two closure panels (g) to upper back of unit using four 5/16" hex head bolts and finish attaching angled flue duct as shown in Detail P.

PHOTO g

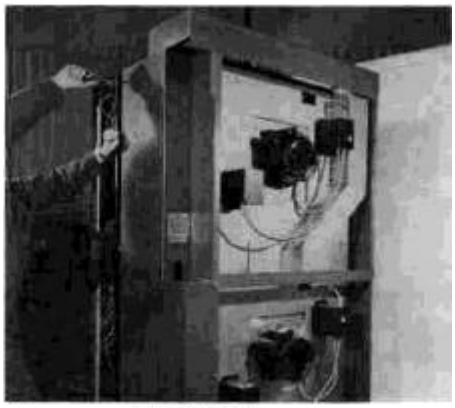
DETAIL P

10. While facing back of unit, remove two 51/6" hex head bolts holding two stacking braces to the SMB unit. See Detail N. Reinstall the bottom side manifold cover using fourteen 5/16" hex head bolts (See Detail Q) and reassemble stacking straps to the SMB and SMT sections.



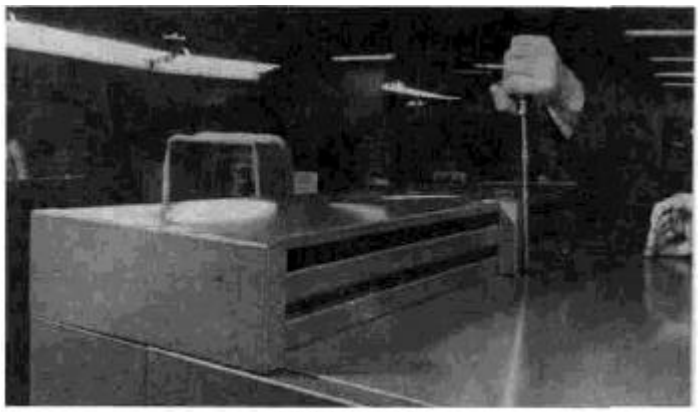
DETAIL Q

11. Reinstall the SMT manifold cover using six 5/16" hex head bolts (See Detail R)



DETAIL R

12. Tighten down all but the two back 5/16" hex head screws of the new flue deflector resting on top of the SMT unit (See Detail S).



DETAIL S

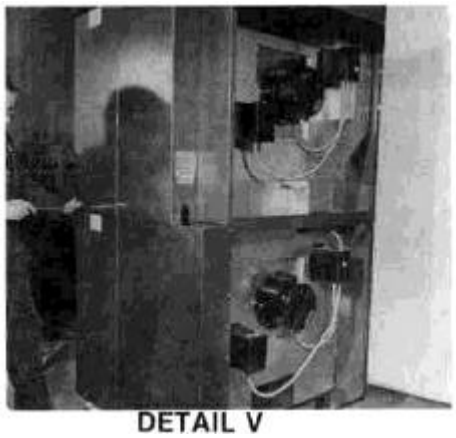
13. Assemble black hood stacking strip to back of SMT unit using four 5/16" hex head screws. (See Detail T)

DETAIL T

SG-2SMT & SG-10SMT ADD-A-SECTION INST. (Continued)

14. Reassemble the top and bottom right front side control covers using seven 5/16" hex head screws. (See Detail U and Detail V)

DETAIL U



DETAIL V

15. Unit is now ready to be placed into operation.

f. Reconnect the unit to the gas supply and test for leaks. Reinstall the side panel and continue with the installation and operating manuals.

NOTE: All convection oven sections built before October, 1983 will require the use of a 3.7" regulator. Any convection oven section built after October, 1983 will require the use of a 6" regulator. For orifice size differences, refer to chart on page 21 of this manual.

a. To determine if your unit was built prior to October, 1983, refer to the rating plate serial number. The first two digits of this number indicates the year, the second two numbers indicates the month, i.e. YEAR 83 MONTH 10, SERIAL NUMBER 8310.

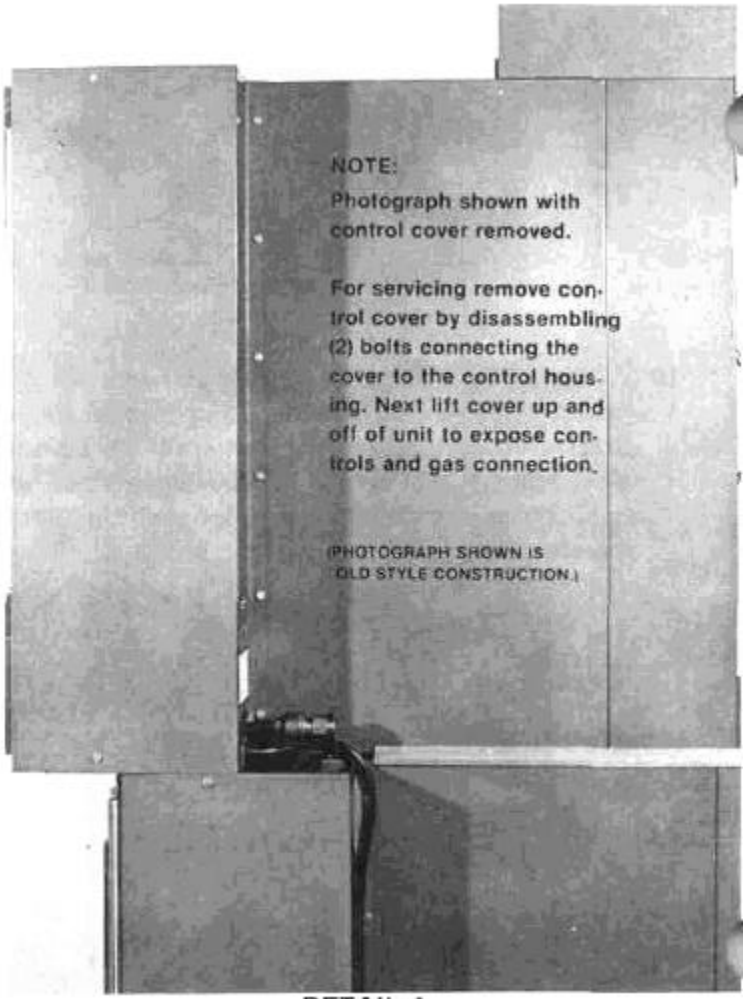
If your unit was built prior to October, 1983 proceed to Step b.

b. New units are provided with a 6" pressure regulator preassembled to the interconnecting manifold pipe.

c. Turn off the gas supply and remove the 3.7 inch pressure regulator from the existing unit.

d. Assemble the 3.7" regulator, removed in Step c, to the interconnecting manifold as shown in Detail A.

e. Connect the manifold assembly to the unit making sure that the 6 inch pressure regulator is connected to the lower unit as indicated in Detail A.



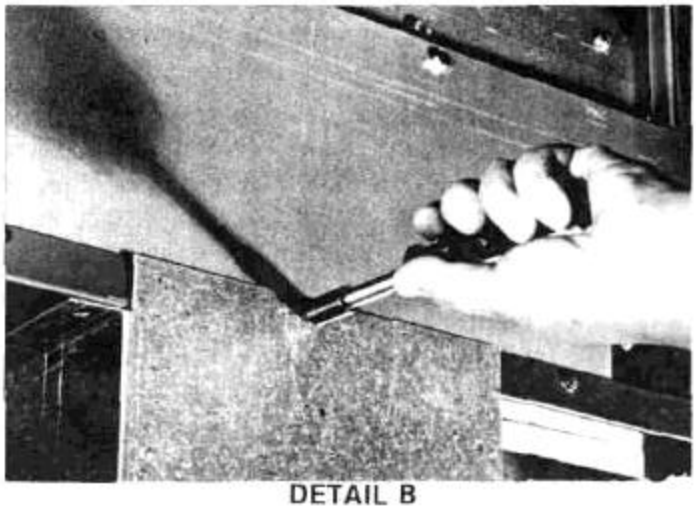
DETAIL A

INSTALLATION INSTRUCTIONS (Continued from Page 7)

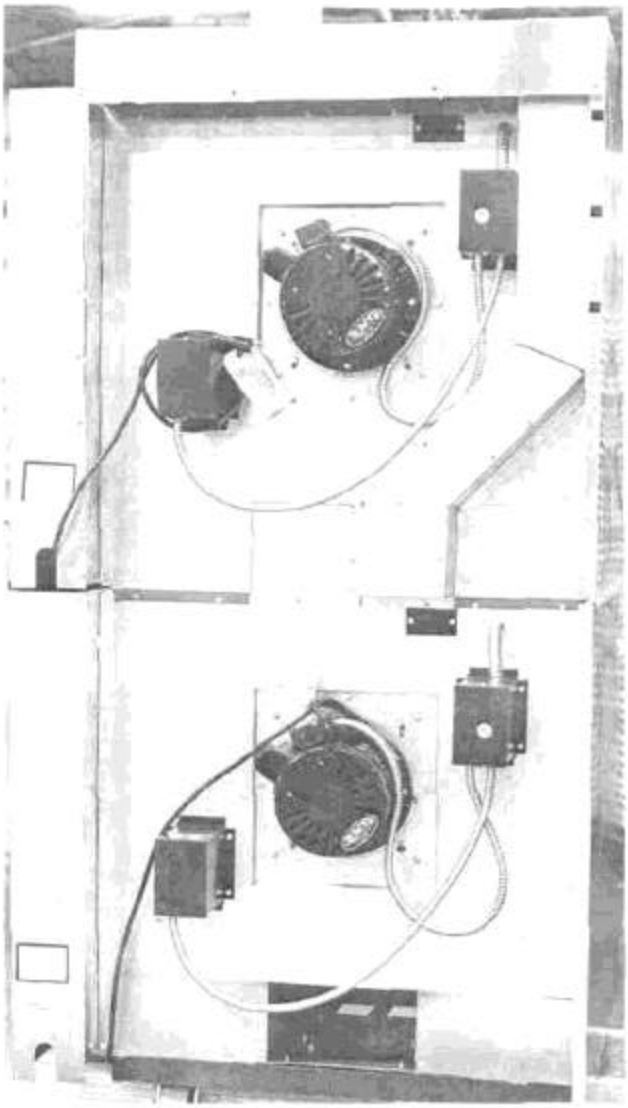
7. Attach flue cover to the lower section with sheet metal screws provided. Detail B.

8. Position upper section in line with lower section. Install flue closure assembly, connecting upper and lower sections with sheet metal screws provided. Detail C & CA.

DETAIL C



DETAIL B



DETAIL C A

9. Install connection pipe with unions per Detail D.

10. Connect upper and lower units together at the front per Detail E.

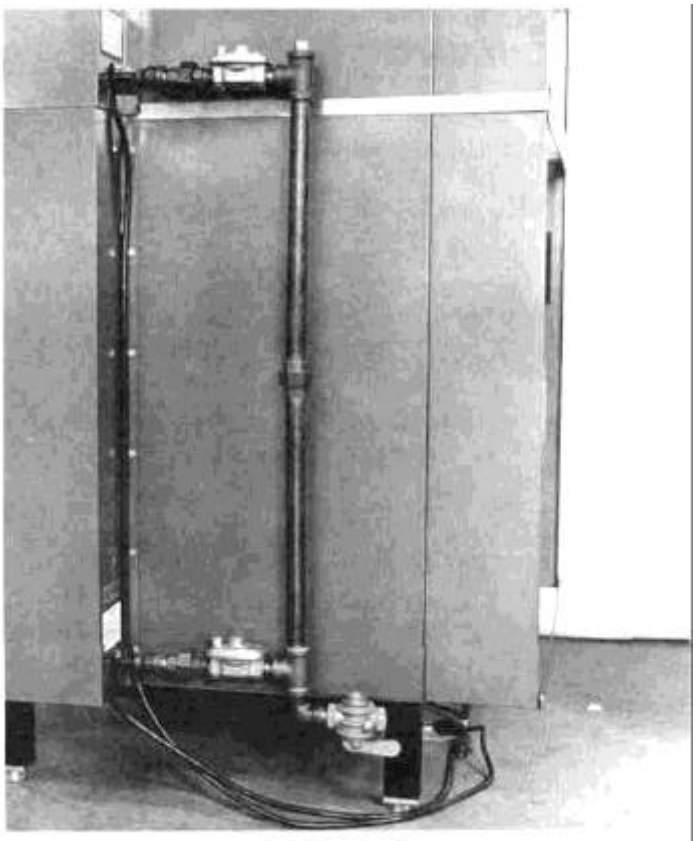
11. Be sure supply cords are accessible or connections have been made to the junction box.

INSTALLATION INSTRUCTIONS (Continued)

12. Connect oven to gas supply through the shut-off valve and gas pressure regulator provided. Locate the shut-off valve in an accessible location.

Units for use on natural gas are equipped with a pressure regulator with a preset outlet pressure of 6" W.C. Units for use on propane gas have a regulator with a preset outlet pressure of 10.0" W.C. Regulator must be mounted horizontally to provide the preset outlet pressure. If regulator is mounted in any other position, the outlet pressure must be reset.

Note: Do not obstruct the leak limiter on pressure regulator. A leak limiter is supplied with every regulator to allow excess gas pressure to escape. Do not obstruct leak limiter on gas pressure regulator as obstruction may cause regulator to malfunction.



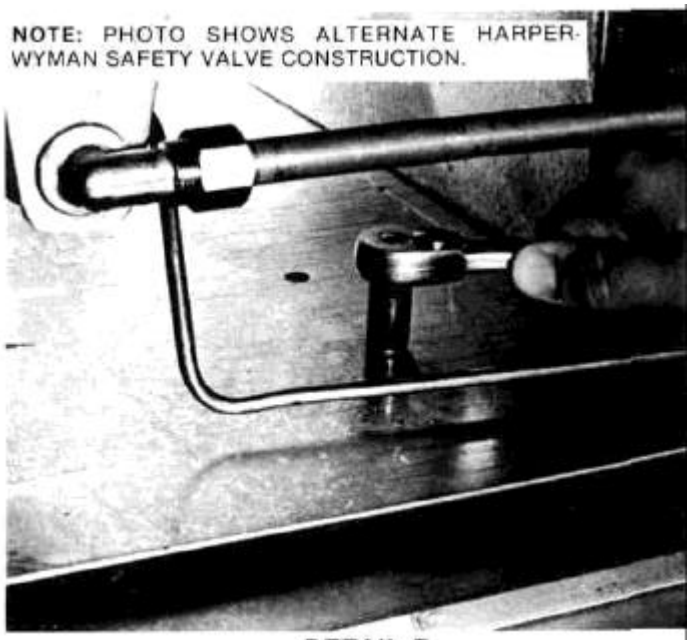
DETAIL D

13. Connect the oven to the electric supply. 120 volt ovens single phase units are equipped with a 7 ft. 3 in. wire (including ground) supply cord. 120 volt appliances are equipped with a three prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three prong receptacle. **Do not** cut or remove the grounding prong from its plug. 208/240 volts units with a single or three phase motor are provided with a terminal block. 208/240 volt units must be electrically grounded at the time of installation.

14. Either a draft diverter or a low profile deflector is shipped with every oven. A low profile deflector is intended for use when the oven is installed under canopy type hoods. When the oven is directly connected to a vent system, a down draft diverter must be used.

15. Using a carpenter's level placed on a rack, adjust the feet on the bottom of each leg, so that oven is level from the front to back and side to side.

(Note: Level the oven when in its permanent position only).



DETAIL E

INSTALLATION INSTRUCTIONS (Continued)

16. Turn on the gas. Purge the gas line to remove air. Check for leaks.

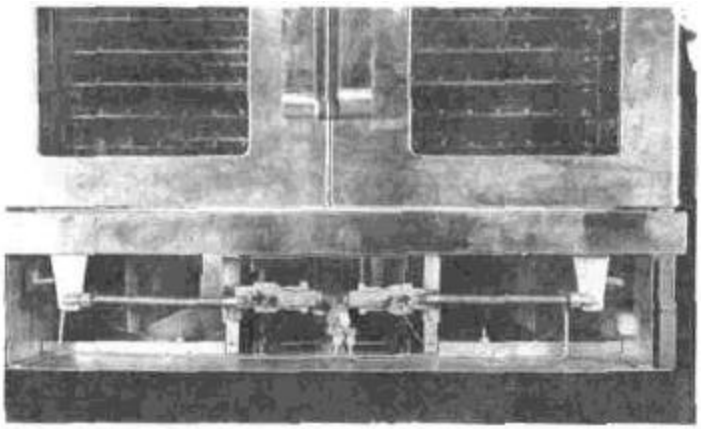
CAUTION: Use a soap solution or similar means (do not check with open flame).

