

**OWNER'S MANUAL**  
**INSTALLATION**  
**USER'S GUIDE**  
**SERVICE**  
**PARTS**  
**COMPARTMENT STEAMER**  
**GAS BOILER**

MODELS: GC-2S; GC-3S; GDA-2S; CQ-325S  
(250,000 BTU BOILER)

These instructions should be read thoroughly before attempting installation. Set up, installation and Performance Check should be performed by a qualified service technician. The Manufacturer, Southbend (1100 Old Honeycutt Rd., Fuquay-Varina, North Carolina 27526), informs you that unless the installation instructions for the above described Southbend product are followed and performed by a qualified service technician, (a person experienced in and knowledgeable concerning the installation of commercial gas and/or electrical cooking equipment) then the terms and conditions of the Manufacturer's Limited Warranty will be rendered void and no warranty of any kind shall apply.

If the equipment has been changed, altered, modified or repaired by other than a qualified service technician during or after the 12-month limited warranty period, then the manufacturer shall not be liable for any incidental or consequential damages to any person or to any property which may result from the use of the equipment thereafter. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion thereto may not apply to you.

In the event you have any question concerning the installation, use, care, or service of the product, write Customer Service Department, Southbend Corporation, 1100 Old Honeycutt Rd., Fuquay-Varina, North Carolina 27526.



**southbend**

**A MIDDLEBY COMPANY**

Congratulations! You have just purchased one of the finest pieces of heavy-duty, commercial cooking equipment on the market today.

You will find that your new equipment, like all Southbend equipment, has been designed and manufactured to some of the toughest standards in the industry - those of Southbend Corporation. Each piece of Southbend equipment has been carefully engineered and designs have been verified through laboratory tests and field installations in some of the more strenuous commercial cooking applications. With proper care and field maintenance, you will experience years of reliable, trouble-free operation from your Southbend equipment. To get the best results, it's important that you read this manual carefully.

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**CAUTION:** WATER QUALITY IS THE MAJOR FACTOR AFFECTING THE PERFORMANCE OF YOUR APPLIANCE. INCOMING WATER HARDNESS SHOULD NOT EXCEED 2.0 PPM GRAINS AND THE pH SHOULD NOT EXCEED 7.5. IF YOU ARE UNSURE OF WATER CONDITIONS, HAVE IT ANALYZED. CONSULT YOUR LOCAL WATER DEPARTMENT OR A COMPETENT WATER CONDITIONER AGENCY. FAILURE OR MALFUNCTION OF THIS APPLIANCE DUE TO POOR QUALITY OF WATER IS NOT COVERED UNDER THE WARRANTY.

Retain this manual for future reference.

**WARNING — WARRANTY WILL BE VOID IF**

- A. SERVICE WORK IS PERFORMED BY OTHER THAN A QUALIFIED TECHNICIAN.**
- B. OTHER THAN GENUINE SOUTHBEND REPLACEMENT PARTS ARE INSTALLED.**

**FOR YOUR SAFETY**

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

**KEEP AREA AROUND APPLIANCES FREE AND CLEAR FROM COMBUSTIBLES. IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN EQUIPMENT AT THE MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.**



**southbend**

A MIDDLEBY COMPANY

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# COMPARTMENT STEAMER GAS BOILER USER'S GUIDE

## LIMITED WARRANTY

Southbend warrants that the equipment, as supplied by the factory to the original purchasers, is free from defects in materials and workmanship. Should any part thereof become defective as a result of normal use within the period and limits defined below, then at the option of Southbend such parts will be repaired or replaced by Southbend or its Authorized Service Agency. This warranty is subject to the following conditions:

If upon inspection by Southbend or its Authorized Service Agency it is determined that this equipment has not been used in an appropriate manner, has been modified, has not been properly maintained, or has been subject to misuse or misapplication, neglect, abuse, accident, damage during transit or delivery, fire, "flood, riot or Act of God, then this warranty shall be void. Specifically excluded under this warranty are claims relating to installation; examples are improper utility connections and improper utilities supply. Claims relating to normal care and maintenance are also excluded; examples are calibration of controls, and adjustments to pilots and burners.

Equipment failure caused by inadequate water quality is not covered under warranty. WATER QUALITY must not exceed the following limits: Total Dissolved Solids (TDS) - 60 PPM (Parts Per Million). Hardness - 2 Grains or 35 PPM, PH Factor - 7.0 to 7.5. Water pressure 30 PSI minimum, 60 PSI maximum. Boiler maintenance is the responsibility of the owner and is not covered by warranty.

This equipment is intended for commercial use only. Warranty is void if equipment is installed in other than commercial application.

Repairs under this warranty are to be performed only by a Southbend Authorized Service Agency. Southbend can not be responsible for charges incurred from other than Authorized Southbend Agencies. THIS WARRANTY MUST BE SHOWN TO AN AUTHORIZED SERVICE AGENCY WHEN REQUESTING IN-WARRANTY SERVICE WORK. THE AUTHORIZED SERVICE AGENCY MAY AT HIS OPTION REQUIRE PROOF OF PURCHASE. This warranty does not cover services performed at overtime or premium labor rates nor does Southbend assume any liability for extended delays in replacing or repairing any items in the equipment beyond the control of Southbend. "Southbend shall not be liable for consequential or special damages of any nature that may arise in connection with such product or part." Should service be required at times which normally involve overtime or premium labor rates, the owner shall be charged for the difference between normal service rates and such premium rates. In all circumstances, a maximum of one hundred miles in travel and two and one half hours (25) travel time shall be allowable. In all cases the closest Southbend Authorized Agency must be used. The actual warranty time periods and exceptions are as follows:

This warranty only covers product shipped into the 48 contiguous United States and Hawaii, one year labor, one year parts effective from the date of original purchase. There will be no labor coverage for equipment located on any island not connected by roadway to the mainland. Exceptions to standard warranty, effective within above limitations:

Glass Windows, Door Gaskets, Rubber Seals, Light Bulbs, Ceramic Bricks,

Sight Glasses, Cathodic Descalers or Anodes ..... 90 days material and labor

Stainless Steel Fry Pot..... .4 years extended material warranty on fry pot only — no labor

Stainless Steel Open Top Burners.....4 years extended material warranty on burners only — no labor

Pressure Steam Boiler Shell ..... Prorated 4 years extended warranty on boiler shell only — no labor

*Boiler shells which have not been properly maintained will not be covered by warranty.*

In all cases parts covered by a five year warranty will be shipped FOB the factory after the first year. Our warranty on all replacement parts which are replaced in the field by our Authorized Service Agencies will be limited to three months on labor, six months on materials (parts) effective from the date of installation. See LIMITED WARRANTY

- REPLACEMENT PARTS for conditions and limitations.

If the equipment has been changed, altered, modified or repaired by other than a qualified service technician during or after the one year limited warranty period, then the manufacturer shall not be liable for any damages to any person or to any property which may result from the use of the equipment thereafter.

"THE FOREGOING WARRANTY IS IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS, AND CONSTITUTES THE ENTIRE LIABILITY OF SOUTHBEND. IN NO EVENT DOES THE LIMITED WARRANTY EXTEND BEYOND THE DURATION OF ONE YEAR FROM THE EFFECTIVE DATE OF SAID WARRANTY."

SOUTHBEND – Effective February 1, 1990

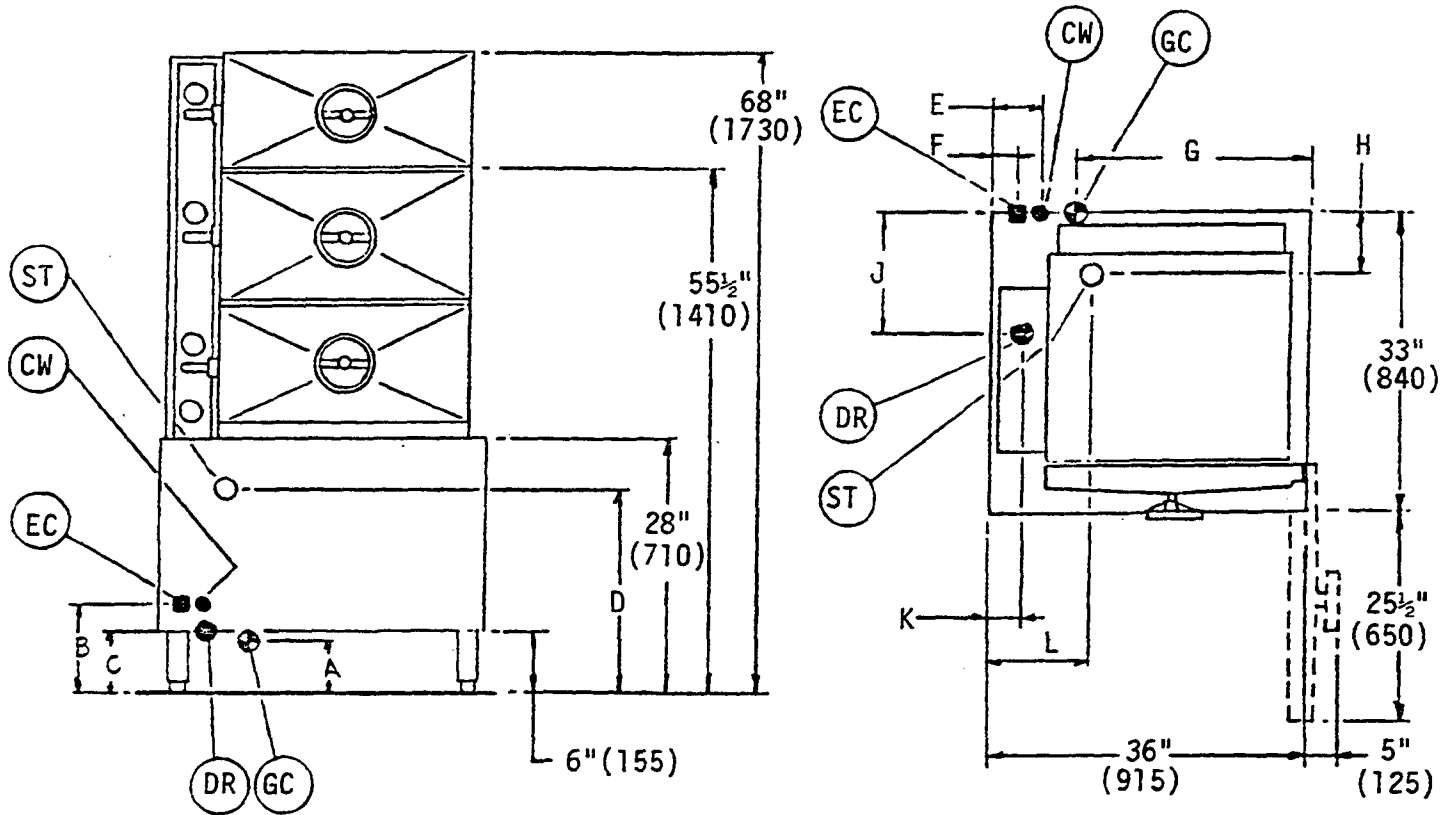
INSTALLATION & SERVICE CONNECTIONS

SECTION 1:

MODELS: GC-2 & GC-3

FIG. 1

	A	B	C	D	E	F	G	H	J	K	L
Inches	5 ½	9	6	21	6 ½	4 ½	18	3	10 ½	3 ½	7
mm	138	228	155	533	163	113	457	76	267	89	178



LEGEND

- GC Supply gas through 3/4" pipe with pressure of approx. 7" W.C. For propane use IT' W.C. pressure. A gas shut off valve must be installed in supply piping convenient and adjacent to appliance.
- EC Unless otherwise specified. Field Wire Electrical Connection to be 120 Volts, 60 Hertz single phase with grounding wire.
- DR Appliance drain is 2" pipe size. Provide open air gap type drain.
- CW Cold Water supply to Boiler. Provide 3/8" copper tube. A Backflow Prevention Device acceptable to BOCA Code or equivalent must be installed in this line.
- ST Steam take-off locations to supply steam to adjacent units if desired.

INSTALLATION INSTRUCTIONS

Cooker location should have an exhaust system provided directly above the appliance to exhaust combustion gases generated by the Gas Boiler.

APPLIANCE IS INTENDED FOR USE ON NONCOMBUSTIBLE FLOORS. MINIMUM CLEARANCE FROM COMBUSTIBLE CONSTRUCTION, 3" ON SIDES AND 2" FROM BACK.

Ascertain that adequate clearance of left side of appliance is available for servicing components contained in Cooker Control Enclosure.

Set Cooker in place and level appliance using spirit level. Mark hole locations on floor through anchoring holes provided in flanged adjustable feet.

Remove appliance and drill holes into locations marked on floor and insert proper anchoring devices. Set Cooker back in proper position.

Re-level the appliance, leveling the unit left to right and front to back. Appliance should be elevated on the right 1/16" to 1/8" to assure proper compartment drainage.

Bolt and anchor appliance securely to the floor. Seal bolts and flanged feet with Silastic or equivalent compound.

SERVICE CONNECTIONS

Make service connections as indicated in LEGEND (Fig. 1).

GAS INSTALLATION TO CONFORM TO LOCAL CODES OR IN THE ABSENCE OF LOCAL CODES TO NATIONAL FUEL GAS CODE - ANSI Z223.1 - 1980. FURTHER NOTE THAT:

1. 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 (3.45kPa).
2. THE APPLIANCE MUST BE ISOLATED FROM THE GAS SUPPLY PIPING SYSTEM BY CLOSING ITS INDIVIDUAL MANUAL SHUTOFF VALVE DURING ANY PRESSURE TESTING OF THE GAS SUPPLY PIPING SYSTEM AT TEST PRESSURES EQUAL TO OR LESS THAN 1/2 PSIG (3.45kPa).

ELECTRICAL GROUNDING MUST BE PROVIDED IN ACCORDANCE WITH LOCAL CODES, OR IN THE ABSENCE OF LOCAL CODES, WITH THE NATIONAL ELECTRIC CODE, ANSI/NFPA 70 - 1981.

## INSTALLATION & SERVICE CONNECTIONS

SECTION 1:

MODELS: GC-2 & GC-3

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### START UP TEST RUN

Open manual gas shut off supply valve and if the appliance has a manual Blow Down Valve, close it. Open left cabinet door and turn ON power switch. Pilot light will come on (green) and water will begin to enter Boiler and required water level will be reached in about 3 minutes. Observe water gauge glass to verify.

The Dial on the gas combination control valve has 3 positions (ON-PILOT-OFF) for manual gas control of main burners and pilot. Turn Dial on gas combination valve to PILOT. Depress Dial and light Pilot Burner located on centre main burner of Boiler. Maintain Dial in depressed position for about 30 seconds and release. Observe that Pilot Burner flame stays on. If at any time the flame should become extinguished, a 5 minute period for complete shut off of Gas Supply is required before relighting.

Turn Dial to ON and burners will ignite. Steam generation will now commence and be completed in about 15 minutes. Observe that Boiler Pressure Gauge indicates steam pressure in range of 9 - 12 psi. The Pressure Gauge on the face of the Cooker Control Panel should indicate pressure of 5 to 6 psi.

Open Cooker compartment door. Dial Timer to 5 minutes and pull out Operating Handle and observe that steam enters compartment.

With Operating Handle pulled out, dial Timer back to "0". The buzzer will now be audible and must be silenced by releasing Operating handle. Check each compartment in a similar manner.