17. PILOT LIGHTING INSTRUCTIONS:

Units with Standing Pilots (Ref. to Detail F).

1. If the pilot light is out, turn the master switch off, open the doors, then wait 5 minutes before relighting.
2. Light the pilot with a taper.
3. Turn the Master Switch to the "On" position.
4. Set the thermostat control knob to the desired temperature. (See Cooking Chart for reference)
5. Set the load control to the proper setting. (See Cooking Chart for reference.
6. For daily shutdown, turn the master switch, the thermostat knob, and the load control knob to the "Off" position.
7. For seasonal shutdown, extinguish the pilot, turn master switch, thermostat knob and load control knob to "Off" position.

NOTE: Pilot burner flames are preset at the factory before shipping, approximately 1/2" high. The flame should impinge on the sensing bulb located directly below each pilot burner. If pilot does not light, turn the gas off, wait 5 minutes and repeat steps 1 through 5 of 17. It is not necessary to repeat pilot lighting everyday. For units with electronic ignition, pilot lighting is not necessary. The main burners are spark ignited when the thermostat is turned on.



DETAIL F

LIGHTING INSTRUCTIONS (ELECTRONIC IGNITION)

1. Start Up Procedure:
   Open The Doors, Turn The Thermostat And Load Control To The "Off" Positions.
2. Turn The Master Switch To The "On" Position. A Clicking Sound Will Be Heard. Pilots Have Ignited When Clicking Stops.
3. Close Doors - Turn The Thermostat And The Load Control To The Desired Setting. (See Cooking Chart For Reference.)
4. For Daily Or Seasonal Shutdown:
   Turn The Master Switch, The Thermostat And The Load Control To The "Off" Position. (Turn the Shut-Off Valve To the "Off" Position, Seasonal Only.)

NOTE: Photo Shows Alternate Harpe-Wyman Protective Valve Construction.

CAUTION: Fan must rotate clockwise when viewed through the oven door. On three phase motor units, fan rotation can be reversed by interchanging any two power supply leads. On single phase units with incorrect fan rotation, contact factory.

FLUE CONNECTIONS

Good ventilation, which includes flue connections and room drafts, is just as important for correct oven operation as adequate gas supply.
Generally speaking, ovens should never be directly flue connected, if a direct flue system can be avoided. The ideal method of ventilating an oven is the use of a properly designed hood. Hood should extend about 6" beyond all sides of the appliance. The hood should be connected to an adequate exhaust duct or system. When ovens are installed in locations with low ceilings, care must be taken to insure proper clearance for the flue products. Lack of this clearance above outlet of rear flue piping will interfere with heat circulation in the oven and could create a fire hazard condition. Refer to NFPA #96.

Do not permit fans to blow directly at the oven and wherever possible, avoid open windows next to the oven sides or back, avoid wall type fans which create air cross currents within the room.

It is also necessary that sufficient room air should be allowed to enter the room to compensate for the amount of air removed by any ventilating system. Otherwise, a subnormal atmosphere pressure will occur, affecting oven operation adversely and causing undesirable working conditions.

A properly designed and installed hood will act as the heart of the ventilating system for the room or area in which the oven is installed, and will leave the oven independent of changing draft conditions.

TROUBLE-SHOOTING – SERVICE

The following is intended to provide a guide for trouble shooting procedure and covers some of the more common problems with the equipment. The servicing personnel, as with any other equipment, need to become familiar enough with the circuit and the components in order to be able to follow a logical sequence of trouble shooting, and repair malfunctions not mentioned in the following paragraphs.

The instruments necessary for trouble shooting would be:
A. A.C. Voltmeter to measure line voltages up to 480 volts.
B. A.C. Amp-meter to measure line currents.
C. Accurate Thermometer to measure oven temperature
up to 500°F.

In the following paragraphs, the voltmeter is used to measure the voltage between 2 phases on 208, 240, 480 volt and between one phase and neutral on 220/380 and 240/415 volt supplies. Do not measure the voltage with respect to the chassis ground. For the sake of simplicity, the measured voltage is referred to 120 volt, assuming that the supply is 120 volt. When supply is 240 or 220, the measured voltage should also be 240 or 220—it is also assumed that the voltage rating of the oven matches exactly (within the allowable supply tolerance) that of the field supply. Refer to the appropriate wiring diagram which has been packaged separately with this unit in an 11 x 14 clear plastic envelope.

With the main power and oven circuit breakers "ON", the master switch turned to the "ON" position and the oven door closed:

Problem: 1. No blower, no heat

Procedure: Depress the Oven Light switch or turn timer knob to "0" position. If the lights come On and the Buzzer sounds, follow step B. If not, follow step A.

STEP A—Measure the voltage between leads 93 and 94 (The supply side) of the Master Switch.

If no voltage, check connection to Power Supply cord and verify power at wall socket.
If 120 volts, measure the voltage across 21 and 22.

If no voltage, the Master Switch is defective.

If 120 volts, check for bad connection from the switch terminal to the Thermostat and motor connections.

STEP B—Only the door switch can disable the blower and heat at the same time. While opening and closing the right hand door listen for a click near the top of the right hand door. If no click, the door switch requires adjustment. If the switch does click but no heat or blower, the switch may be defective.

TROUBLE-SHOOTING - SERVICE (Continued)

Problem: 2. The blower is "ON" (with auxiliary fan switch de-energized) but no heat.

Procedure: Turn the thermostat knob to about the 400°F. position. If the oven signal light is turned "ON", follow step A; if not, follow step B.

STEP A — Oven indicator light is "ON". This is an indication that the door switch, and the thermostat are functioning properly. The problem can then be related to the load control switch or the solenoid.

Turn the load control knob to "HI" position.

Check the voltage between terminals L 1 & L 2 of the load control switch.

If no voltage, check for bad connection or faulty lead to the switch.

If 120 volts, check the voltage across H 1 & H 2 terminals of the switch.

If no voltage, the switch is defective.

If 120 volts, check for defective solenoid or faulty connection between the load control and the solenoid.

STEP B — Oven indicator light does not come "On". This is an indication that the door switch, load control or thermostat could be defective. (Check for a bad connection between the master switch and the thermostat, defective thermostat or bad connection between the normally open contact of the door switches and leads going to the solenoids.

Problem: 3. The oven heats up properly when empty, but as soon as the food is put in it, the temperature drops and the oven never recovers.

Procedure: Meals containing excessive moisture can cause the temperature to drop. Also, a cause of temperature drop is excess load.

Problem: 4. The oven temperature keeps increasing beyond the setting of the thermostat.

Procedure: If the thermostat indicator light cycles on and off, check for defective solenoid. If the thermostat light remains "On" check for defective thermostat contacts.

Problem: 5 The motor turns off and automatically comes back "ON" after a few minutes.

Procedure: The internal thermal protector of the motor is sensing a high temperature which is caused by:

A—High current. Check for clockwise rotation of the shaft, for any binding on the shaft or the blower wheel (the wheel should be rotated freely by a hand touch). If none of the above, the motor may be defective.

B—High ambient. Check for hot air leakage from inside the oven to the back through the light or motor housings. Check to see if hot air is being blown on the motor from the adjacent equipment.

Check for proper ventilation in the area.

208-240 volt units note: Sometimes the over current affects the circuit breaker (15 amp breaker) before it does the thermal protector; and the circuit breaker keeps tripping to the "OFF" position.

PARTS, ORDERING-REPLACEMENT-ADJUSTMENTS

REPLACEMENT PARTS ORDERING

The following information must accompany a replacement parts order or it cannot be filled.

A. Model and Style or Serial Number

B. Gas Type

C. Voltage and Phase

D. Appliance finish, Permafinish, Stainless Steel, etc. (If applicable to part to be replaced). This information can be found on the rating plate on the unit. Parts may be ordered from your dealer, service agency, or parts distributor.

WARNING: Turn the main gas valve and power disconnect switch to "OFF" before servicing the equipment. Reconnect the leads of the replacing components exactly to the original position and reverse procedure for adding the new component.

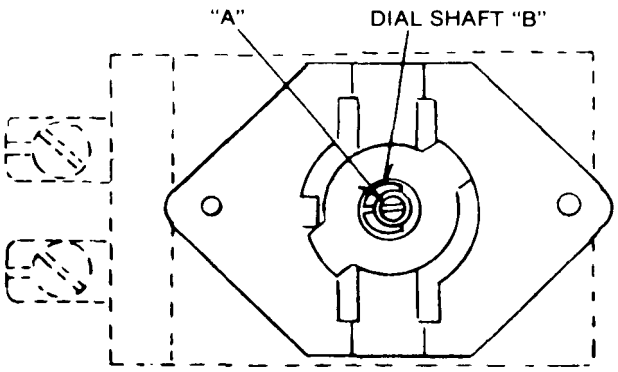
1. SWITCH PANEL

Remove two screws from the rear flange of the Switch Panel louvered cover. Push cover back exposing switch panel components.

A. Replacing Rocker Switches And Indicator Lights

Remove all wire connections to a component. Make a note of the terminal positions.
Compress spring clips on the top and bottom of the component while forcing it out the front of the switch panel.
Replace the component in the original position by pushing through the front face of the switch panel until the spring clips lock into place.

Reconnect wires to proper terminals.



B. Replacing the Thermostat

Remove rear body top.

Remove the thermostat bulb from it's two retaining clips located in the right rear corner of oven cavity. Push bulb and capillary tube through the grommet in the cavity top.

Push bulb and capillary through the hole in switch panel compartment.

Remove silicone tubing from capillary and save for reinstallation.
Disconnect wires from thermostat. Remove control knobs and mounting screws. Pull thermostat off back of panel.

When reinstalling thermostat, reverse procedure listed above. Do not kink capillary or place sharp bend in bulb.

Thermostat Calibration Check

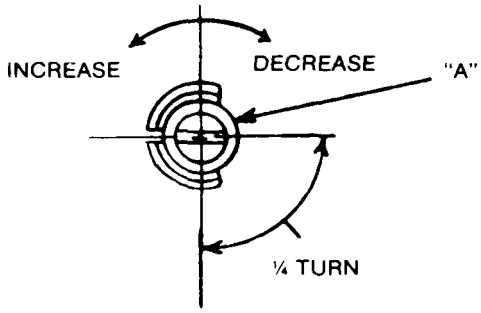
Use a calibrated potentiometer with a thermocouple located in the center of the fan guard assembly.
Set the thermostat knob to a mid range temperature.

Allow adequate time for the temperature to stabilize.

Thermostat Calibration

Remove knob from dial shaft B.
Turn screw "A" clockwise to decrease temperature and counterclockwise to increase temperature.

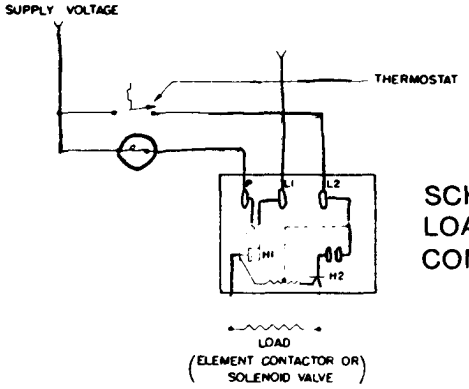
Note: 1/4 turn of screw "A" represents a temperature shift of 35 degrees F.



THERMOSTAT CALIBRATION

C. Load Control A.D.P.S.T.

This Cycling Switch varies, according to its setting, the percent on-time of the output as shown below:



SCHEMATIC LOAD CONTROL CONNECTION

Dial Setting	Percent On-Time
Hi	100
Hi—	83
Med+	72
Med	60
Med—	48
Lo+	37
Lo	27
Off	0

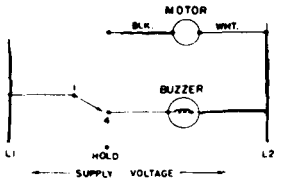
INFINITE LOAD CONTROL SWITCH

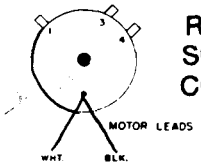
The Load Control, as shown schematically, is connected in series with the thermostat, thus providing a variable rate of temperature rise to reach the thermostat setting, as well as maintaining the temperature at the final set temperature. Therefore, with the load control set at Lo, it will take much longer to reach a desired temperature than with a setting of Hi. The cooking chart shows the necessary dial setting for different food products.

To replace this switch remove the knob and the lock nut. To reinstall, make sure the dimples on the face of the switch fall in the slot of the switch panel in order to prevent it from rotating.

D. Timer (one or five-hour models).

The normally open and common contacts of the electric timer are connected together, energizing the timer motor when the knob is set to the desired position. Once the timer completes its set interval (at the zero mark) the common terminal disconnects from timer motor (shuts the motor off) and connects with the buzzer. The buzzer will continue to sound until the knob is manually turned to "Hold" position where all contacts are opened, (timer motor and buzzer turned off).





REAR VIEW SCHEMATIC COMPONENT

To replace, remove the knob and the lock-nut—reinstall same as item C.

2. BLOWER MOTOR

The blower motor has internal thermal protection, and its sealed bearings do not require any lubrication. The mounting of the blower assembly allows servicing from inside the oven as follows:

Remove the fan cover.
Loosen the set screw on the centrifugal fan with allen wrench.
Pull the centrifugal fan forward off of the motor shaft with a wheel puller.
Remove the four nuts holding the motor mounting plate. Pull the motor assembly forward and rest it on the cavity bottom.
Remove the junction box cover and supply leads.
Rest the motor on its back. Remove four flat head screws, lockwashers, nuts and spacers used to fasten the motor mounting plate to the motor.

CAUTION: The motor is suitable for connection to two different voltage supplies. Check the connection instruction inside the motor junction box cover to assure the proper connection for the available voltage supply.

The direction of rotation is clockwise as viewed from inside the oven. The 1-phase motors are internally designed for C.W. rotation. On 3-phase motors, interchange any two supply leads to convert C.C.W. to C.W. rotation.

PART REPLACEMENT (Continued)

3. OVEN LIGHTS

The two 50 watt, 120 volt bulbs are connected in series in the electric ovens and in parallel in the gas convection ovens.

To replace lamps, remove the four mounting bolts holding the lamp window assembly. Both the lamp, as well as the socket can now be serviced. Make sure the replacement lamp is the high temperature type and is not larger than 50 watts.

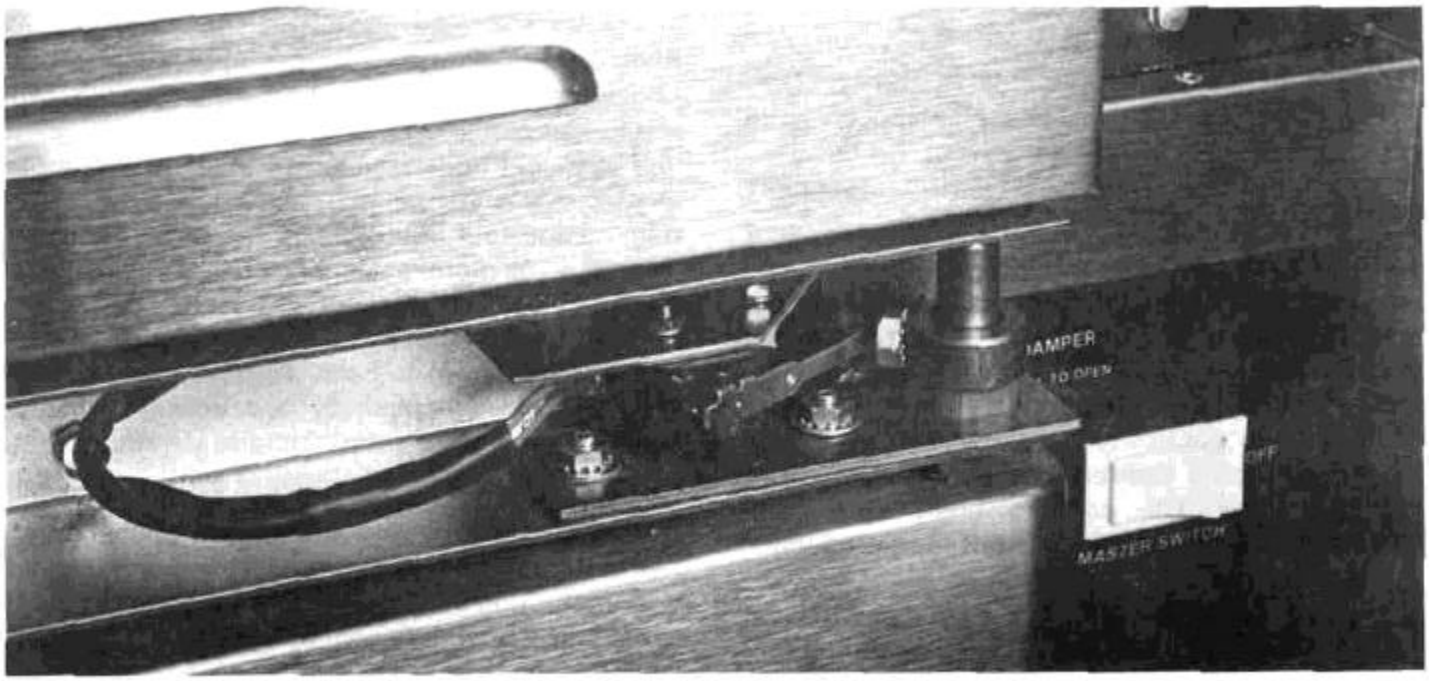
4. DOOR SWITCH

With the oven door closed, the normally open contact of the door switch is closed providing power to the heat and motor controls. When the door opens, the normally open contact is de-energized, and the solenoid and the blower are turned off.