Close compartment door and turn Handwheel clockwise sufficiently to provide a good seal on door gasket. Dial Timer to 5 minutes. Pull out Operating Handle and set in position. Steam entry into compartment will be audible and Compartment Vent, located at rear left side of Cooker compartment, will exhaust air (hissing noise) trapped in the compartment until replaced by steam. Observe that door gasket seals properly and no leaks are evident.

After 5 minutes the Timer will read "0", Buzzer will come on, steam will cease to enter compartment and drain valve will open to exhaust steam and condensate from compartment. Release Operating Handle to silence Buzzer.

Observe Appliance Drain that live steam *from* compartment is being cooled by cold water from Cold Water Solenoid Valve (thermostatically controlled). Turn Handwheel fully counter-clockwise to avoid pressure on door gasket when not in use. Check each compartment in a similar manner.

During simulation of the cooking cycle, the Burners will cycle on and off to maintain steam pressure in Boiler between 9 to 12 psi range.

Turn OFF power switch. Observe that Burners go off and if the appliance is equipped with Automatic Blow Down Solenoid Valve, the Boiler contents water and steam, will be blown out and exhausted through the appliance Drain. The Cold Water Solenoid Valve will now be activated as well. If the appliance is equipped with a manual Blow Down Valve, open it.

## INSTALLATION & SERVICE CONNECTIONS

SECTION 2:

MODELS: GC-2 & GC-3

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Steamers are made of two sections, the Cooker and the Cabinet. These Steamers are intended for use in commercial establishments. They are floor supported, are steam heated and incorporate steel enclosures to contain live electrical parts.

Gas, Power, hot and cold water, must be supplied to these Steamers. Refer to Section 1, Service Connections.

The Cooker consists of two or three compartments and is the upper portion of the Steamer. Each compartment is provided with its own Solenoids, Interlock Switches, Timer, Pilot Light, Operating Handle and Door. When a compartment is off, or de-energized, the Exhaust Solenoid Valve is open and the inlet Steam Solenoid Valve is closed. Pans, containing food properly portioned, are placed into guided racks or onto wire shelves provided in each compartment. When the door is closed, the Timer dialed and the Operating Handle is pulled out to the locked position, (which also locks the door and engages the Interlock Switches), the valves are energized. Steam reduced to maximum 6 psi pressure by the Pressure Regulating Valve will then be permitted to enter the compartment but not exit. Air, captured in the sealed compartment is allowed to exhaust through the Compartment Vent which will close at approximately 180°F, whence the compartment becomes an entirely sealed chamber. The duration of the cooking cycle is controlled by the Timer and when desired time has elapsed. Timer will read '0' and will set off an audible Buzzer and de-energize valves. Buzzer must be silenced by releasing the Operating Handle and presumably door opened to remove cooked food. -

The Cabinet is the lower portion of the Steamer and contains components which control the functioning of the Gas Boiler. A switch located on the front face of the Generator Control Box, when turned ON will provide power for the appliance and also initiate the Gas Burners to maintain steam generation in the boiler which in turn supplies steam to the compartment.

The Gas Boiler is designed to ASME Code and approved as a steam heating boiler restricted to operate at pressures not to exceed 15 psi and the burner system is UL tested and Certified.

Refer to Periodic Maintenance, Section 4, for detailed version of components and controls.

COMPARTMENT CAPACITIES

The Cooker compartments are provided with either removable shelf supports with slide out shelves OR universal pan supports. The following capacities for each compartment are based on full size, 12" x 20", pans and depths indicated.

Shelf supports with shelving can accommodate:

- 6 - 2-1/2" deep full size pans or
- 4 - 4" deep full size pans or
- 2 - 6" deep and 2 - 2-1/2" deep full size pans.

Universal pan supports can accommodate:

- 8 - 2-1/2" deep full size pans or
- 4 - 4" deep full size pans or
- 2 - 6" deep and 2 - 2-1/2" deep full size pans.

Food placed in pans must, where possible, be evenly spread out and not protrude above pans since steam circulation between pans in the compartment will be impeded.

Always preheat compartments for satisfactory results.

When all compartments are to be used at the same time, allow one compartment to recover steam pressure (approx. 4-1/2 p.s.i.) before commencing cooking operation on next compartment.

When time does not allow for defrosting of frozen vegetables such as loose pack peas, corn, diced carrots, etc., they may be cooked at once provided half suggested portions in Cooking Chart are used.

ITEM	PAN DEPTH (FULL SIZE)	COOKING CHART		WEIGHT LBS PER PAN	NUMBER OF PANS
		TIMER SETTING			
		IN MINUTES			
Beans	2-1/2"	10 - 12		5	1 - 3
Lima & Reg.	Perforated	13 - 15			4-6
Beans	2-1/2"	15-20		6	1 - 3
Waxed	Perforated	20 - 25			4-6
Broccoli	2-1/2"	8-10		6	1 - 3
Waxed	Perforated	10 - 12			4-6
Broccoli	2-1/2"	10 - 15		6	1 - 3
1/2" - 3/4" Stalks	Perforated	15-20			4-6
Canned	2-1/2"	4-5		7	1 - 3
Vegetables	Solid	5-8			4-6



PAN SELECTION & TIME SCHEDULES

SECTION 3:

MODELS: GC-2 & GC-3

COOKING CHART - cont'd

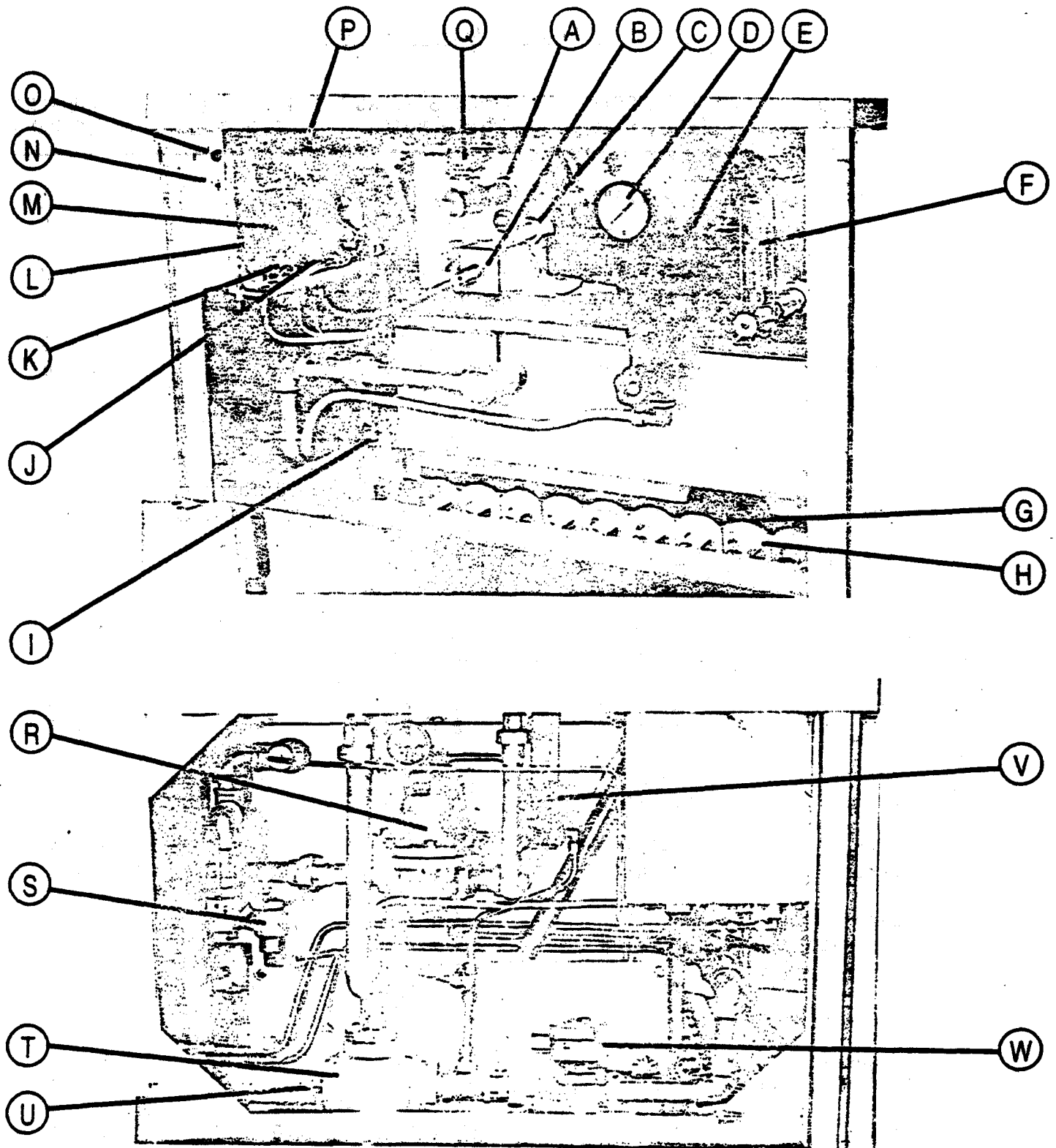
ITEM	PAN DEPTH (FULL SIZE)	TIMER SETTING IN MINUTES	WEIGHT LBS PER PAN	NUMBER OF PANS
Carrots (sliced)	2-1/2"	18 - 21	9	1 - 3
	Perforated	21 - 25		4-6
Corn	2-1/2"	9-10	5	1 - 3
	Perforated	11 - 13		4-6
Chicken Blanched-Cut	2-1/2"	18 - 25	8	1 - 3
	Perforated	25 - 30		4-6
Eggs - out of Shell	2-1/2"	6-7	4 dozen	1 - 3
	Solid	7-8		4-6
Eggs - in Shell	2-1/2"	2-3	3 dozen	1 - 3
	Perforated	4-6		4-6
Fish-Fillets	2-1/2"	8-12	3	1 - 3
	Perforated	10 - 15		4-6
Meatloaf	2-1/2"	35 - 40	15	1 - 3
	Solid for Broth	40 - 45		4-6
Peas	2-1/2"	6-7	5	1 - 3
	Perforated	8-9		4-6
Potatoes cut Regular	2-1/2"	20 - 25	10	1 - 3
	Perforated	25 - 30		4-6
Potatoes cut French Fry	2-1/2"	15 - 18	10	1 - 3
	Perforated	18 - 20		4-6
Spinach cut, cleaned	4"	3-5	3	1 - 2
	Perforated	4-6		3-4
Rice	4"	22 - 24	4	1 - 2
1 Gallon Water	Solid	- ,25-27		3-4
Spaghetti	4"	20 - 22	3	1 - 2
1-3/4 Gal. Water	Solid	23 - 26		3-3
Turkey	2-1/2"	50 - 60	10 - 12	1 - 3
	Perforated	60 - 75		4-6

PERIODIC MAINTENANCE

SECTION 4:

MODELS: GC-2 & GC-3

FIG. 2



SIDE VIEW

Fig. 2: The Cabinet is the lower section of the Steamer providing not only a base for the Cooker to be positioned at a proper working height but also the enclosure for the Gas Boiler and Controls.

**THE APPLIANCE AREA MUST BE KEPT FREE AND CLEAR FROM COMBUSTIBLES. DO NOT OBSTRUCT THE FLOW OF COMBUSTION AND VENTILATION AIR.**

FRONT VIEW

Item A: Gas Boiler weldment assembly.

Item B: Safety Sensor, enclosed by the Sensor Cover Box, is a Boiler protective device which will shut off the Main Burners when excessive heat occurs should the water level in the Boiler drop below a level sufficient to immerse and protect the Boiler tubes, heads and shell that come in contact with direct heat from the Burners.

Item C: Handhole Cover Assembly when unbolted and removed allows internal examination and cleaning of Boiler if required.

**AT LEAST TWICE A YEAR REMOVE HANDHOLE COVER ASSEMBLY.  
INSPECT BOILER INTERIOR FOR SCALANT AND LIME BUILD UP.**

Item D: The Pressure Gauge is directly above and threaded to the Water Level Control. It should read '0' during shut down and function in a range of approximately 9 to 13 p.s.i. during operation of the appliance.

Item E: The Water Level Control is a mechanical switch intended to maintain proper water level in the Boiler. A Float is contained within the chamber of the Water Level Control and when it drops, it will trip the switch in the control and demand sufficient water to replenish it to the proper level.

**A MANUAL VALVE LOCATED DIRECTLY BELOW THE WATER LEVEL CONTROL CHAMBER MUST BE OPENED BRIEFLY AT LEAST ONCE A WEEK TO BLOWDOWN SEDIMENT AND SCALANT THAT MAY BE LODGED IN THE CHAMBER. FAILURE TO DO SO MAY CAUSE EXCESSIVE ACCUMULATION, SEIZURE OF THE FLOAT AND EVENTUAL MALFUNCTION OF THE WATER LEVEL CONTROL.**

Item F: The Water Gauge assembly has a glass tube for visual verification that water level is being maintained in the Boiler during operation. The manual valves at the top and the bottom of this assembly must be fully open and only closed if damage should occur to the glass tube.

**OBSERVE THAT THE WATER IS CLEAN AND CLEAR IN THE GLASS TUBE. THE APPEARANCE OF EXTREME MURKINESS IN THE WATER INDICATES INADEQUATE WATER QUALITY AND WILL CAUSE FAILURE OF CONTROLS AND THE APPLIANCE. WARRANTY DOES NOT COVER MALFUNCTION DUE TO POOR WATER CONDITIONS.**

Item G: Pilot Burner should remain lit at all times unless appliance will not be in use for an extended period of time.

**IF AT ANY TIME THE FLAME SHOULD BECOME EXTINGUISHED. A 5 MINUTE PERIOD FOR COMPLETE SHUT OFF OF GAS SUPPLY IS REQUIRED BEFORE RELIGHTING.**

Item H: Main Burners of aluminized steel tube.

**FLOOR AREA BENEATH BURNERS MUST BE KEPT FREE AND CLEAR TO PROVIDE AIR FOR COMBUSTION AND VENTILATION.**

Item I: Gas Combination Control Valve regulates flow of natural gas (or propane) to Burners. Operation is dependent on other controls. Refer to START UP TEST RUN - SECTION 1.

Item J: Cold Water Solenoid Valve fastened to the right rear bottom of Generator Control Box supplies cold water to condense live steam before it exhausts into the drain and is controlled by the Thermostat (Item P).

Item K: Hot Water Solenoid Valve fastened to the bottom of Generator Control Box immediately in Front of Item J feeds hot water to the Boiler but its functioning is entirely dependent on the Water Level Control (Item E).

Item L: Operating Pressure Switch fastened to the inside bottom front of the Generator Control Box is plumbed to sense the pressure in the Boiler and thence control the operating cycle of the Gas Combination Control Valve (Item I). This switch is factory set to energize the Gas Combination Control Valve and ignite the Main Burners at 9 psi but to de-energize the Valve and turn off Burners at 11 ½ psi thus maintaining a pressure range in the Boiler between 9 psi to approximately 13 psi (override considered).

Item M: Override Pressure Switch similar to and located directly behind the above switch senses steam pressure in excess of the normal operating range which occurs only at initial Start-Up of the Boiler at approximately 13 psi and thence energizes Solenoid Valve (Item V) to open briefly to allow for discharge of said excess pressurized steam thence the Boiler becomes stabilized.

Item N: Power Switch fastened to the front fact of the Generator Control Box when switched ON will automatically begin the steam generating process in the Boiler.

Item O: Pilot Light is located directly above the Power Switch and when lit (green) indicates power is ON.

Item P: A Thermostat mounted on the back wait of the Generator Control Box has its heat sensing capillary bulb fastened to the appliance Drain. When excessive heat (i.e. steam) comes in contact with the bulb, the Thermostat will energize the Cold Water Solenoid Valve (Item J).

Item Q: Safety Valve is a protective device set at 15 psi. Malfunction or improper setting of controls may allow the pressure to exceed 15 psi in the Boiler and will consequently set off this valve.

**ONCE A WEEK THIS VALVE SHOULD BE TRIPPED DURING OPERATION TO ASSURE THAT IT FUNCTIONS PROPERLY.**

LEFT SIDE VIEW

Item R: Pressure Regulator reduces the pressure of the steam supplied from the Boiler to the Steam Header and the Cooker compartments.

**TWICE A YEAR UNSCREW THE LARGE HEX HEAD PLUG LOCATED AT THE BOTTOM OF THE REGULATOR AND REMOVE AND CLEAN THE STRAINER.**

Item S: A Thermostatic Steam Trap is plumbed to the steam supply piping from the Boiler and is a mechanical device that closes on high temperatures and opens when the temperature drops. This Trap allows water formed from condensed steam to exhaust into the appliance Drain but will retain steam being of a higher temperature.

Item T: Drain for compartments and Boiler approximately 2" pipe size. Must be provided with open air gap type floor drain.

Item U: Thermostat Capillary Bulb fastened to appliance Drain. Refer to Item P.

Item V: Override Solenoid Valve functions only briefly at initial Start-Up of Boiler and is controlled by override Pressure Switch (Item M).

Item W: Boiler Blowdown Valve is plumbed to the drain pipe of the Boiler and when specified as automatic will be a solenoid (electrically operated) valve which will close when energized in order to facilitate maintenance of proper water level in the Boiler.

**HOWEVER. THE STEAMER SHOULD BE SWITCHED OFF AT LEAST ONCE DAILY WHICH WILL DE-ENERGIZE AND OPEN THE VALVE IN ORDER FOR THE BLOKDOWN PROCEDURE TO OCCUR AND REMOVE SEDIMENTS. SCALANTS AND LIME BUILD-UP IN THE BOILER. IF THE APPLIANCE IS SUPPLIED WITH A MANUAL VALVE. IT SHOULD BE OPENED DAILY WHEN THE APPLIANCE IS SHUT DOWN.**

FIG. 3

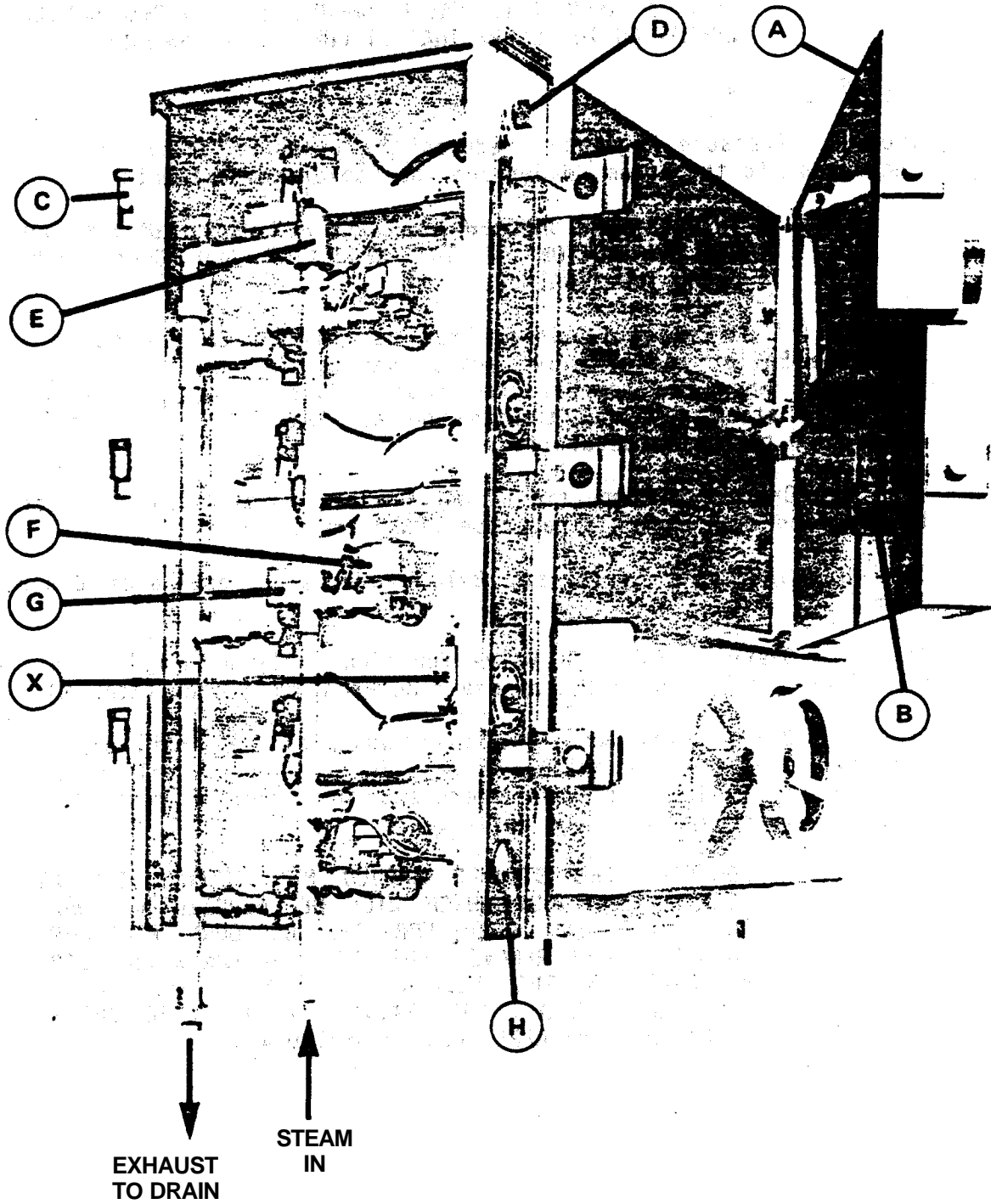


Fig. 3: The Cooker is the upper section of the steamer and is either a two or three compartment appliance. Each compartment functions independently with its own controls and is a separated sealed steam chamber during the cooking operation.

DO NOT OBSTRUCT THE FLOW OF COMBUSTION GASES THROUGH FLUE STACK LOCATED DIRECTLY BEHIND AND ABOVE COOKER.

Item A: A Door Gasket is provided on each compartment door and ensures proper sealing of the cooking compartment.

WASH THE GASKET SEALING SURFACE WITH MILD DETERGENT DAILY TO REMOVE HARMFUL FOOD ACIDS. TURN HANDWHEEL COUNTER-CLOCKWISE TO RETRACT GASKET PLATE FULLY INTO DOOR WHEN NOT IN USE. DAMAGE TO GASKET SEALING SURFACE, SUCH AS NICKS OR CUTS WILL CAUSE STEAM LEAKAGE.

Item B: A Thrust Screw is located inside the door and its shaft protrudes through the door centre and is fastened directly to the Handwheel. Any force on the Handwheel is transmitted through the Thrust Screw simultaneously against the Gasket Retaining Plate and Door Gasket to seal the compartment.