To adjust or replace the door switch (refer to Detail G), remove the two mounting screws on the underside of the top finishing piece. Depress the door catches up inside the top channel and pull the top finishing piece off.

The door switch is controlled by a cam type device mounted to the top of the right hinge pin. The cam must actuate the door switch when the door is approximately 3 inches from being closed.

To replace the door switch, remove the mounting screws on the door switch support bracket and remove the defective switch from the bracket.



DETAIL G

POWER PANEL-PART REPLACEMENT

A. CONTACTOR The 3-pole motor contactor is used on units equipped with 3-phase motors. It is energized when the power is on and the door is closed but also when the door is open but the auxiliary fan switch is depressed to the "ON" position.

To replace, remove the two mounting screws and disconnect the leads.

B. RELAY The S.P.S.T. relay provides power to the blower motor, on units equipped with auxiliary fan switch, in order to over-ride the door interlock.

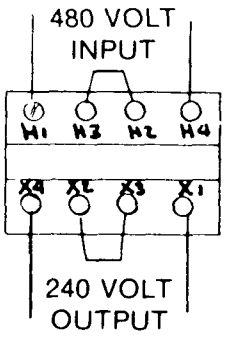
To replace, follow item A procedure.

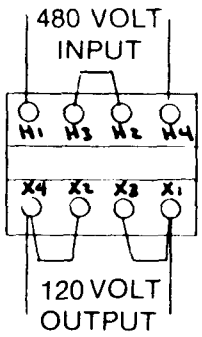
C. BUZZER Signaled by the timer, the buzzer sounds when the pre-set time is completed.

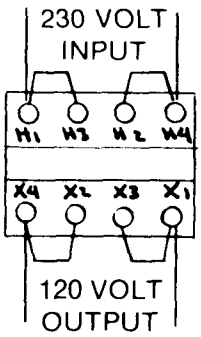
To replace, cut both wires approximately 3" from the buzzer and strip the ends. Remove the bracket holding the defective buzzer. Install the new buzzer equipped with mounting bracket and lead, and connect the wires with wire nuts.

D. CIRCUIT BREAKER The circuit breakers in 208, 240, 480 volt models provide protection for the control circuits and the lights. The circuit breakers are constructed with internal time delay. They detect short circuit or overload conditions in the equipment and trip to "OFF" position.

E. TRANSFORMER The control transformer is used to step down the available supply voltage from 480 to 240 volt on the electric models and from either 480 or 240 to 120 volt on the gas models for the use of the control and oven light circuits. The jumper straps (or wires) are used to change the input and output voltages to the required ratio. Below is the schematic showing the 3 connections used in different models. In replacing the old transformers with new ones care must be taken to follow the required connections accurately.







SHUT-OFF VALVE SERVICE

The gas shut-off valve is located at the rear of the unit and should be used to shut the unit down when service is required to gas components. This valve should also be used to turn all gas off to the unit when the unit is being shut down for an extended period of time.

If the shut-off valve requires service this may be accomplished only by turning off the gas supply upstream of the valve.

PRESSURE REG.-PILOT ADJ.-AIR ADJ.-ORIFICE DATA

PRESSURE REGULATOR SERVICE

NOTE: The unit and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 PISG (3.45 K Pa.).
The appliance must also be- isolated from the gas supply piping system by closing it's individual manual shut-off valves during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG (3.45L Pa.) as stated by the American National Standards Z83.11-1984. Copies of this Standard are available from the American Gas Association, 1515 Wilson Blvd., Arlington, VA 22209.
The pressure regulator is located at the rear of the unit downstream of the shut-off valve. If the pressure regulator requires service, this may be accomplished by turning off the gas supply upstream of the shut-off valve and pressure regulator and then removing both of these parts.
Blockage of the pressure regulator leak limiter will result in eratic burner operation and pilot outage.

NOTE: Prior to replacing a pressure regulator, in an effort to correct problems traced to this component, remove and clean the leak limiter.

PILOT BURNER ADJUSTMENT

Remove lower panel assembly (spring clip mounted) and light both pilot burners.

Adjust pilot flame heights to approximately 1/2"

Flame should impinge on the sensing bulbs located directly below the pilot burner flames. See Detail A for location of the pilot. Both pilot valves are located in the front center of the burner compartment.

AIR ADJUSTMENT

Although the burner air supply is adjusted before shipment, it should be checked at the time of in-stallation. Excessive air will cause flames to lift off a burner when cold or may cause flash-back during normal cycling of unit, 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 exchange tubes.

BURNER ORIFICE DATA

FOR ALL UNITS MANUFACTURED AFTER OCTOBER 1, 1983				
INCLUDING "E" UNITS	BURNER ORIFICE DATA NOTE: DATA ALSO APPLIES TO E-UNIT CONSTRUCTION			
MODEL	MAXIMUM INPUT PER BURNER	PRESSURE REG. SETTING	ORIFICE DRILL SIZE	GAS
SG-2SM, SG-22, SG-2	30,000	6" W.C.	#38	NAT.
SG-2SM, SG-22, SG-2	30,000	10.0" W.C.	#1/16	PROPANE
SG-10SM, SG-1010, SG-10	35,000	6' W.C.	#35	NAT.
SG-10SM, SG-1010, SG-10	35,000	10.0" W.C.	#53	PROPANE
FOR ALL UNITS MANUFACTURED BEFORE OCTOBER 1, 1983				
INCLUDING "E" UNITS	BURNER ORIFICE DATA			
MODEL	MAXIMUM INPUT PER BURNER	PRESSURE REG. SETTING	ORIFICE DRILL SIZE	GAS
SG-2SM, SG-22	30,000	3.7" W.C.	#36	NAT.
SG-2SM, SG-22	30,000	10,00" W.C.	#1/16	PROPANE
SG-10SM, SG-1010	35,000	3.7 " W.C.	#33	NAT.
SG-10, SG-1010	35,000	10.0" W.C.	#53	PROPANE

REPLACEMENT OF REGULATOR, OR SHUTOFF VALVE INCLUDING "E" UNITS

- Turn off gas supply upstream of unit.
- Break gas connection at shut-off valve.
- Break compression fittings at front manifold.
- Remove (4) bolts (inside center chamber) to rear manifold support.
- Disconnect wires to solenoid at wire nuts.
- Pull manifold out back of unit.
- Remount manifold by reversing procedure listed above.

COOKING CHART

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

RECOMMENDED TEMPERATURES, TIMES AND LOADS FOR ROASTING

Meat roasting is most satisfactory at temperatures of 225° to 325°F. for Beef, Lamb, Poultry and Ham; 325° for fresh Pork as recommended by USDA and American Meat Institute.

A pan, approximately 12" x 20" x 1", 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 2 1/2 ".

Cooking time and shrinkage may vary with roasting temperature, cut and 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	TEMPERATURE	LOAD CONTROL SETTING	APPROXIMATE TIMES
Standing Rib Roasts — Oven Ready	250°F	Hi	3 to 4 Hrs. — Rare
			4 to 4 1/2 Hrs. — Med.
Rolled Rib Roasts — 20 to 22 Ibs.	275°F	Hi	4 Hrs. — Med.
Veal Roast — 15 Ibs.	300°F	Hi	3 Hrs. — Med. Well
Turkeys — 15 to 20 Ibs.	300°F	Hi	3 Hrs.
Meat Load — 8 to 10 Ibs.	350°F	Hi	45 to 60 Minutes

RECOMMENDED TEMPERATURES, FOR BAKING (ALL SNORKEL MODELS)

PRODUCT	TEMPERATURE	TIME IN MINUTES	NO. of RACKS	LOAD CONTROL SETTING
Cakes				
Sheet Cakes 18 x 26 x 1" Pan			5	Med + to Med
Scaled 4 1/2 to 6 Ibs. Per Pan	325° to 360°F	20 to 23	4	Med to Med—
Scaled 6 to 7 1/2 Ibs. Per Pan	335° to 350°F	22 to 25	4	Med to Med—
Sheet Cakes 18 x 26 x 2" Pan	300° to 325°F	25 to 35	3	Med—
Equals 2-12 x 18 x 2" Pans				
Scaled 10 to 12 Ibs. Per 18 x 26 x 2" Pan				
or 5 to 6 Ibs. Per 12 x 18 x 2" Pan				
Angel or Sponge Cakes				
Sheet Pans 18 x 26 x 1"	300° to 325°F	15 to 20	4	Lo+
Scaled 5 to 6 Lbs. Per Pan				
Loaf or Tube Pans	315° to 340°F	20 to 30	3-4	Med— to Lo
Cup Cakes	350° to 400°F	6 to 12	4	Med to Med—
Frozen Fruit Pies	350° to 375°F	30 to 45	4	Med to Med—
			3	Med—
Pumpkin or Custard Pies	300° to 350°F	30 to 45	4	Med to Med—
			3	Med— to Lo+
Cobblers				
12 x 18 x 2" or 12 x 20 x *2 1/2*	350° to 400°F	30 to 45	4	Med
			3	Med—
Meringue Pies	350° to 425°F	6 to 10	4	Med to Med—
			3	Med to Med—
			2	Med to Med—
Fruit Turnovers	350° to 375°F	15 to 25	5	Med to Med—
18 x 26 x 1" Pans			4	Med to Med—
			3	Med— to Lo+
Cookies				
Rolled or Pressed	350° to 400°F	6 to 12	5	Med to Lo+
			4	Med— to Lo+
			3	Lo+
Drop	350° to 400°F	6 to 15	5	Med to Med—
			4	Med— to Lo+
			3	Lo+
Brownies	350°F	12 to 20	5	Med to Med—
			4	Med— to Lo
Rolls—1 oz.	350° to 400°F	5 to 10	4	Med to Med—
			3	Med—
Rolls—1 1/2 to 2 1/2 ozs.	350° to 400°F	8 to 15	4	Med to Med—
			3	Med— to Lo+
Loaf Bread—1 lb.	325° to 375°F	20 to 40	3 (30 Pans)	Med—
			2 (20 Pans)	Lo +

NOTE: Pies and Cobblers; Fruit, Custard and Pumpkin Pies in tins, should be placed on 18 x 26 x 1" pans for baking.

NOTE: This chart is for models: SG-2SM, SG-22, SG-10SM & SG-1010. and E-Units. (E—Electric Ignition Option)

COOKING CHART (Continued)

RECOMMENDED TEMPERATURES, TIMES AND LOADS FOR BAKING (ALL SNORKEL MODELS)

PRODUCT	TEMPERATURE	TIME IN MINUTES	NO. OF RACKS	LOAD CONTROL
Yeast Breads				
Note: Yeast Breads should be fully proofed for best results.				
Sweet Rolls & Danish Pastries	325° to 375°F	5 to 15	4	Med to Med—
			3	Med— to Lo+
Quick Breads				
Biscuits	350° to 400°F	5 to 15	4	Med to Med—
Rolled 1/2" Thick			3	Med-to Lo +
Muffins	325° to 375°F	6 to 18	4	Med—
			3	Med— to Lo+
Corn Bread				
5 to 7 lbs. Per Pan	335° to 400°F	10 to 20	4	Med to Med—
Per 18 x 26 x 1" Pan				
8 to 20 lbs. Per 18 x 26 x 2" Pan	335° to 400°F	15 to 25	4	Med to Med—
			3	Med— to Lo +
Corn Muffins	335° to 385°F	10 to 20	4	Med to Med—
			3	Med to Lo+
OVEN "BROILING" OR "FRYING"				
Hamburger Patties				
8 Per lb.	400° to 450°F	5 to 6	4 to 6	Hi- to Med+
Med. to Well Done			2 & 3	Med+ to Med
6 Per lb.	400° to 450°F	7 to 10	4 to 6	Hi to Hi—
			2 & 3	Hi— to Med+
4 Per lb.	375° to 450°F	8 to 12	4 to 6	Hi
			2 & 3	Hi— to Med+
Fish Sticks & Portions—Frozen Breaded				
1 oz.	350° to 400°F	6 to 10	4	Hi— to Med
			2 & 3	Med + to Med—
2 1/2 to 3 ozs	350° to 375°F	8 to 15	4	Med + to Med
			2 & 3	Med to Med—
Chicken Pieces—"Broiled" or Oven "Fried"				
2 to 2 1/2 lb. Bird	375° to 425°F	8 to 15	4 to 5	Hi— to Med
			2 & 3	Med+ to Med—
2 1/2 to 3 lb. Bird	350° to 400°F	15 to 25	4	Med + to Med
			2 & 3	Med to Med—
Lobsters—1 to 1 1/2" lb.	400° to 450°F	8 to 14	2 to 4	Hi to Med
Lobster Tails—Frozen				
1/2 to 3/4 lb.	350° to 400°F	10 to 15	2 to 4	Hi—to Med
REHEATING PREPARED FOODS				
Frozen French Fries	400° to 450°F	6 to 8	4	Hi— to Med
			2 to 3	Med + to Med—
Frozen Lunches ("TV" Dinners)	350° to 400°F	10 to 12	4 to 5	Hi to Med
			2 to 3	Med+ to Med—
Frozen Entrees (3/4" to 1" Thick)	300° to 350°F	10 to 20	2 to 5	Hi to Med
Frozen Meals (8 oz.) Foil Pkg.	350° to 400°F	20 to 30	2 to 5	Hi
CASSEROLES				
Food Service Pans				
2" to 3" Deep	325° to 375°F	15 to 25		
3" to 4 " Deep	325° to 375°F	20 to 35	2 to 4	Med + to Med—
Ramikins or Foil Pans	350° to 400°F	5 to 6	4 to 5	Hi to Med+
Up to 1 1/2" Deep			2 to 4	Med+ to Med
*(Frozen 10 to 15 Minutes)				

RECOMMENDED TEMPERATURES, TIMES AND LOADS, MISCELLANEOUS PRODUCTS

Baked Potatoes				
120 Count Per 50 lbs.	400° to 450°F	20 to 25	2 to 5	Hi— to Med
100 Count Per 50 lbs.	400° to 450°F	25 to 40	2 to 5	Hi— to Med
80 Count Per 50 lbs.	400° to 425°F	30 to 50	2 to 5	Med + to Med—
Pizzas — Frozen or with Prebaked Crust	425° to 475°F	5 to 10	4	Hi— to Med
			2 & 3	Med to Med—
Melted Cheese Sandwiches	400° to 425°F	8 to 10	4	Hi— to Med
			2 & 3	Med + to Med—

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. It is, therefore, usually necessary to allow fuller proof, 2 1/2 to 3 times increase in volume for the best results.

Pies: When baking pies in your convection oven, 3 or 4 pies should be put on an 18 x 26" sheet or bun pan. This procedure helps the bottom crust to bake, makes handling easier and reduces the possibility of boll over spoiling the appearance of the pies on the lower racks.

NOTE: This chart is for models: SG-2SM, SG-22, SG-10SM & SG-1010, & E-Units. (E—Electric Ignition Option)

REPLACEMENT PARTS LIST AND PHOTOGRAPHS

SG-22, SG-1010, SG-2SM, SG-10SM, SG-22E, SG-1010E. SG-2SME, & SG-10SME

WARNING ALL SERVICE PERSONNEL

WHEN SERVICING THIS EQUIPMENT, USE ONLY CERTIFIED (U.L. OR A.G.A.) CONTROLS, DUPLICATING THOSE ORGINALLY SUPPLIED ON THIS EQUIPMENT BY VULCAN-HART CORP. **DO NOT SUBSTITUTE** COMPONENTS WITH DIFFERENT MODEL NUMBERS.

DO NOT SUBSTITUTE COMPONENTS WITH DIFFERENT MANUFACTURING NAMES.

DO NOT SUBSTITUTE COMPONENTS WITH REBUILT CONTROLS. ANY UNAUTHORIZED SUBSTITUTION OF CONTROLS AS STATED ABOVE MAY BE A SAFETY HAZARD AND WILL AUTOMATICALLY VOID THE WARRANTY AND THE CERTIFICATION ASSOCIATED WITH THIS EQUIPMENT.

Replacement Part Orders:

The following information must accompany a replacement parts order or it cannot be filled.

A. Model and serial number
B. Type of gas
C. Unit voltage, amperage and motor phase
D. Appliance finish black, gray, stainless steel etc.

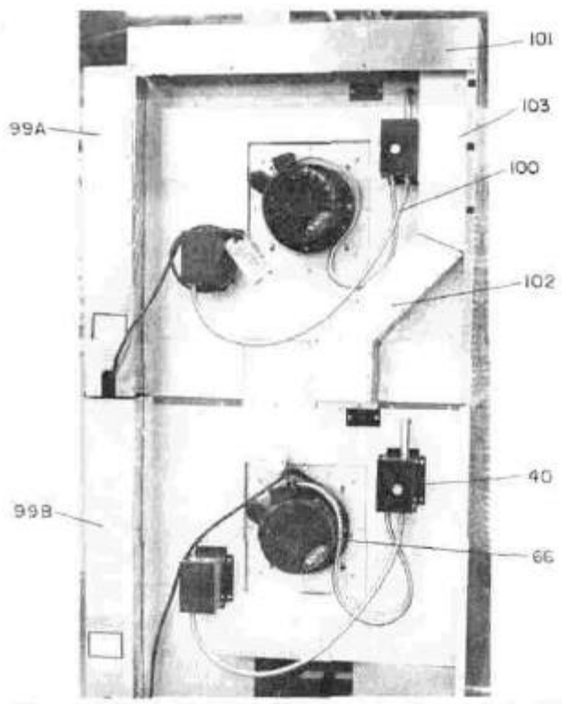
This information may be found on the unit rating plate located inside the lower front panel.
Parts may be ordered from your dealer, service agency, or parts distributor.

PARTS-REAR EXTERIOR

ITEM NO.	DESCRIPTION	PART NO. SG-10, SMT & E-UNITS	QTY. SG-10, SMT & E-UNITS	PART NO. SG-10, SMB & E-UNITS	QTY. SG-10 MB & E-UNITS	PART NO. SG-1010T & E-UNITS	QTY. 1010T& E-UNITS	PART NO. SG-22B & E-UNITS	QTY. SG-22B & E-UNITS
40	LAMP BOX ASSEMBLY	111395-G1	2	111395-G1		111395-G1	2	111395-G1	2
66	MOTOR 120V	111205-5	1	111205-5	1	111205-5	1	111205-5	1
66A	MOTOR 480V (NS)	111205-8	1	111205-8	1	111205-8	1	111205-8	1
100	CONDUIT	114540-B35	2	114540-B35	2	114540-B35	2	114540-B35	2
99	UPPER CONTROL PANEL EXT. ASSY. (NS)	114629-G2	1						
99A	UPPER CONTROL PANEL EXT.ASSY.					114629-G4	1		
99 B	COVER LOWER EXT. ASSY.			114649-G2	1	111492-G5	1	114649-G2	1
101	FLUE DEFLECTOR ASSY.							111457-G1	1
102	FLUE CLOSURE ASSY.			111457-G1	1	111456-2	1		
103	FLUE STACK								

ITEM NO.	DESCRIPTION	PART NO. SG-2SMT & E-UNITS	QTY. SG-2, SMT & E-UNITS	PART NO. SG-2SMB & E-UNITS	QTY. SG-2 SMB & E-UNITS	PART NO. SG-22T & E-UNITS	QTY. SG22T & E-UNITS	PART NO. SG-22B & E-UNITS	QTY. SG-22B & E-UNITS
40	LAMP BOX ASSEMBLY	111395-G1	2	111395-G1		111395-G1	2	111395-G1	2
66	MOTOR 120V	111205-5	1	111205-5	1	111205-5	1	111205-5	1
66A	MOTOR 480V (NS)	111205-8	1	111205-8	1	111205-8	1	111205-8	1
100	CONDUIT	114540-B35	2	114540-B35	2	114540-B35	2	114540-B35	2
99	UPPER CONTROL PANEL EXT. ASSY. (NS)	114629-G2	1						
99A	UPPER CONTROL PANEL EXT. ASSY					114629-G3	1		
99B	COVER LOWER EXT. ASSY.			114649-G1	1	111492-G5	1		
101	FLUE DEFLECTOR ASSY.							111457-G1	1
102	FLUE CLOSURE ASSY.	111457-G1				111456-2	1		
103	FLUE STACK								

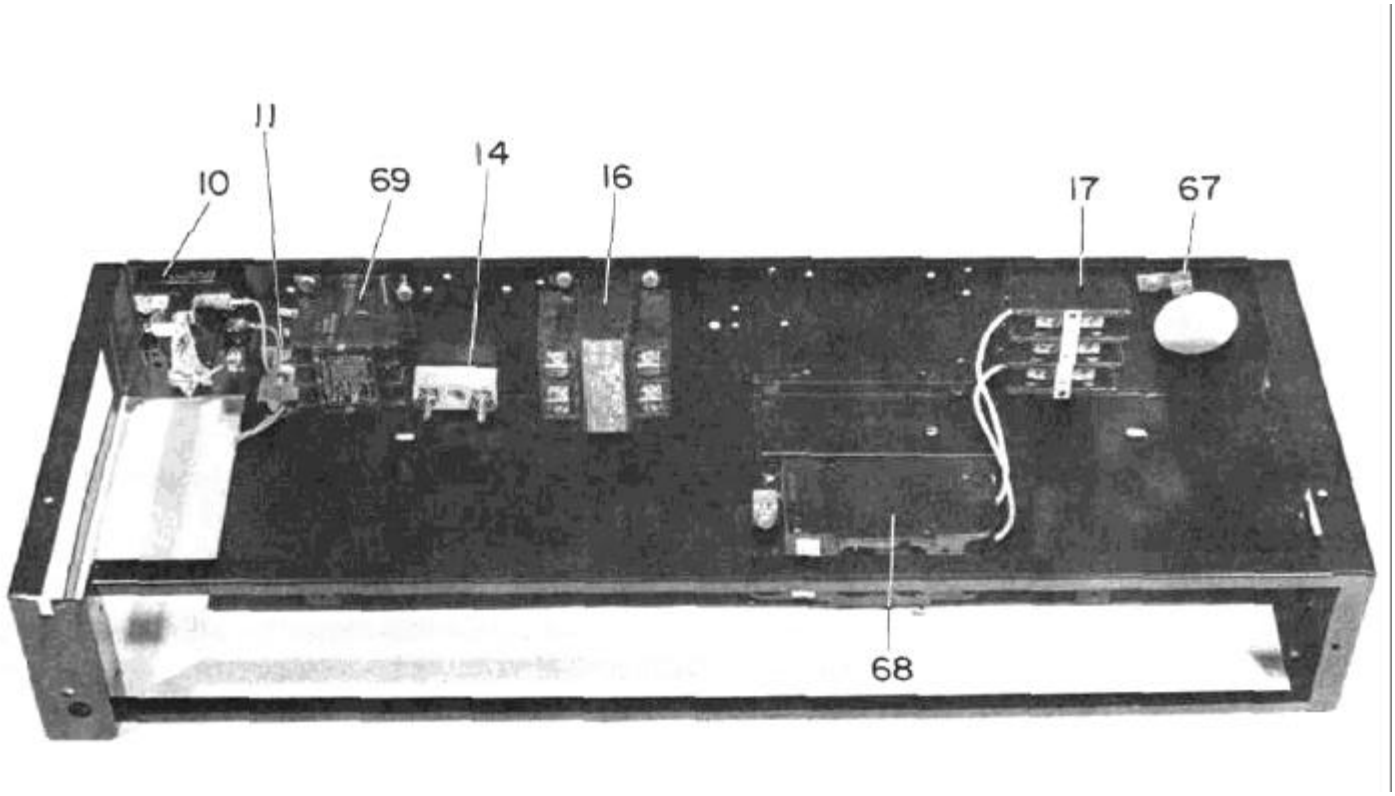
T-TOP OVEN IN DOUBLE OVEN **B-BOTTOM OVEN IN DOUBLE OVEN** **E-ELECTRONIC IGNITION**



PARTS-BREAKER HOUSING

ITEM NUMBER	DESCRIPTION (240 VOLT, 1 PHASE) (SG-2SMT, 10 SMT)	PART NO. SG2SM, SG-22 & E-UNITS	QUANTITY SG2SM, SG-22 & E-UNITS	PART NO. SG-10SM SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
10	RELAY	111497-A2	3	111497-A2	3
11	BUZZER	111499-1	1	111499-1	1
14	PORCELAIN BLOCK	114881-1	1	114881-1	1
16	TRANSFORMER	111500-6	1	111500-6	1
17	TERMINAL BLOCK (3-POLE)	110472-8	1	110472-8	1
67	GROUND LUG	3.1500/06089	1	3.1500/06089	1
68	BREAKER	111501-5	1	111501-5	1

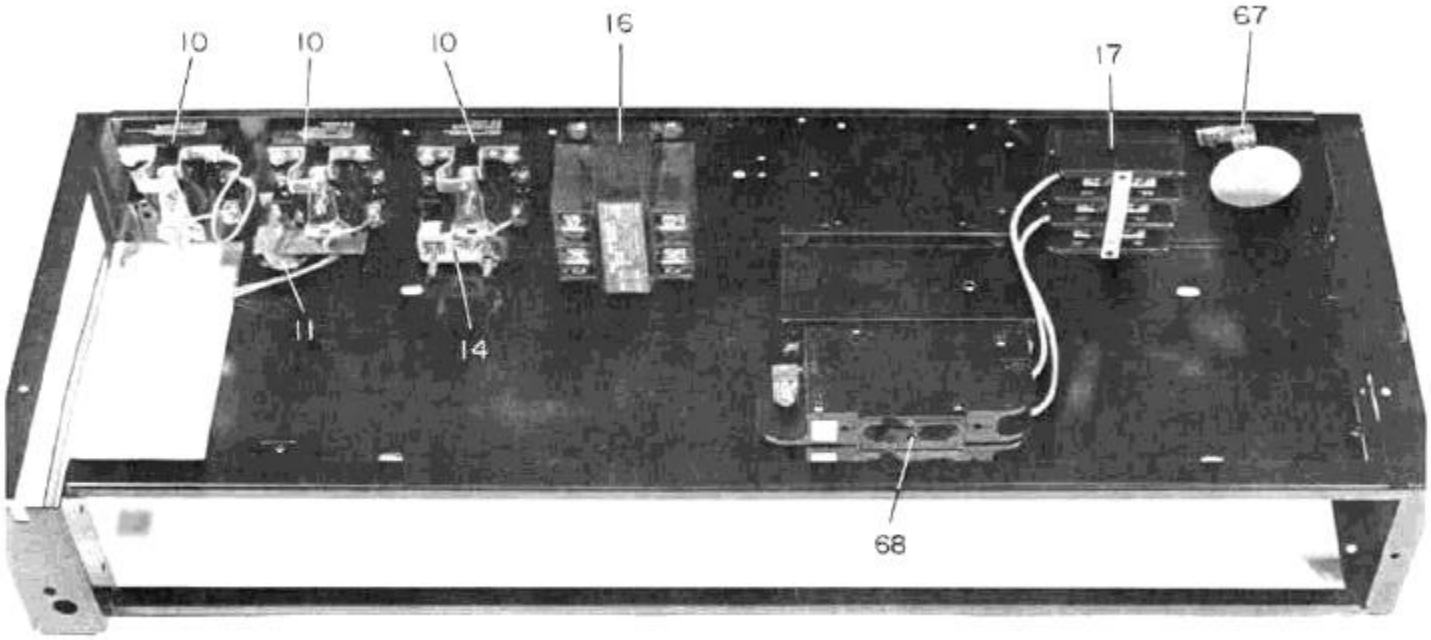
T-TOP OVEN IN DOUBLE OVEN **E—ELECTRONIC IGNITION**



PARTS-BREAKER HOUSING (Continued)

ITEM NUMBER	DESCRIPTION 208, 240 VOLT (SG-2SM, 10SM, 22 & 1010)	PART NO. SG-2SM SG-22 & E-UNITS	QUANTITY SG-2SM SG-22 & E-UNITS	PART NO. SG-10SM SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
10	RELAY	111497-A2	1	111497-A2	3
11	BUZZER (NS)	111499-1	1	111499-1	1
14	PORCELAIN BLOCK	114881-1	1	114881-1	1
16	TRANSFORMER	111500-6	1	111500-6	1
17	TERMIMAL BLOCK (3-POLE)	110472-8	1	110472-8	1
67	GROND LUG	3.1500/06089	1	3.1500/06089	1
68	BREAKER	111501-5	2	111501-5	2
69	CONTACTOR (FOR (OPTIONAL 3-PHASE MOTOR)	111497-C2	1	111497-C2	1
12	BREAKER MOUNTING BRKT.	114648-1	1 (2)-22	114648-1	1 (2)1010

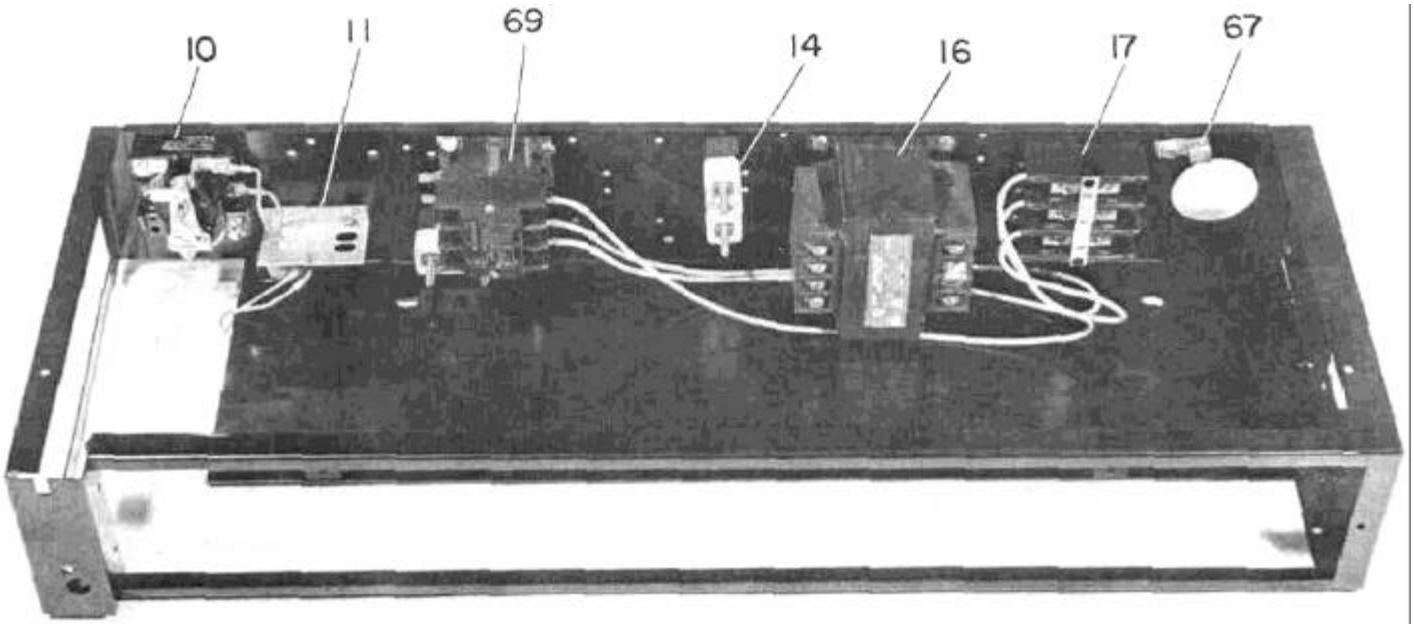
NS—NOT SHOWN ON PHOTOGRAPH **E—ELECTRONIC IGNITION**



PARTS-BREAKER HOUSING (Continued)