THE THRUST SCREW OF EACH COMPARTMENT DOOR SHOULD BE LUBRICATED ONCE A MONTH. TO GAIN ACCESS TO SCREW, OPEN COMPARTMENT DOOR AND TURN HANDWHEEL CLOCKWISE (CLOSE DIRECTION) UNTIL GASKET RETAINING PLATE IS FULLY EXTENDED OUT OF DOOR. GRASP FINGER HOOKS AND LIFT UP AND OUT TO REMOVE GASKET PLATE ASSEMBLY. APPLY GREASE NLG12 CONSISTENCY OF 285W60 VISCOSITY LIBERALLY TO THRUST SCREW ROTATING HANDWHEEL TO ASSURE COMPLETE COVERAGE. REPLACE GASKET PLATE AND TURN HANDWHEEL COUNTER-CLOCKWISE RETRACTING GASKET PLATE INTO DOOR. CLOSE DOOR.

Item C: A Compartment Vent is plumbed to each compartment directly behind the Cooker Control Enclosure. During preheat or initially at commencement of cooking operation it remains open to exhaust air and condensate from the compartment. It will close at approximately 180°F.

Item D: A Timer is fastened to the Cooker Control Panel for each compartment and can be dialed from 0 to 60 minutes. At completion of the cooking cycle, dial should read '0' and an audible Buzzer will commence and can only be silenced by releasing the Operating Handle-Item E: A Pressure Relief Valve is located inside the Control Enclosure and is plumbed to the top of the Steam Header. This protective device will open when 8 p.s.i. steam pressure is exceeded. Replace if leakage occurs or it opens below rated pressure.

Item F: A Steam Solenoid Valve is provided for each compartment and will open when energized to allow steam entry into the compartment. This valve will remain de-energized and closed if the Timer reads '0' and/or the Operating Handle is in the released position.

Item G: An Exhaust Solenoid valve is provided for each compartment and operates in reverse to Item F; that is, it will close when energized thus seating the steam, provided by the Steam Valve, within the compartment.

ANY FOREIGN MATERIAL, OTHER THAN STEAM OR WATER, SHOULD NOT BE ALLOWED TO EXHAUST THROUGH THIS VALVE. AFTER OPERATION WIPE AND REMOVE FOOD OR ANY OTHER PARTICLES FROM EACH COMPARTMENT BOTTOM.

A stainless steel strainer is provided in each compartment just ahead of the exhaust port as a protective device for this valve. Remove, clean and replace if excessive food and/or dirt accumulation is evident.

IF PARTICULARLY GREASY FOODS HAVE BEEN COOKED IN THE COMPARTMENT, DEPOSITS MAY ACCUMULATE IN EXHAUST VALVES AND MUST BE REMOVED BY CLOSING DOOR, SEALING COMPARTMENT, SETTING TIMER AND AT FREQUENT INTERVALS PULL OUT AND RELEASE OPERATING HANDLE TO BLOW STEAM THROUGH VALVE AND DISSOLVE GREASE.

Item H: A Pressure Gauge is fastened to the bottom face of the Cooker Control Panel. It is plumbed to sense pressure in the Steam Header. When compartments are inactive, it should read approximately 6 p.s.i. but will fluctuate between 4½ to 6 p.s.i. during the cooking cycle. Pressure above 6 p.s.i. indicates that Pressure Regulating Valve is set too high and may set off Pressure Relief Valve (Item E).

Item I: Flue Stack Assembly is located directly behind Cooker (See Page 29, Parts No. 7 & 8) and provides for exhaust of combustion gases.

AT LEAST TWICE A YEAR EXAMINE THAT INTERIOR OF FLUE STACK IS CLEAN. IF ACCUMULATION OF DIRT AND/OR SOOT IS APPARENT, THE STACK COVER AND FLUE STACK MUST BE REMOVED AND CLEANED. ALSO PORTION OF FLUE EXTENDING BELOW CABINET SURFACE TO BOILER MUST BE CLEANED.



### STEAM GENERATING PROCESS

Open left door of cabinet and turn ON power switch on face of Generator Control Box. Pilot light will come on (green), burners will ignite and steam generating process will begin. After approximately 20 minutes, sufficient amount of pressurized steam will have been generated in the Boiler and the Cooker is now ready for the Cooking Operation.

### COOKING OPERATION

- If the appliance has been standing idle for a considerable length of time, the compartments will be cold and must be pre-heated before commencing the Cooking Operation.
- Refer to Pan Selection and Time Schedules in Section 4.
- Turn Handwheel clockwise sufficiently to provide a good seal on gasket.
- Set Timer to desired cooking cycle.
- Pull out Operating Handle and set in position.
- Pilot light will indicate that cooking cycle is now in progress.
- Completion of the cooking cycle is indicated by the buzzer going on and the pilot light off.
- Set Operating Handle back and turn Handwheel fully counter-clockwise.
- Open door and remove food in pans.

### CLEANING

At the end of each day turn appliance OFF. Remove pans and side racks from compartments. Remove food sediment from compartment bottoms and wash compartment interior with mild detergent and rinse. Never use steel wool on stainless steel equipment. Replace washed racks and shelves. Wash the gasket sealing surface of compartment door daily with mild detergent to remove harmful food acids. Turn Handwheel fully counter-clockwise to retract gasket plate into door to avoid pressure on gasket when not in use.

**CONTACT THE FACTORY, THE FACTORY REPRESENTATIVE OR A LOCAL SERVICE COMPANY TO PERFORM MAINTENANCE AND REPAIRS SHOULD THE APPLIANCE MALFUNCTION. REFER TO WARRANTY TERMS.**

COMPARTMENT DOORSDoor Hasp does not engage Door Catch properly

Check if door appears loose at hinges since worn out Bronze Bushings will cause misalignment of door and bushings must be replaced. Force out Tension Pins in Hinges with pin punch. (Refer to Parts List Section 7 - Compartment Door Assembly). Eject Hinge Pins and remove door. Force out worn Bronze Bushings and replace with care since this is a snug fit.

However, if door is rigid at hinges, then Door Hasp may require adjustment. Remove Cooker Enclosure Panel. Remove Hasp Pin and either add or delete washer under Hasp for proper height.

Handwheel is binding or difficult to turn

Foreign matter or lack of lubricant on dry Thrust Screw may cause threads to bind. Refer to Section 4, Periodic Maintenance.

If Thrust Screw is bent or threads are badly worn, remove Thrust Screw and replace. Refer to Steamer Compartment Door Assembly, Section 7, Page 23.

Door Gasket is leaking

Gasket Retainer Cap Screws may be loose and must be tightened to prevent steam leakage.

Gasket may be nicked, cut or at end of useful life and must be replaced.

Door may hang loosely and Gasket edges do not align with compartment surface properly. Correct as previously noted.

The Door Gasket and Aluminum Plate assembly may be hanging improperly within door on supporting Alignment Screws. Remove Gasket Plate Assembly and adjust Alignment Screws slightly.

As previously noted, Handwheel may be difficult to turn and excessive friction prevents exerting pressure required for sealing.

## COOKER PROBLEMS

### Water accumulates in bottom of compartment

Water accumulation in bottom of compartment is primarily condensed steam and failure to drain out completely may be due to improperly leveled appliance. Refer to Section 1, Installation Instructions.

Stainless steel compartment Screen protecting exhaust port in compartment may be clogged with debris and screen must be removed, cleaned and replaced. Exhaust Solenoid Valve may be obstructed with accumulated grease which will impede drainage of water. Refer to Section 4, Periodic Maintenance.

If grease is not the obstruction, then with power Off, the Exhaust Header must be disconnected at all unions and removed. The Union Elbow must be unthreaded from the Exhaust Solenoid Valve. Visually inspect the Exhaust Header and the valve for obstruction. Verify that no obstruction is present by passing an object, such as a pencil, freely through valve and also examine that exhaust port (stainless steel 1/2" fitting welded to Cooker body) is internally clean. Reconnect all plumbing.