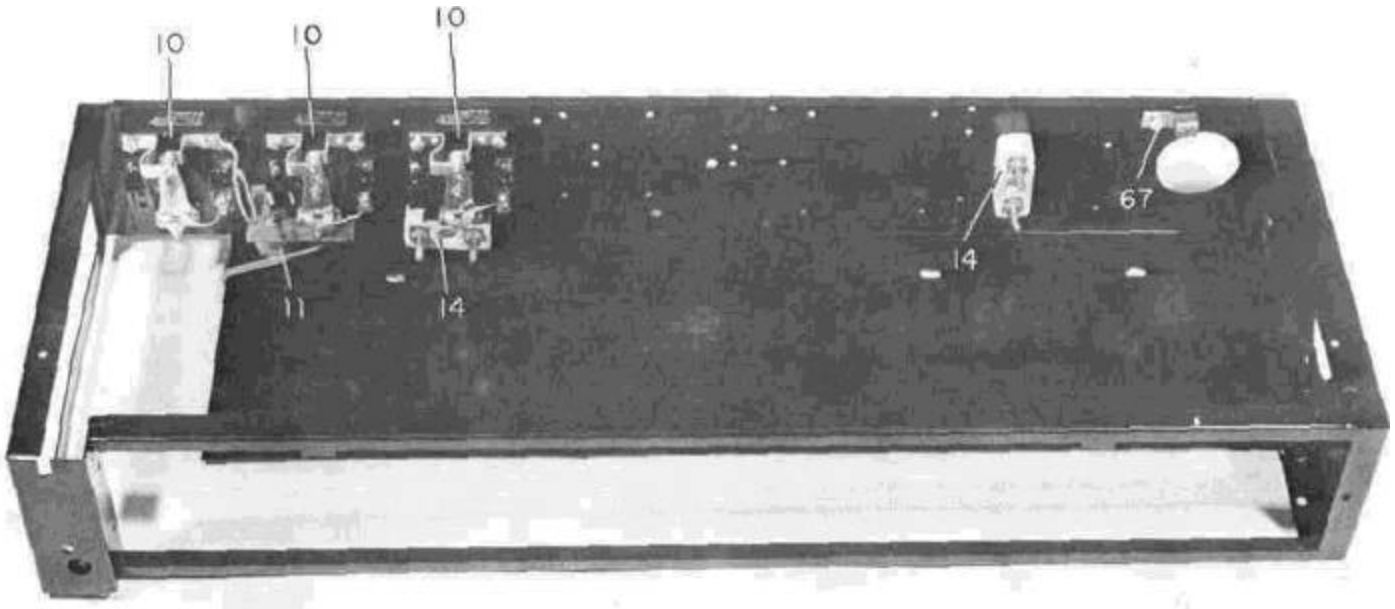
ITEM NUMBER	DESCRIPTION (480 VOLT SG-2SM, 10SM, 22 & 1010)	PART NO. SG-2SM & SG-22 & E-UNITS	QUANTITY SG-2SM & SG-22 & E-UNITS	PART NO. SG-10SM & SG-1010 & E-UNITS	QUANTITY SG-10SM & SG-1010 & E-UNITS
10	RELAY	111497-A1	1	111497-A1	1
11	BUZZER	111499-2	1	111499-2	1
14	PORCELAIN BLOCK	114881-1	2	114881-1	2
16	TRANSFORMER	111500-7	1	111500-7	1
17	TERMINAL BLOCK	110472-8	1	110472-8	1
18	FUSE HOLDER (NS)	113053-1	1	113053-1	1
25	FUSE 3A. GLASS (NS)	3.1105-19	1	3.1105.19	1
67	GROUND LUG	3.1500/06089	1	3.1500/0689	1
69	CONTACTOR 3-POLE,	111497-C1	1	114971-C1	1

NS—NOT SHOWN ON PHOTOGRAPH **E—ELECTRONIC IGNITION**



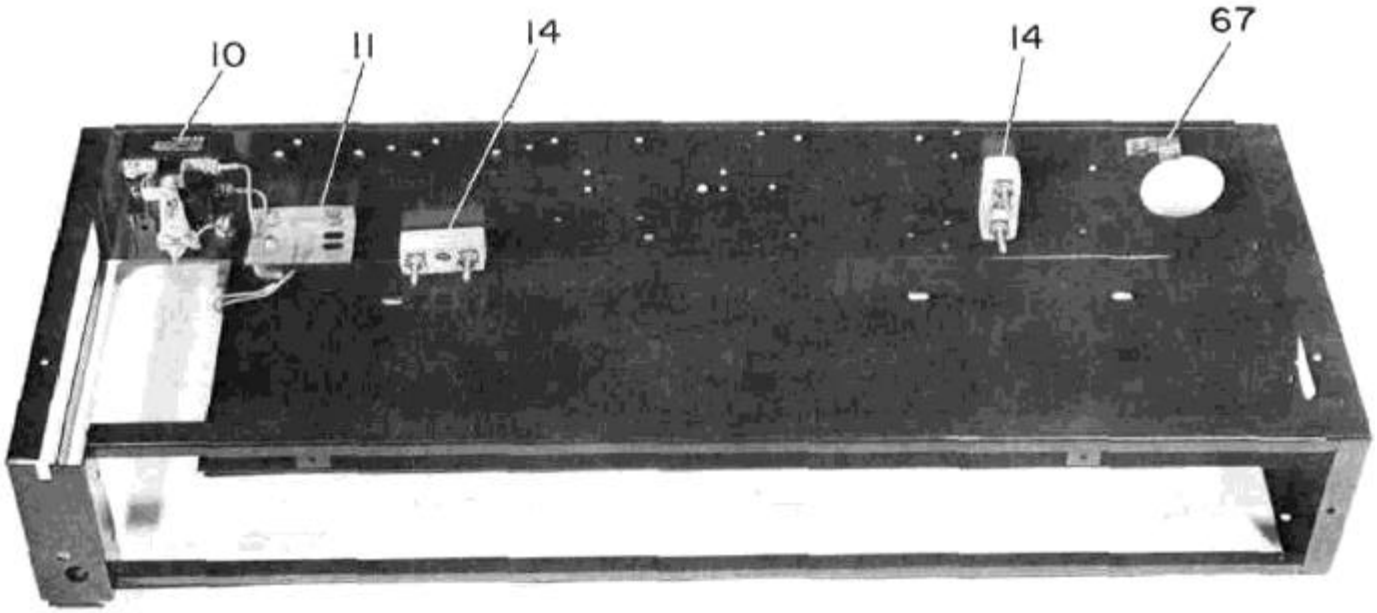
PARTS-BREAKER HOUSING (Continued)

ITEM NUMBER	DESCRIPTION (120 VOLT SG-2SMT, 10SMT)	PART NO. SG2SMT & E-UNITS	QUANTITY SG2SMT & E-UNITS	PART NO. SG-10SMT & E-UNITS	QUANTITY SG-10SMT & E-UNITS
10	RELAY	111497-A1	3	111497-A1	3
11	BUZZER	111499-2	1	111499-2	1
67	GROUND LUG	3.1500	1	3.1500	1
14	PORCELAIN BLOCK	114881-1	1	114881-1	1
	E—ELECTRONIC IGNITION		**T-TOP OVEN IN DOUBLE OVEN**		



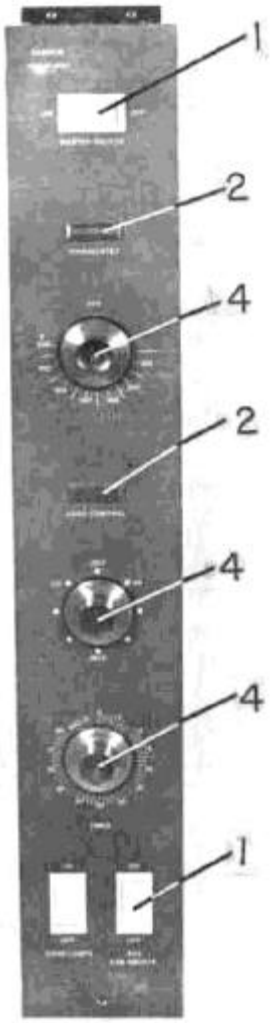
PARTS-BREAKER HOUSING

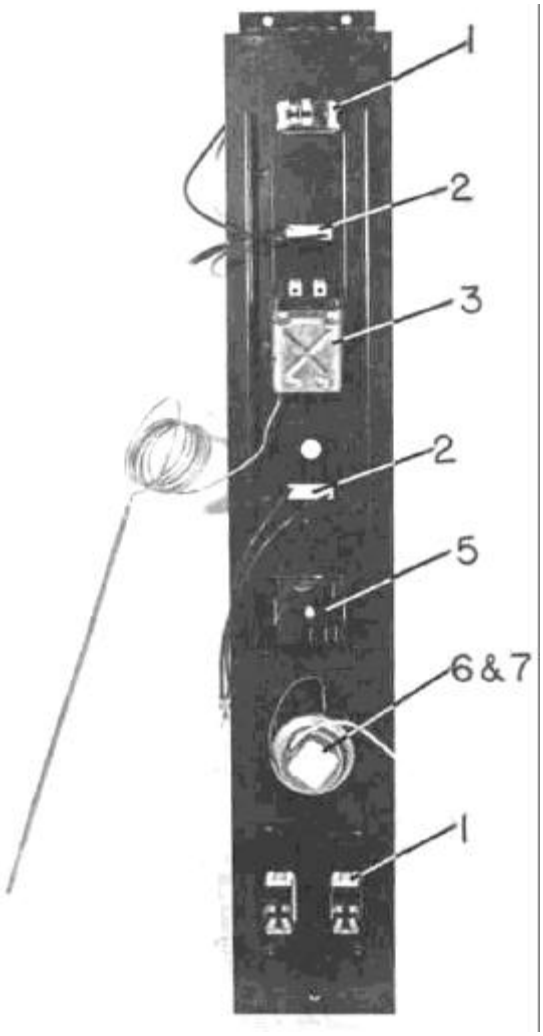
ITEM NUMBER	DESCRIPTION (120 VOLT, SG-2SM, 10SM, 22 & 1010)	PART NO. SG2SM, SG-22 & E-UNITS	QUANTITY SG2SM, SG-22 & E-UNITS	PART NO. SG-10SM SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
10	RELAY	111497-A1	1	111497-A1	1
11	BUZZER	111499-2	1	111499-2	1
14	PORCELAIN BLOCK	114881-1	2	114881-1	2
67	GROUND LUG	3.1500/06089	1	3.1500/06089	1
	E—ELECTRONIC IGNITION				



PARTS-CONTROL PANEL

ITEM NUMBER	DESCRIPTION 208/240V, 120V, 480V	PART NO. SG-2SM SG-22 & E-UNITS	QUANTITY SG-2SM SG-22 & E-UNITS	PART NO. SG-10SM SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
1	ROCKER SWITCH	111496-B1	3	111496-B1	3
2	SIGNAL LIGHT	111496-E4	2	111496-E4	2
3	THERMOSTAT	111506-3	1	111506-3	1
4	CONTROL KNOB	111242-1	3	111242-1	3
5	INFINITE SWITCH	111503-1	1	111503-1	1
6	TIMER 60 MIN. 120V	111690-1	1	111690-1	1
	TIMER 60 MIN. 240V	111690-2	1	111690-2	1
7	TIMER 5 HR. (OPTIONAL 120V) (NS)	111690-3	1	111690-3	1
	TIMER 5 HR. (OPTIONAL 240V) (NS)	111690-4	1	111690-4	1
8	DECAL FOR 5 HR. TIMER (NS)	111693-1	1	111693-1	1
9	MYLAR CONTROL PLATE	112450-1	1	112450-1	1
NS—NOT SHOWN ON PHOTOGRAPH				**ELECTRONIC IGNITION**	

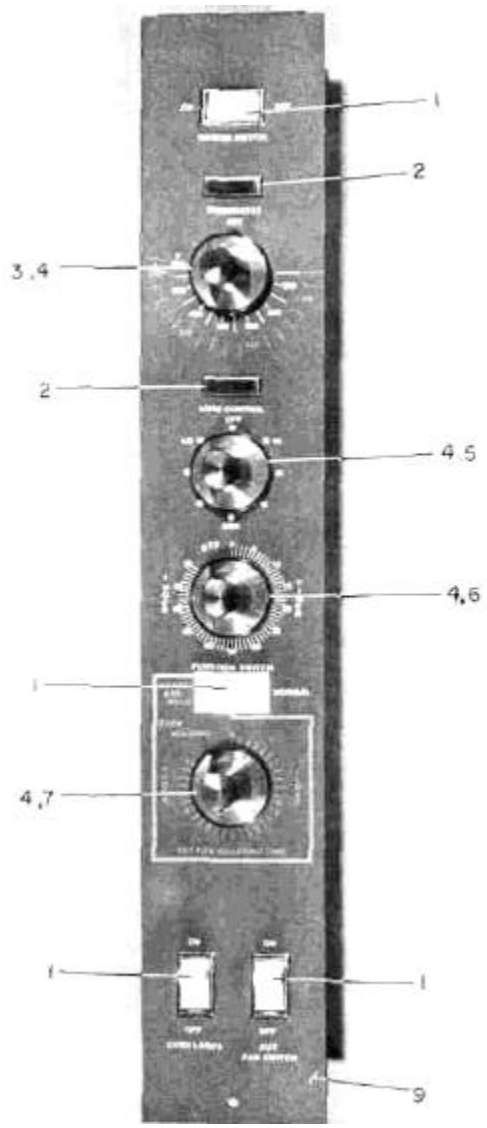




CONTROL PANEL (Continued)

ITEM NUMBER	DESCRIPTION 120, 208/240V (SG-2SM, -22,-10SM,-1010)	PART NO. SG-2SM & SG-22 & E-UNITS	QUANTITY SG-2SM & SG-22 & E-UNITS	PART NO. SG-10SM & SG-1010 & E-UNITS	QUANTITY SG-10SM & SG-1010 & E-UNITS
1	ROCKER SWITCH	111496-B1	4	111496-B1	3
2	SIGNAL LIGHT	111496-E4	2	111496-E4	2
3	THERMOSTAT	111506-3	1	111506-3	1
4	CONTROL KNOB	111242-1	4	111242-1	4
5	INFINITE SWITCH (NS)	111503-1	1	111503-1	1
6	TIMER, 60 MINUTE, 120V	111690-1	1	111690-1	1
6A	TIMER, 60 MINUTE, 240V	111690-2	1	111690-2	1
7	TIMER, 5 HOUR (OPTIONAL 120 V)	111690-3	1	111690-3	1
7A	TIMER, 5 HOUR (OPTIONAL 240 V)	111690-4	1	111690-4	1
9	MYLAR CONTROL PLATE	113931-1	1	113931-1	1

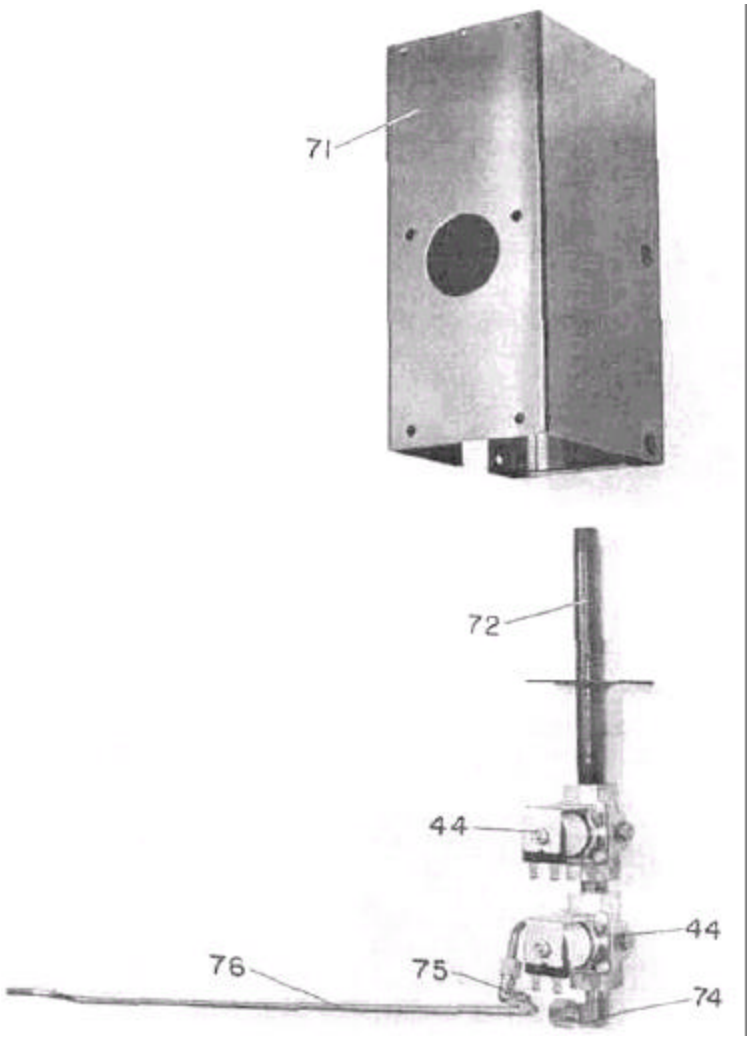
NS—NOT SHOWN ON PHOTOGRAPH **E—ELECTRONIC IGNITION**



PARTS-SOLENOID HOUSING (NS) NOT SHOWN BY PHOTO

ITEM NUMBER	DESCRIPTION	PART NO. SG2SM, SG-22 & E-UNITS	QUANTITY SG2SM, SG-22 & E-UNITS	PART NO. SG-10SM, SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
42	SOLENOID VALVE	111497-F1	2	111497-F1	2
44	ELBOW 90° COMP. FITTING 1/8 MPT X 1/4 CC	114678-2	1	114678-2	1
71	SOLENOID HOUSING ASSEMBLY	114653-G1	1	114653-G1	1
72	INLET PIPE ASSEMBLY	112380-G1	1	112380-G1	1
74	90° ELBOW FITTING 3/8NPT TO 7/16 CC ST.	114800-4	1	114800-4	1
75	FITTING 90° ELBOW 1/4 CC x 1/4 CC	103638-1	1	103638-1	1
76	PILOT TUBE SOLENOID TO ADJ. VALVE	114634-1	1	114634-1	1
78A (NS)	PILOT FEED TUBE (STANDARD)	114643-1	1	114643-1	1
78	PILOT FEED TUBE (ELECTRONIC IGNITION)	112485-1	1	112485-1	1

NOTE: PHOTO SHOWS ELECTRONIC IGNITION CONSTRUCTION **E—ELECTRONIC IGNITION**

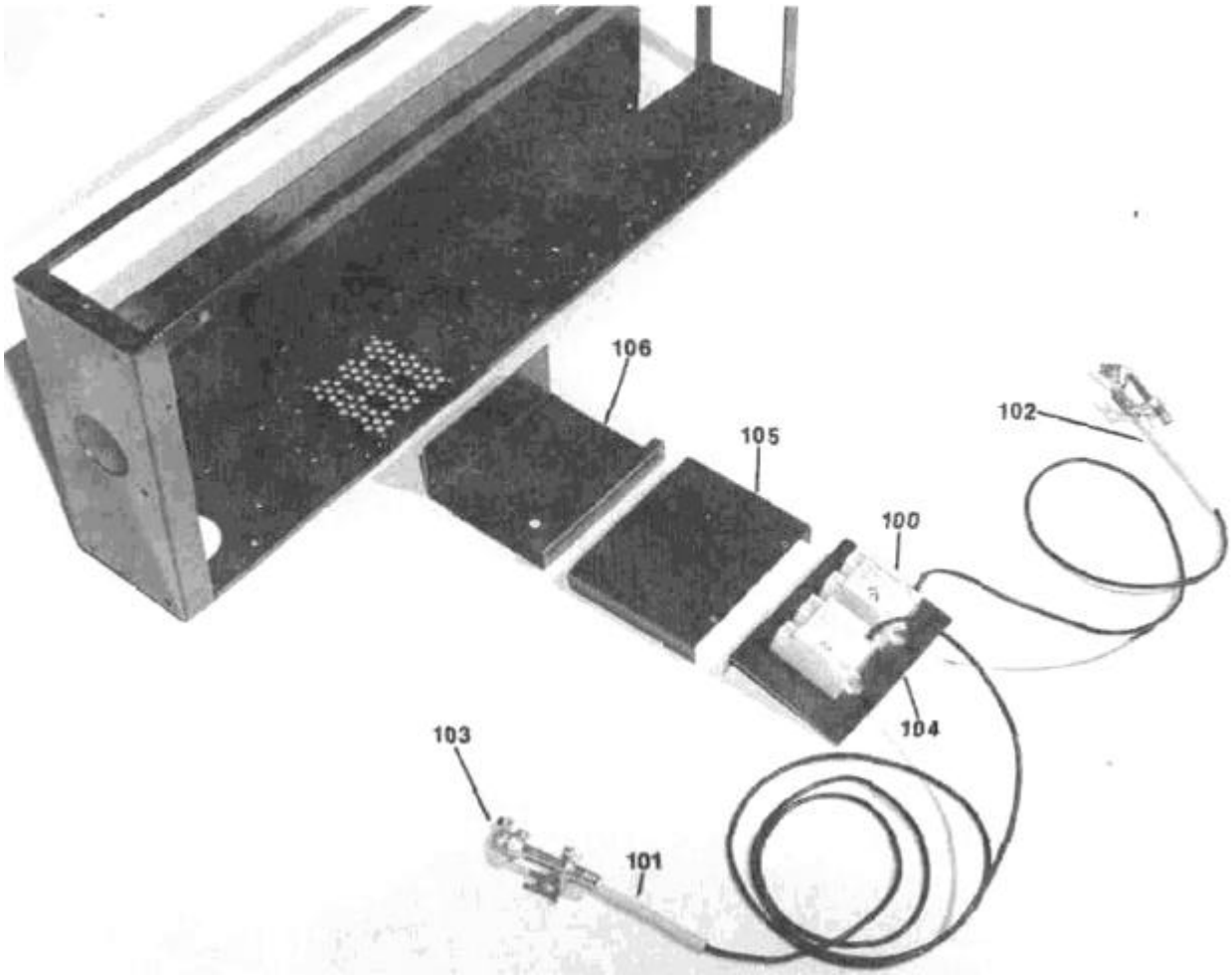


PARTS--ELECTRONIC IGNITION (FOR SUFFIX "E" UNITS)

NOTE: FOR UNITS EQUIPPED WITH ROBERTSHAW ELECTRONIC IGNITION SYSTEM.

ITEM NUMBER	DESCRIPTION	PART NUMBER	QUANTITY SG-2SME SG-10SME	QUANTITY SG-22E, SG-1010E
100	SM-2 SPARK MODULE	114806-1	2	4
101	LT. HD. 58" WIRE WITH ELECTRODE	114805-1	1	2
102	RT. HD. 30" WIRE WITH ELECTRODE	114805-2	1	2
103	43-U4 PILOT	114658-1	2	4
104	BRACKET	114671-2	1	2
105	INSULATION COVER	114672-1	1	2
106	BREAKER MOUNTING BRACKET	114648-1	1	2
107	INSULATION (NS) 4" x 5" x 1"	114616-6	1	2
108	FAN-115V (NS)	115207-1	1	2

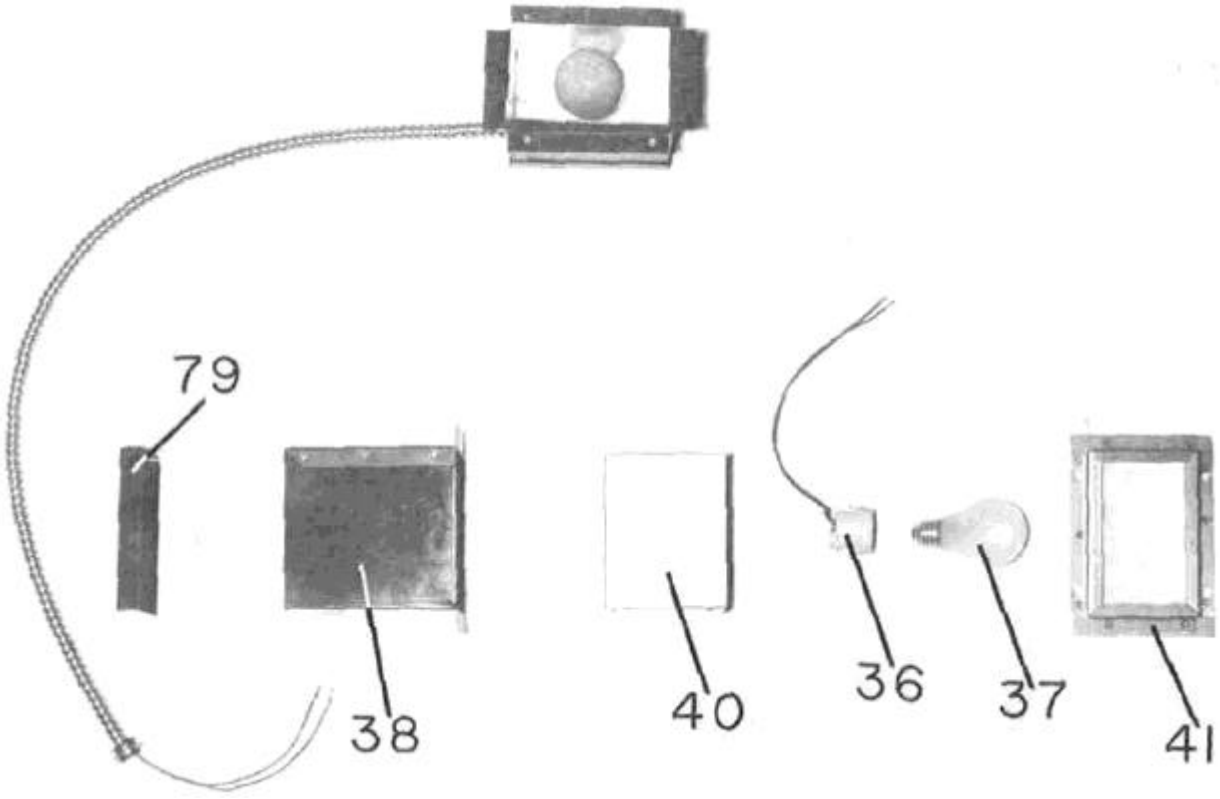
NS—NOT SHOWN IN PHOTOGRAPH



PARTS-OVEN LAMP ASSEMBLY

ITEM NUMBER	DESCRIPTION	PART NO. SG-2SM SG-22 & E-UNITS	QUANTITY SG-2SM SG-22 & E-UNITS	PART NO. SG-10SM SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
36	LAMP SOCKET	21201-20	2	21201-20	2
37	LIGHT BULB 155V 50W (FROSTED)	107793-2	2	107793-2	2
38	LAMP BOX HOUSING ASSEM.	111395-G1	2	111395-G1	2
39	LAMP BOX GASKET (NS)	111206-1	2	111206-1	2
40	LAMP BOX ASSEMBLY	111394-G1	2	111394-G1	2
41	LAMP WINDOW ASSEMBLY	111175-G1	2	111175-G1	2
79	REAR CLOSURE	112827-1	2	112827-1	2

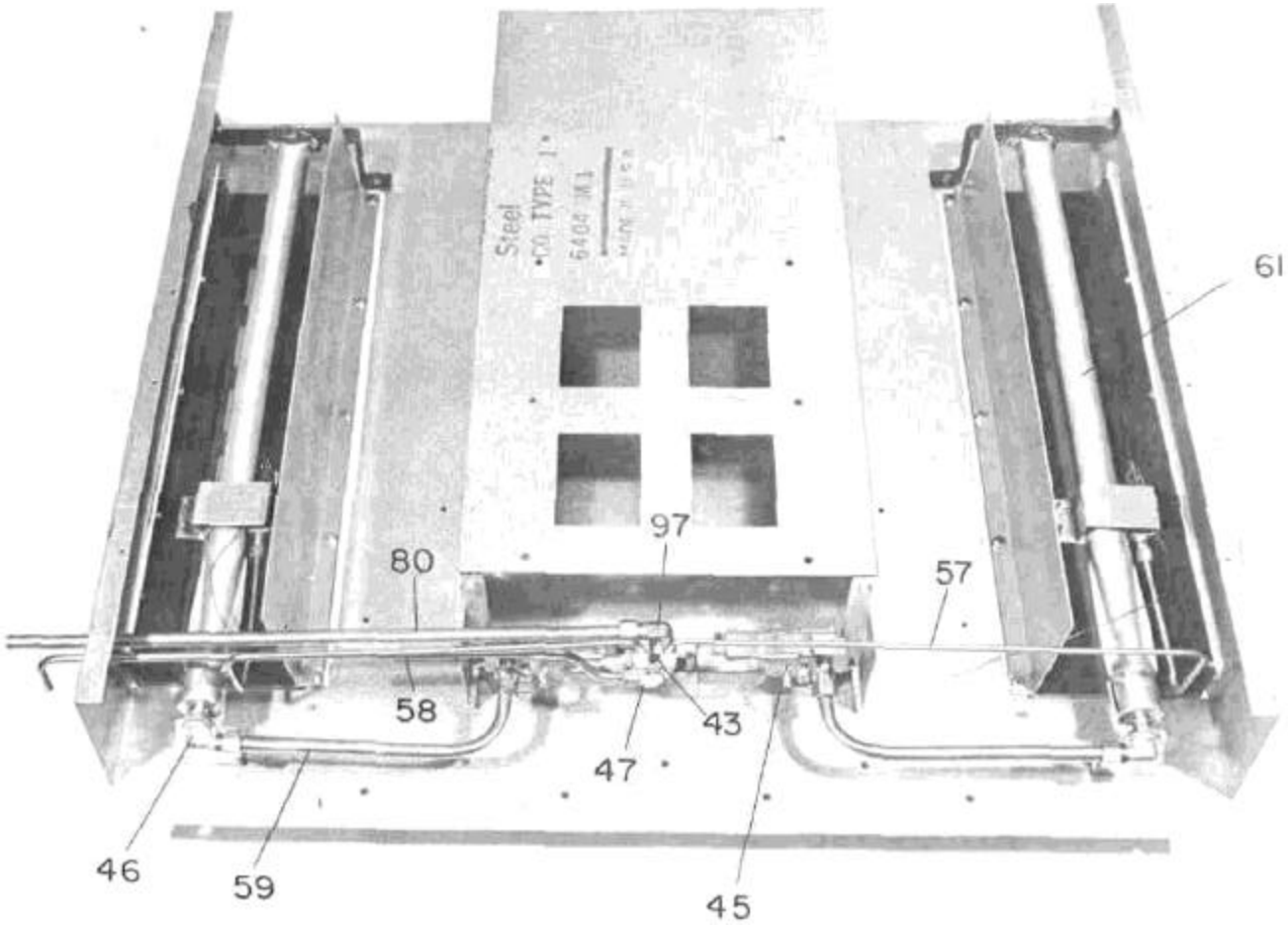
NS—NOT SHOWN ON PHOTOGRAPH **E-ELECTRONIC IGNITION**



PARTS-FLAME CHAMBER

ITEM NUMBER	DESCRIPTION	PART NO. SG2SM, SG-22 & E-UNITS	QUANTITY SG2SM, SG-22 & E-UNITS	PART NO. SG-10SM, SG-1010 & E-UNITS	QUANTITY SG-10SM, SG-1010 & E-UNITS
43	DOUBLE PILOT VALVE	109557-4	1	109557-4	1
46	BURNER NOZZLE 90°	104079-F	2	104079-F	2
57	RIGHT PILOT TUBE 3/16"	114633-2	1	114633-2	1
58	LEFT PILOT TUBE 3/16"	114633-1	1	114633-1	1
59	LEFT & RIGHT NOZZLE TUBE	114619-1	2	114619-1	1
60	BURNER SPUD (NAT.) (NS)	10901-36	2	10901-33	2
60A	BURNER SPUD (PROPANE) (NS)	10901-52	2	10901-53	2
61	BURNER ASSEMBLY	112709-G1	2	112709-G2	2
80	MAIN GAS SUPPLY TUBE	114620-1	1	114620-1	1
45	OVEN PILOT PROTECTION	114613-1	2	114613-F	2
47	FITTING ELBOW 1/8FM X 1/4CC (NS)	114678-2	1	114678-2	1
52	7/16" CC TEE	114614-1	1	114614-1	1
97	7/16" CC ELBOW	103638-3	1	103638-3	1