However, the Exhaust Solenoid Valve may be incapable of opening. Since this valve contains a moveable blade and when de-energized, the blade reacts as a guillotine which should be free to move fully down into the valve pocket (projection at bottom of valve) so that the pierced hole in the blade aligns perfectly with the body opening. If debris has accumulated in the bottom of the valve pocket, then blade obviously will be impeded from moving into pocket completely. Further, a burnt out valve coil is likely. With valve removed from Cooker body, remove retaining clip at top of solenoid. Grasp (green) cover and housing intact with coil inside and slide off from valve. Unscrew projecting tube from top of valve body and remove internal mechanism together with blade assembly. Next unscrew both assembly bolts and split brass body of valve removing loose internal parts. Now flush and clean pocket thoroughly. Reassemble all parts in reverse order of disassembly. Energize valve with 120 V power to verify that valve is functional. As mentioned, coil may require replacement. Reconnect all plumbing.

### Compartment remains pressurized at end of cooking cycle

As noted, when water accumulates at bottom of compartment, an obstructed Exhaust Solenoid Valve must be cleansed to allow not only water but also pressurized steam to exhaust at end of cooking cycle.

COOKER PROBLEMS (cont'd)Steam escapes from compartment during cooking cycle

Initially in the cooking cycle, air is displaced by steam in the compartment through the Compartment Vent (Thermostatic Trap). Displacement of air is audible by the hissing noise but should cease when the Thermo-static Trap reacts to the higher temperature of steam entering the trap. However, malfunction will occur if dirt is lodged internally in metal to metal seat of trap. Unscrew bonnet from top of Compartment Vent. Remove internal mechanism, cleanse thoroughly and replace. If malfunction persists, replace Compartment Vent.

As mentioned previously, if the Exhaust Solenoid Valve has a burnt out coil, it will be incapable of being energized and thus remain open allowing steam to exhaust.

Cooking cycle cannot be activated

Although this appliance has been thoroughly tested, it is advisable to inspect that all wire terminations are positive and secure before assuming any other malfunction.

When Power Switch in Generator Control Box of Cabinet is ON and steam pressure reading shows 5 to 6 p.s.i. on Pressure Gauge of Cooker Control Panel and all compartments fail to function for the cooking cycle, then power obviously is not being supplied to Cooker and wiring must be checked.

The magnetic coil of the Steam Solenoid Valve may be defective and require replacement. With Compartment Door open, observe if steam enters compartment when an outside source of (120 V) power is supplied to valve leads. If the valve energizes and steam enters compartment, then valve is operative and malfunction of cooking cycle is due to either a defective Timer or Microswitch.

When Timer is dialed. Operating Handle pulled out and cooking cycle will not activate in only one compartment, then Microswitches may require adjustment of their activating levers or replacement if defective. With Cooker Cover Panel removed, observe that levers of Microswitches are fully engaged by Arm of Operating Handle as it is pulled out. Bent Levers may fail to activate Microswitch(es) resulting in failure to energize valves and/or Timer and must be straightened (by hand) to assure positive contact.

A defective Timer will prevent cooking cycle from functioning and must be replaced. It is not recommended that repair of Timer be attempted.

COOKER PROBLEMS (cont'd)Water enters compartment through Steam Solenoid Valve

If the cooking cycle is on and water enters compartment through valve and steam pressure is nonexistent, then this may indicate malfunction of the Water Level Control (in Cabinet). The switch in the Water Level Control may be defective and remain in the closed position, consequently energizing the Boiler Water Supply Valve to continuously supply water to fill the Boiler, Steam Header and eventually overflow into the compartments) through Steam Solenoid Valve(s).

However, a more likely cause is excessive sealant and/or lime build up within the chamber of the Water Level Control, which having formed around the float, prevents it from fluctuating upwards with the increase in water level and thus the float is unable to trip the switch in the control to de-energize the solenoid valve and consequently stop water from being fed to the Boiler and flooding the system. Refer to Boiler on Removal of Sealants, etc.. This malfunction is extremely serious and indicates that water quality is inadequate and must be rectified immediately with a proper water conditioner.

Pressure Relief Valve leaks or opens frequently

This valve sits on top of the Steam Header and assures that pressure will not exceed 8 p.s.i.. The valve may "leak if dirt is under valve disc. Manually trip lever of valve smartly a few times in an effort to dislodge and blow dirt away. Pressure Gauge on Cooker Control Panel should read maximum 6 p.s.i. and if valve continues to leak, then it is defective and must be replaced.

Pressure in Steam Header may be too high and Pressure Regulating Valve will require adjustment. To re-adjust, loosen lock nut on the adjusting screw and turn adjusting screw counter-clockwise to decrease pressure.

## CABINET CONTROL PROBLEMS

### Safety Relief Valve blows and releases steam frequently

The Safety Relief Valve is set at 15 p.s.i. and is a protective device intended to prevent pressure from exceeding 15 p.s.i. in the Boiler. During the operating cycle, observe the fluctuating pressure range as indicated on the Pressure Gauge located directly on top of the Water Level Control. The fluctuating range should read approximately 9 to 12 p.s.i. during a normal operating cycle and if the Safety Relief Valve blows prematurely then assume it must be defective and requires replacement.

However, if the pressure reading, indicated on the Pressure Gauge, approaches 15 p.s.i., then lower adjustment of the Pressure Switches are required. Remove Cover from Generator Control Box and locate both switches at bottom left side on Control Box. When facing Pressure Switch in the upright position, the adjusting nut on the higher top point to the back controls the high pressure setting of that switch and the adjusting nut on the tower top surface to the front of the switch controls the low pressure setting of that switch. Both nuts when turned counter clockwise with either a 1/4" wrench or slotted screwdriver will lower the pressure settings. Refer to Periodic Maintenance Section 4, for proper pressure settings. Each nut should be turned slightly and the pressure reading on the Gauge observed before adjusting the next nut unnecessarily.

### Water is not being supplied to Boiler

When the appliance is first turned ON, and assuming that water supply is definitely available to the appliance, and after 20 minutes no water can be observed in the Water Gauge Assembly, then either the Solenoid (Hot Water) Valve is defective or is incapable of being energized by the Water Level Control. As mentioned previously, the float within the chamber of the Water Level Control may be seized up and remain stuck in the upper position by sealant thereby falsely indicating sufficient water is present in the Boiler. The Water Level Control Assembly must be detached, removed and thoroughly cleansed to remove sealants and lime build up. Refer to Boiler on Removal of Sealants etc.. This malfunction indicates extremely poor water quality being supplied to the appliance and must be attended to immediately to avoid complete breakdown of the appliance.

Another possibility is that as quickly as water is fed to the Boiler it is being drained through an open Boiler Blow down Solenoid Valve which cannot close since it is not being energized either through defective wiring or a burnt out coil.

This valve is similar in construction to the Exhaust Solenoid Valve mentioned previously and may malfunction due to sealants lodging in the pocket of the valve. Refer to page 17 Cooker Problems - "Water accumulation in the bottom of compartment" - for procedure of cleaning this valve.

CABINET CONTROL PROBLEMS (con t d )Boiler Slowdown Valve does not drain

When the appliance is turned OFF, the Boiler Slowdown Valve is de-energized and consequently opens and the water contained in the Boiler being under pressure, should be blown through this Valve and be noticeably visible exhausting out the appliance Drain. However, if the blow down operation appears to function rather sluggishly or not at all, then assume that considerable sealant may be lodged in the drain pipe and/or the Valve. Disconnect the Valve from the drain line and inspect both the Valve and the drain pipe fixed to the Boiler. If considerable sealant or lime build up is apparent then not only the Valve but also the Boiler and Water Level Control must be thoroughly cleansed. Refer to Gas Boiler (below) on Removal of Sealants etc. for procedure.