NS—NOT SHOWN IN PHOTOGRAPH **E—ELECTRONIC IGNITION**

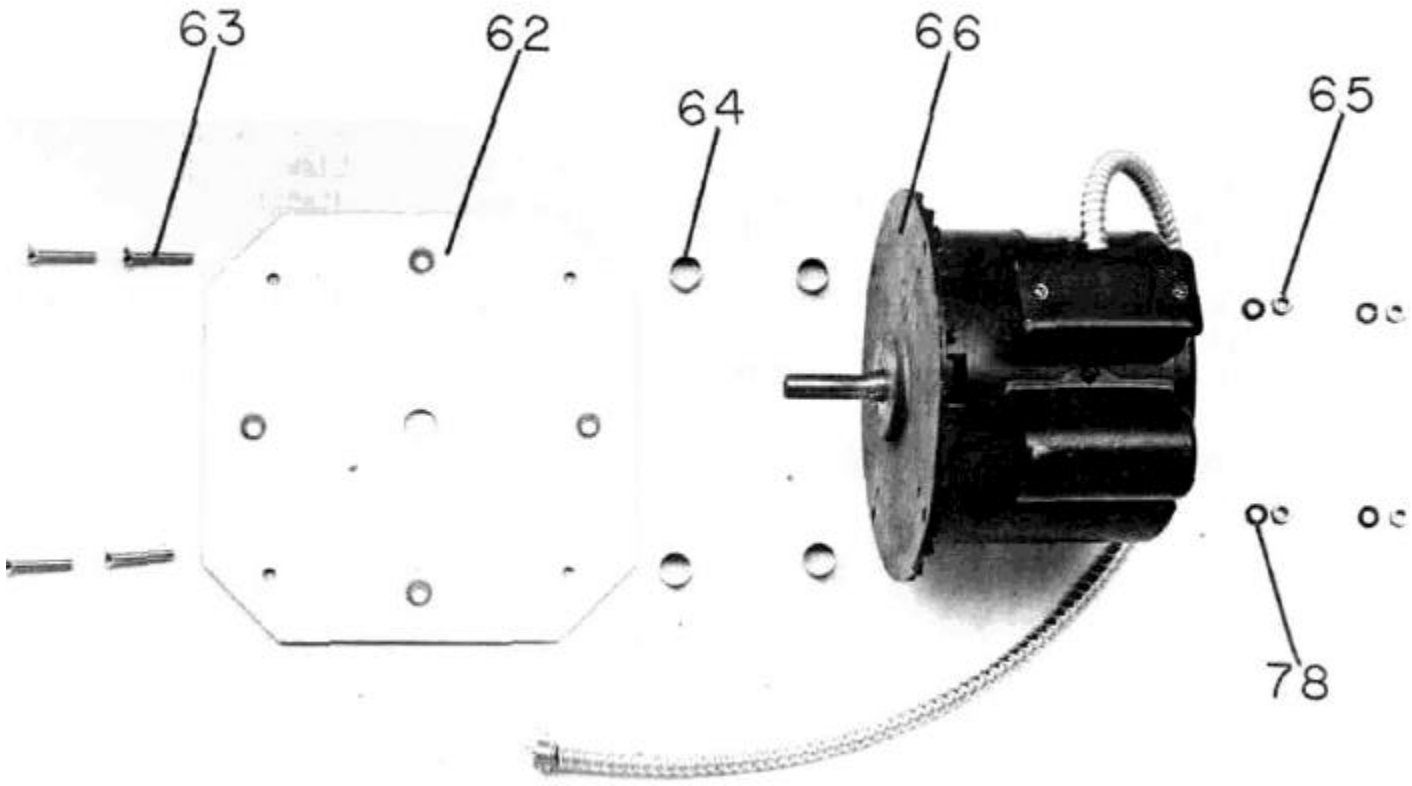


NOTE: PHOTO SHOWS ALTERNATE HARPER-WYMAN AUTOMATIC VALVE CONSTRUCTION.

PARTS-MOTOR

ITEM NUMBER	DESCRIPTION	SG-2SM, SG-22 & E-UNITS	QUANTITY SG-2SM, SG-22 & E-UNITS	SG-10SM SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
62	MOTOR MOUNT	112629-1	1	112629-1	1
63	MOUNTING BOLT	102085-20	4	102085-20	4
64	MOTOR SPACER	112630-1	4	112630-1	4
65	LOCK NUT	104084-9	4	104084-9	4
66	MOTOR 120V OR 208/240 1 PH	111205-5	1	111205-5	1
	Motor 480V 3 PH OR				
	208/240 3 PH OPTION	111205-8	1	111205-8	1
78	LOCKWASHER (NS)	3.0201/102524	4	3.0201/102524	4

NS—NOT SHOWN ON PHOTOGRAPH **E—ELECTRONIC IGNITION**

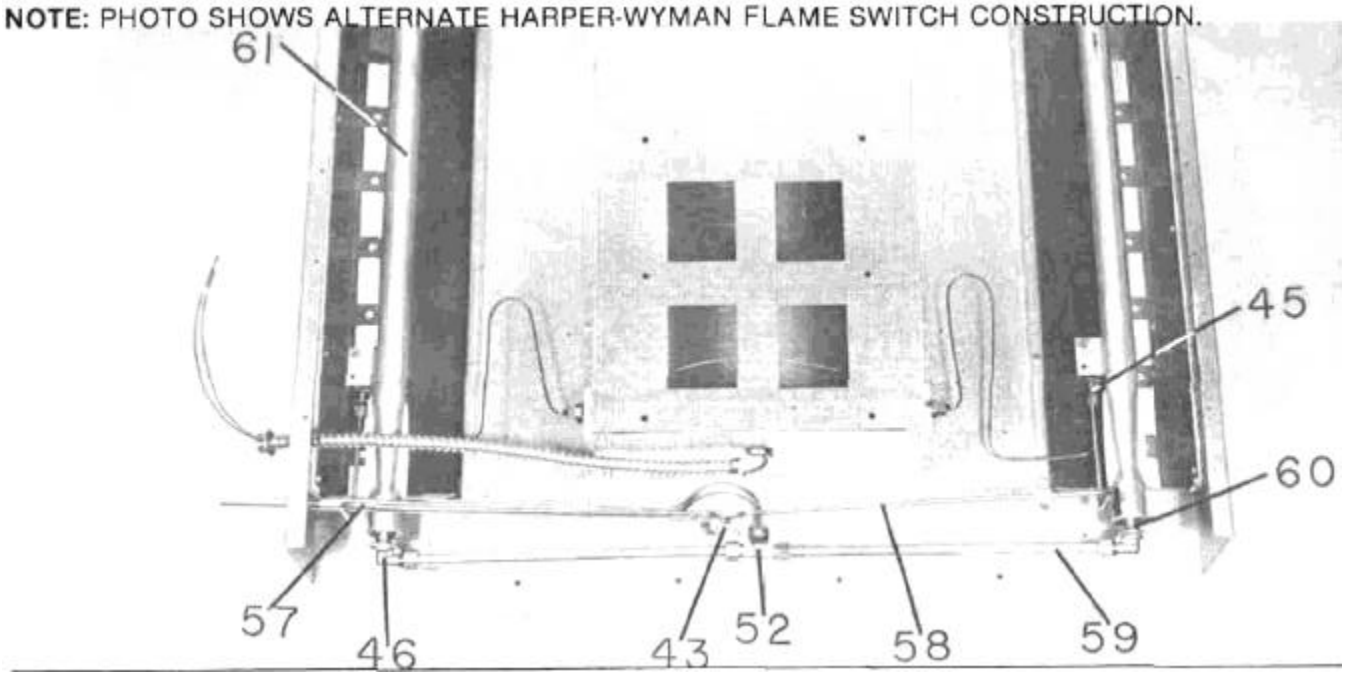


PARTS-FLAME CHAMBER

ITEM NUMBER	DESCRIPTION	PART NO. SG-2SM, SG-22 & E-UNITS	QUANTITY SG2SM, G-22 & E-UNITS	PART NO. SG-10SM, SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010& E-UNITS
42	SOLENOID VALVE (ND)	111497-F1	2	111497-F1	2
43	DOUBLE PILOT VALVE (NS)	104079-F	2	104079-F	2
44	ELBOW 1/8M TO 1/4 CC (NS)	13178	1	13178	1
45	OVEN PILOT PROTECTION (NS)	114613-F	2	114613-F	2
46	BURNER NOZZLE 90° (NS)	104079-F	2	104079-F	2
47	FITTING ELBOW				
	1/8 FM X 1/4 CC (NS)	114678-2	1	114678-2	1
48	3/4 CLOSE NIPPLE (NS)	113500-E11	1	113500-E11	1
49	SHUT-OFF VALVE (NS)	111420-1	1	111420-1	1
50	REGULATOR 6" RV43A				
	(NAT. GAS) (NS)	108279-9	1	108279-1	1
50A	REGULATOR 10RV-43				
	(PROPANE GAS) (NS)	108279-3	1	108279-3	1
52	TEE FITTING (NS)	114614-1	1	114614-1	1
53	COUPLING 3/4 x 3/8 (NS)	114782-3	1	114782-3	1
54	3/8 CLOSE NIPPLE (NS)	113500-C6	1	113500-C6	1
55	MAIN GAS SUPPLY				
	7/16 TUBE (NS)	114620-1	1	114620-1	1
57	RIGHT PILOT TUBE 3/16 (NS)	114633-2	1	114633-2	1
58	LEFT PILOT TUBE 3/16 (NS)	114633-1	1	114633-1	1
59	LT. & RT. NOZZLE TO VALVE				
	TUBES 7/16 (NS)	114619-1	2	114619-1	2
60	BURNER SPUD (NAT.) (NS)	10901-36	2	10901-33	2
60A	BURNER SPUD (PROPANE) (NS)	10901-1/6	2	10901-53	2
61	BURNER ASSEMBLY (NS)	112709-G1	2	112709-G2	2

NS— NOT SHOWN IN PHOTOGRAPH **E—ELECTRONIC IGNITION**

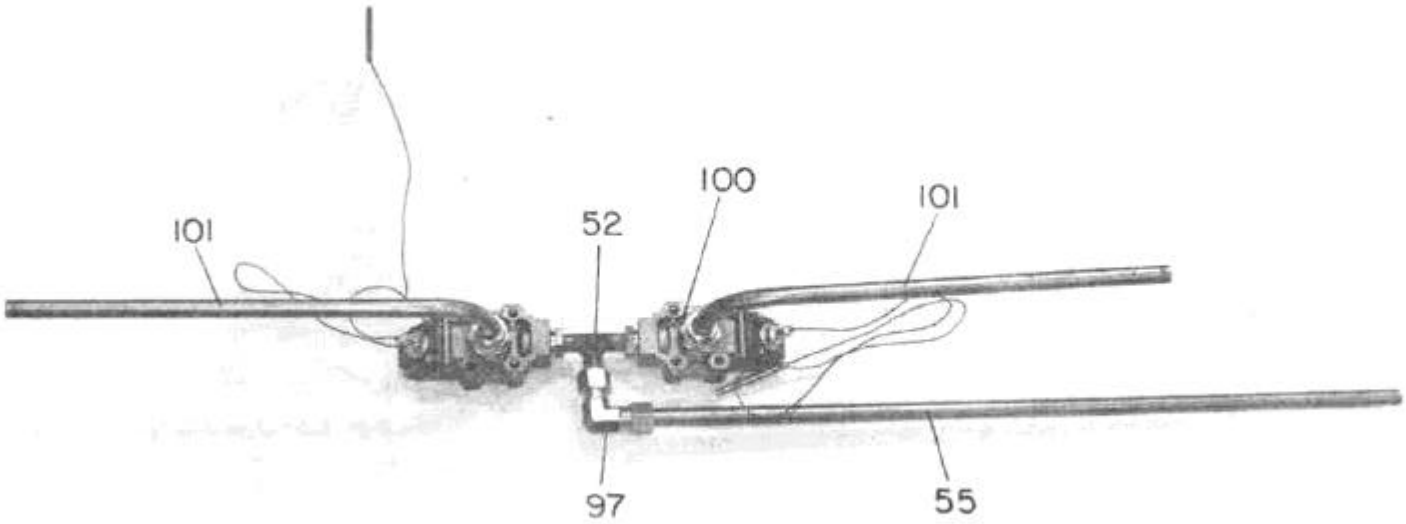
NOTE: PHOTO SHOWS ALTERNATE HARPER-WYMAN FLAME SWITCH CONSTRUCTION.



PARTS-PILOT PROTECTION SYSTEM

ITEM NUMBER	DESCRIPTION	PART NO. SG-2SM, SG-22 & E-UNITS	QUANTITY SG-2SM, SG-& 22 & E-UNITS	PART NO. SG-10SM, SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UN ITS
100	OVEN PILOT PROTECTION	114644-1	2	114644-1	2
101	LEFT & RIGHT SUPPLY TUBING	114635-1	2	114635-1	2
55	MAIN GAS SUPPLY TUBING	114620-1	1	114620-1	1
52	TEE 7/16 CC	114614-1	1	114614-1	1
97	ELBOW 7/16 CC	103638-3	1	103638-3	1

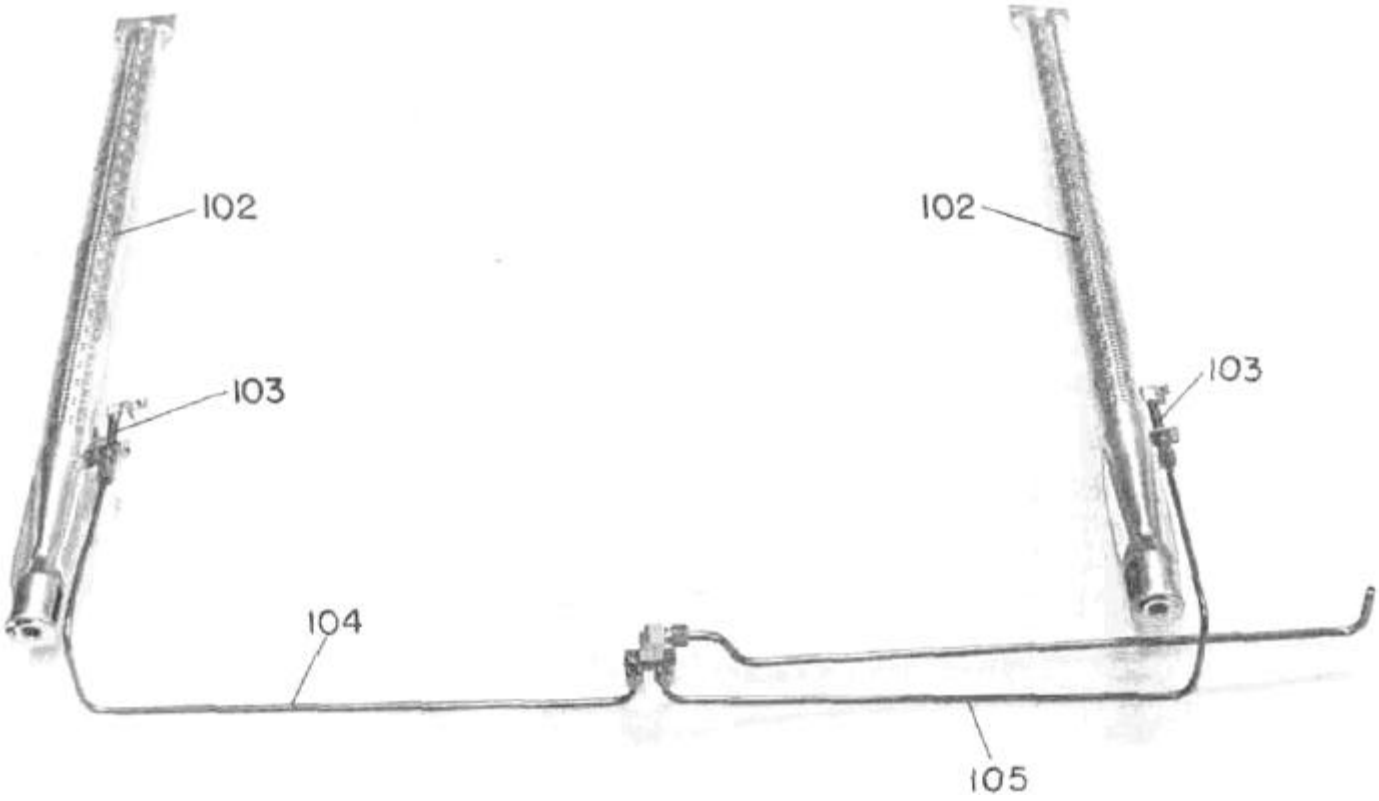
NOTE: FOR USE WITH THE ROBERTSHAW PILOT PROTECTION SYSTEM E—ELECTRONIC IGNITION



PARTS-USING THE PILOT PROTECTION SYSTEM

ITEM NUMBER	DESCRIPTION	PART NO. SG-2SM, SG-22 & E-UNITS	QUANTITY SG-2SM SG-22 &, E-UNITS	PART NO. SG-10SM SG-1010, E-UNITS	QUANTITY SG-10SM SG-1010, E-UNITS
102	BURNER	114646-1	2	114646-2	2
103	OVEN PILOT	114645-1	2	114645-1	2
104	LEFT HAND PILOT TUBE	114658-1	1	114658-1	1
105	RIGHT HAND PILOT TUBE	114658-2	1	114658-2	1

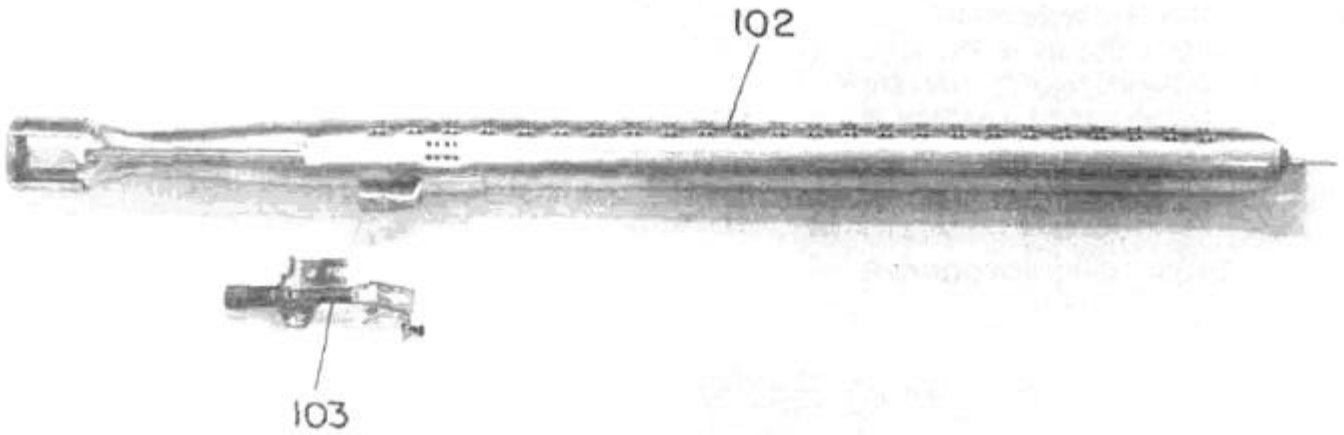
NOTE: FOR USE WITH THE ROBERTSHAW PROTECTION SYSTEM E—ELECTRONIC IGNITION



PARTS-USING THE PILOT PROTECTION SYSTEM (Continued)

ITEM NUMBER	DESCRIPTION	PART NO. SG-2SM SG-22 & E-UNITS	QUANTITY SG-2SM SG-22 & E-UNITS	PART NO. SG-10SM SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
102	BURNER	114646-1	2	114646-2	2
103	OVEN PILOT	114645-1	2	114645-1	2

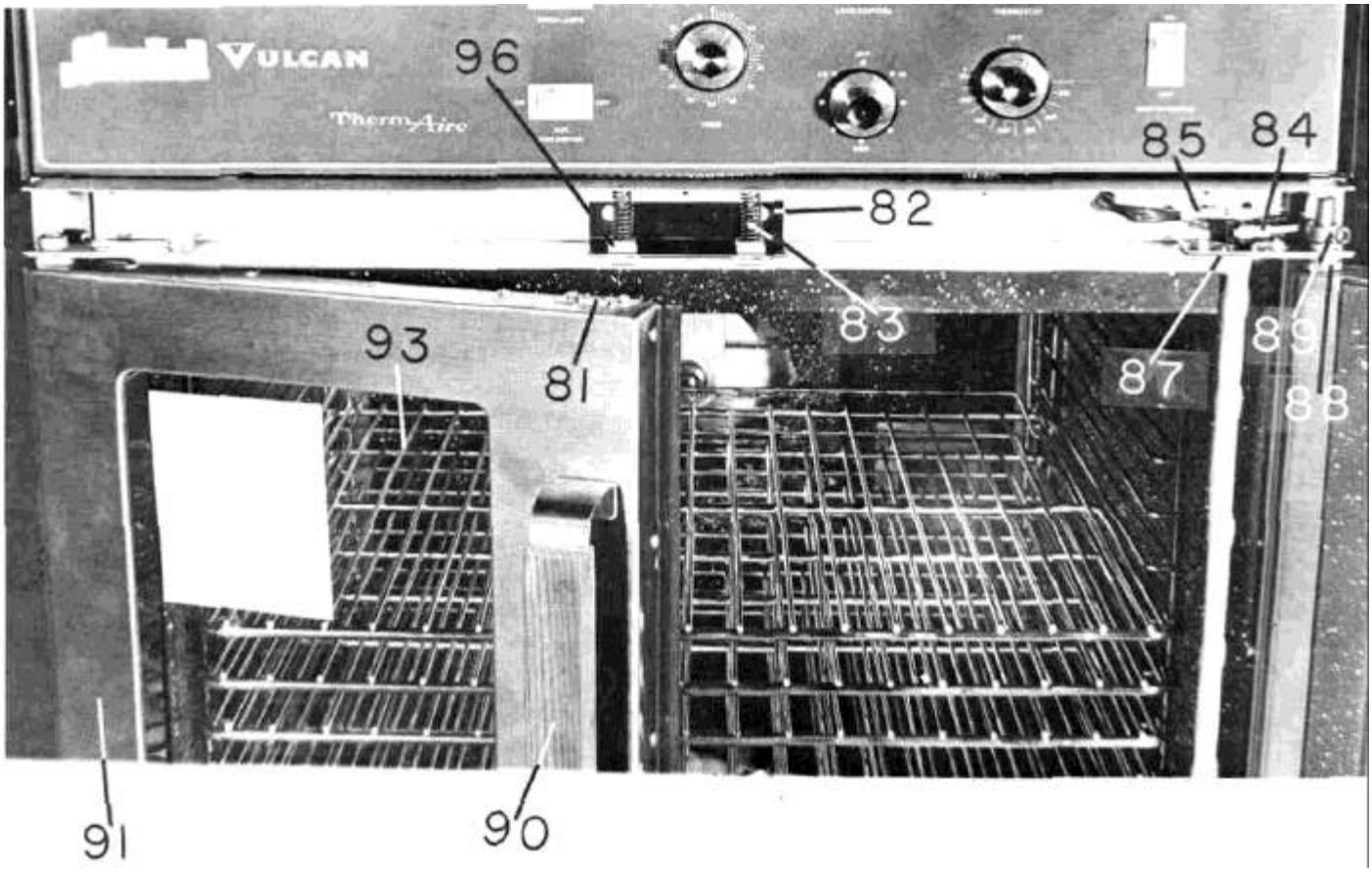
NOTE; FOR USE WITH THE ROBERTSHAW PROTECTION SYSTEM **E—ELECTRONIC IGNITION**



PARTS-DOOR ASSEMBLY & MECHANISM

ITEM NUMBER	DESCRIPTION	PART NO. SG-2SM, SG-22 & E-UNITS	QUANTITY SG-2SM SG-22 & E-UNITS	PART NO. SG-10SM SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
81	DOOR STRIKE	111170-1	2	111170-1	2
82	DOOR CATCH PLATE	111934-1	1	111923-1	1
83	COMPRESSION SPRING	20707-23	2	20707-23	2
84	MICRO SWITCH	111496-F1	1	111496-F1	1
85	MICRO SWITCH SUPPORT	110619-1	1	110619-1	1
86	MICRO SWITCH INSULATION (3" LONG) (NS)	111365-1	2	111365-1	2
87	DOOR ADJ. BRACKET	111139-1	4	111939-1	4
88	HINGE PIN BEARING	104629-2	4	104629-2	4
89	COLLAR HINGE PIN 1/2"	3.0209-2	1	3.0209-2	1
90	DOOR HANDLE ASSEMBLY	113030-G1	2	113030-G1	2
91	DOOR PANEL ASSEMBLY	112606-G2	2	112606-G2	2
93	DOOR WINDOW	111294-2	2	111294-2	2
94	PLUG BUTTON (NS)	3.0317-8	4	3.0317-8	4
96	DOOR CATCH	111794-1	2	111794-1	2

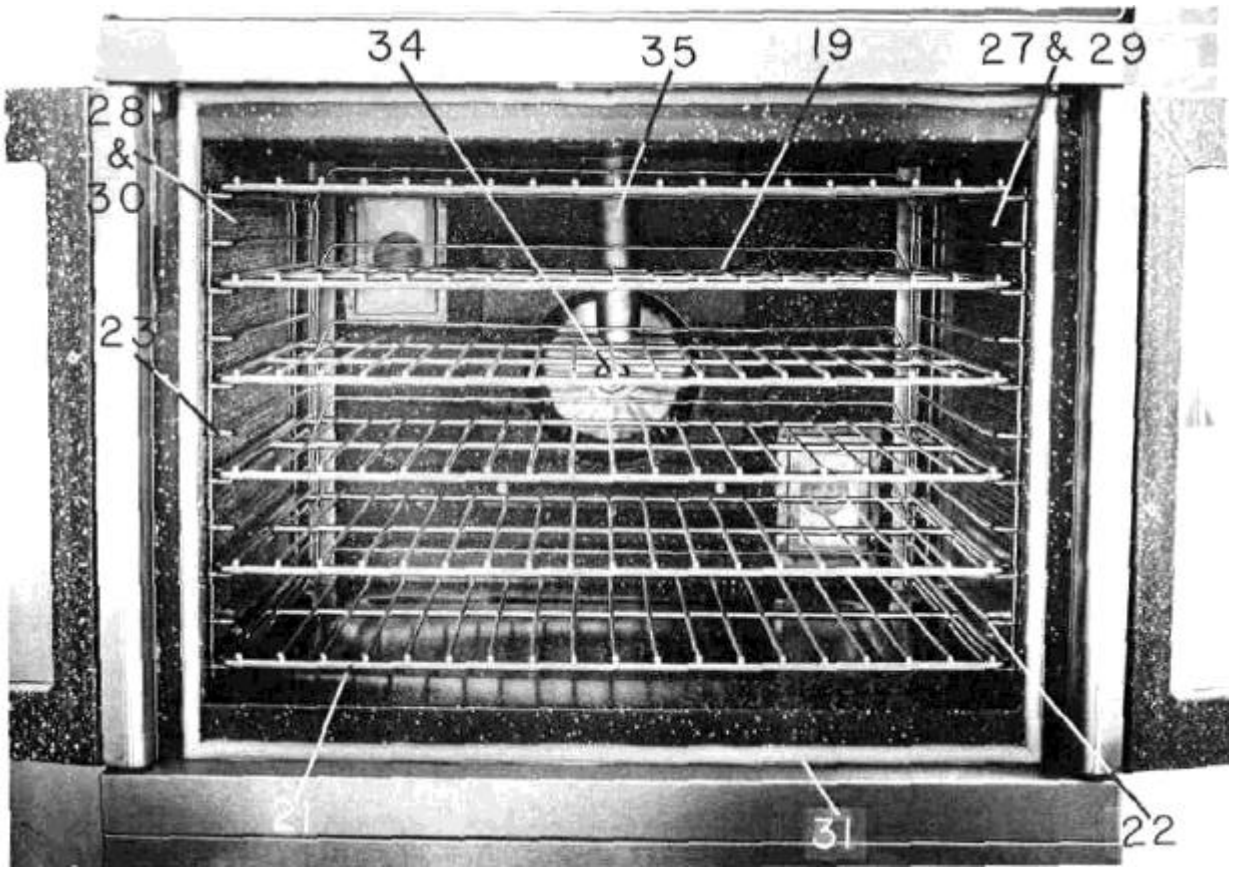
NS—NOT SHOWN ON PHOTOGRAPH **E—ELECTRONIC IGNITION**



PARTS-OVEN CAVITY

ITEM NUMBER	DESCRIPTION	SG-2SM SG-22 & E-UNITS	QUANTITY SG-2SM SG-22 & E-UNITS	SG-10SM SG-1010& E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
19	FAN COVER ASSEMBLY	111136-G2	1	111136-G2	1
19A	FAN COVER ASSEMBLY (SS)	111136-G4	1	111136-G4	1
21	OVEN RACK	111265-15	6	111265-1	6
22	RIGHT HAND RACK SUPPORT	111430-2	1	111430-3	1
23	LEFT HAND RACK SUPPORT	111430-1	1	111430-4	1
24	DRIP TRAY GUIDE (NS)	112845-1	2	112845-2	2
26	DRIP TRAY (NS)	111429-1	1	111429-3	1
26A	DRIP TRAY (SS) (NS)	111429-2	1	111429-4	1
27	RIGHT HAND SIDE LINING	112697-1	1	112697-5	1
28	LEFT HAND SIDE LINING	112697-2	1	112697-6	1
29	RIGHT HAND SIDE LINING (SS)	112697-3	1	112697-1	1
30	LEFT HAND SIDE LINING (SS)	112697-4	1	112697-8	1
31	DOOR GASKET	111688-1	1	111688-1	1
32	TOP & BOTTOM DOOR GASKET SHIM (NS)	111339-1	2	111339-1	2
33	SIDE DOOR GASKET SHIM (NS)	111339-2	2	111339-2	2
34	AIROTOR 10"	3.1300-3	1	3.1300-3	1
35	SNORKELTUBE ASSEMBLY	114296-G1	1	113627-G1	1

NS—NOT SHOWN ON PHOTOGRAPH **SS—STAINLESS STEEL** **E-ELECTRONIC IGNITION**

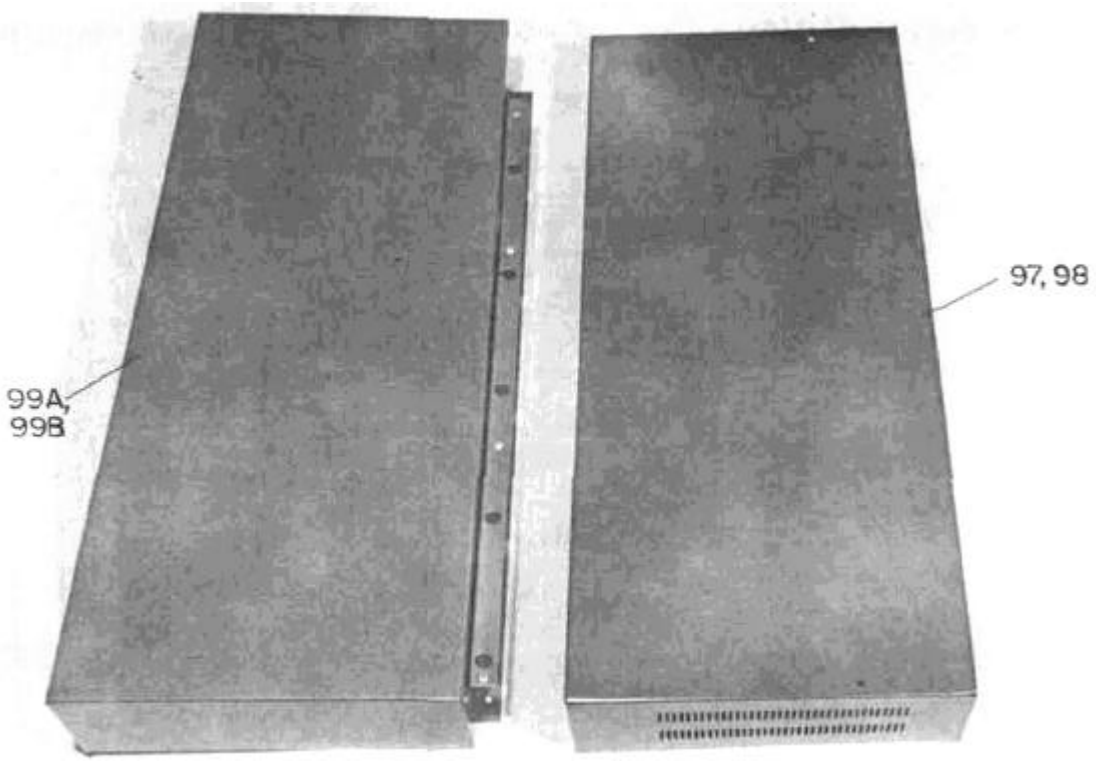


PARTS-CONTROL COVER PANEL ASSEMBLY

ITEM NUMBER	DESCRIPTION	PART NO. SG-2SM, SG-22 & E-UNITS	QUANTITY SG-2SM, SG-22 & E-UNITS	PART NO. SG-10SM SG-1010 & E-UNITS	QUANTITY SG-10SM SG-1010 & E-UNITS
97	CONTROL COVER	114630-1	1	114630-1	1
98	CONTROL COVER	114642-1	1	114642-1	1
99	PANEL-UPPER EXT. ASSEMBLY (SMT UNITS)	114629-G1	1	114629-G1	1
99A	PANEL-UPPER EXT. ASSEMBLY (T UNITS)	114629-G3	1	114629-G3	1
99 B	PANEL-LOWER EXT. ASSEMBLY (SMB. & B UNITS) (NS)	114649-G1	1	114629-G2	1

NS—NOT SHOWN ON PHOTOGRAPH E—ELECTRONIC IGNITION

T—Top Oven In Double Oven B—Bottom Oven In Bottom Oven



MANUAL ASSEMBLY 114594-G1

I.S.P. MANUAL FOR SG-22, 22E, 2SM, 2SME, SG-1010, 1010E, 10SM, & 10SME CONVECTION OVEN

SIGN	MANUAL 114594-G1 SUB NO.	SHEET PART NUMBER AFFECTED	DATE
DML	5	114594-1 thru 114594-46	12-27-84