Gas Boiler achieves pressure slower than normal

If the Boiler requires considerably more time than 20 minutes to achieve normal operating pressure (9-12 p.s.i.), then assume that heavy build up of sealant has completely coated the interior of the Boiler and consequently heat transfer is hampered by the insulating effect of the sealant. Unbolt and remove the Hand hole Cover Plate and Gasket assembly. Examine interior of Boiler for sealant and/or lime build up.

If considerable sealant is evident then the Boiler Blow down Valve (similar to Exhaust Solenoid Valve) must also be examined. Refer to page 17 on cleaning procedure.

Removal of sealants

Disconnect all (3) union pipe fittings and hot water tilt connection to Boiler. Cap and seal all 4 opened connections to Boiler.

Plumbed directly to the Boiler drain pipe is a pipe Tee with a plug which must be removed and replaced with a convenient length of pipe to provide drainage into a suitable receptacle placed in front of the appliance.

With hose through Hand hole, flush out all loose sealants allowing them to drain through Boiler drain pipe (into receptacle). If drain pipe is clogged with sealant and unable to drain, ream open with a suitable tool such as screwdriver or long rod from inside of Boiler and through drain pipe Tee. With wire brush, loosen as much sealant as possible and flush out of Boiler.

Plug drain pipe. Prepare a solution of one part Muriatic (Hydrochloric) Acid to seven parts of water and pour into Boiler through Handhole up to Handhole opening level and allow to stand for several hours or overnight. Unplug drain pipe and allow solution and sealants to drain out. During this procedure, exercise extreme care to avoid personally coming in contact with acid. If contact occurs, wash acid off immediately with clean water.

Remove all caps and reconnect all unions and connections to Boiler.

CABINET CONTROL PROBLEMS (cont'd)Malfunction of Pilot Burner flame

The Pilot Burner should have a steady blue flame about 1" long which must envelop and heat the thermocouple tip in order for the Main Burners to ignite on demand.

Check that required gas pressure is available to Gas Combination Control Valve.

Unusually strong floor drafts may interfere with pilot flame preventing it from properly heating the thermocouple tip and result in ignition failure of Main Burners.

An inadequately heated thermocouple tip can result from an unusually short pilot flame which most often can be attributed to insufficient or irregular gas supply to Pilot Burner. Examine the gas supply tube (1/4" OD) that it has no severe kinks. Remove tube and check that free flow of gas is possible through it. Also, if the orifice of the Pilot Burner is slightly plugged, gas flow will be impeded causing an irregular flame and will require replacement.

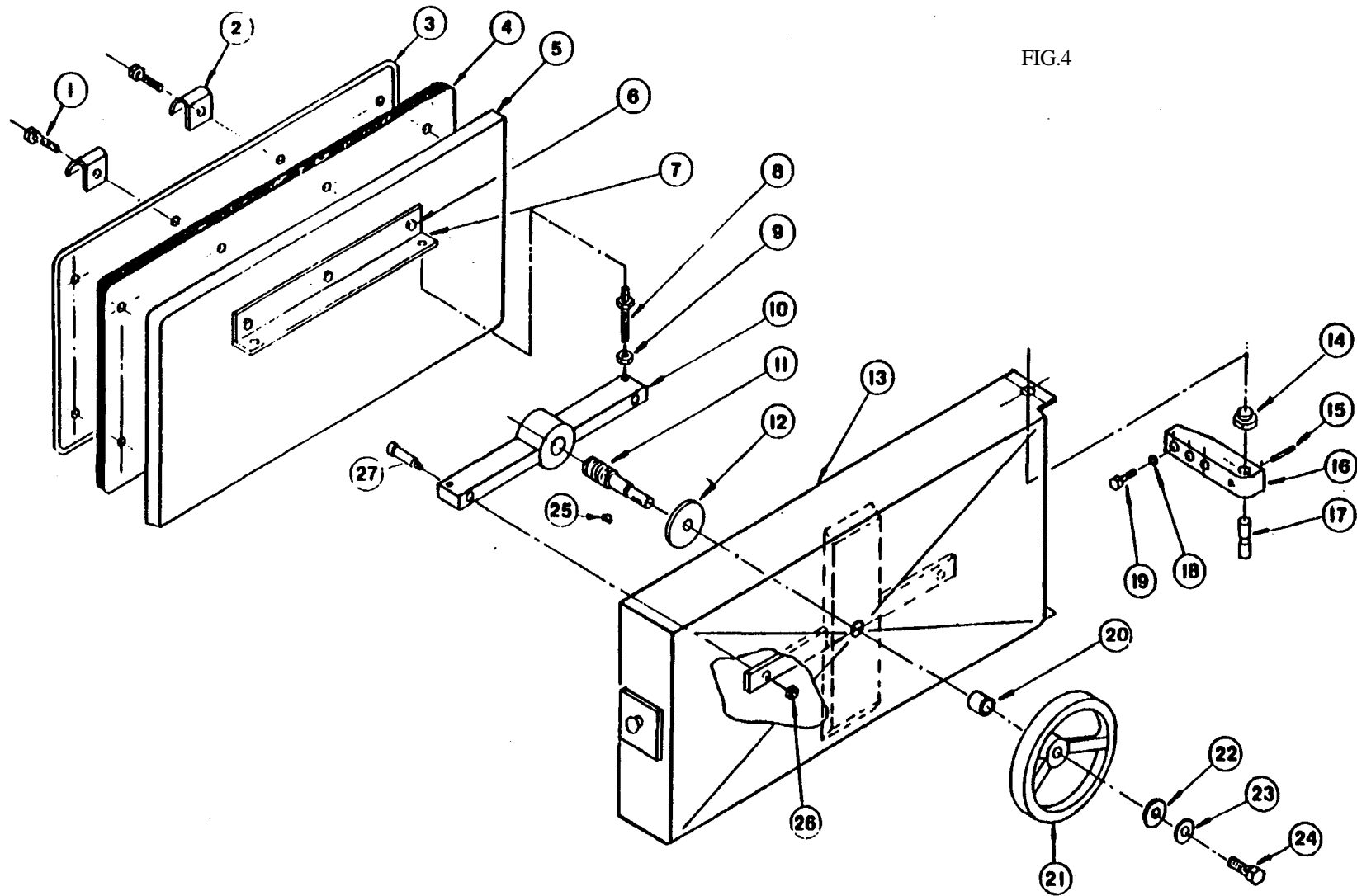
Main Burners refuse to ignite

Assuming that the Pilot Burner flame is of proper size and envelops the thermocouple tip, but the Main Burners refuse on demand to ignite, then possibly the Thermocouple Assembly is malfunctioning. Examine that proper contact of thermocouple to Gas Combination Control Valve is being maintained by checking that the nut connection at Valve is initially finger tight with an additional 1/2 turn by wrench. If malfunction persists, replace Thermocouple Assembly and retest.

Finally, when all above corrections have been made, assume that Gas Combination Control Valve is defective. Replace Valve, it is not recommended that disassembly and repair be attempted.



FIG.4



# COMPARTMENT STEAMER GAS BOILER PARTS

**WARNING:**  
**INSTALLATION OF OTHER THAN GENUINE SOUTHBEND PARTS WILL VOID THE WARRANTY ON THIS EQUIPMENT.**

## **SERIAL NUMBER/RATING PLATE:**

The serial plate is located inside the left door of the cabinet base on the top of the panel

Replacement parts may be ordered either through a Southbend Authorized Parts Distributor or a South-bend Authorized Service Agency.

When ordering parts please supply the Model Number, Serial Number, Part Number, Description, plus Finish, Type of Gas and Electrical Characteristics, as applicable.

For parts not listed consult a Southbend Authorized Parts Distributor or Southbend Authorized Service Agency. If necessary, please consult Southbend Escan Parts Department for assistance.

## PARTS LIST

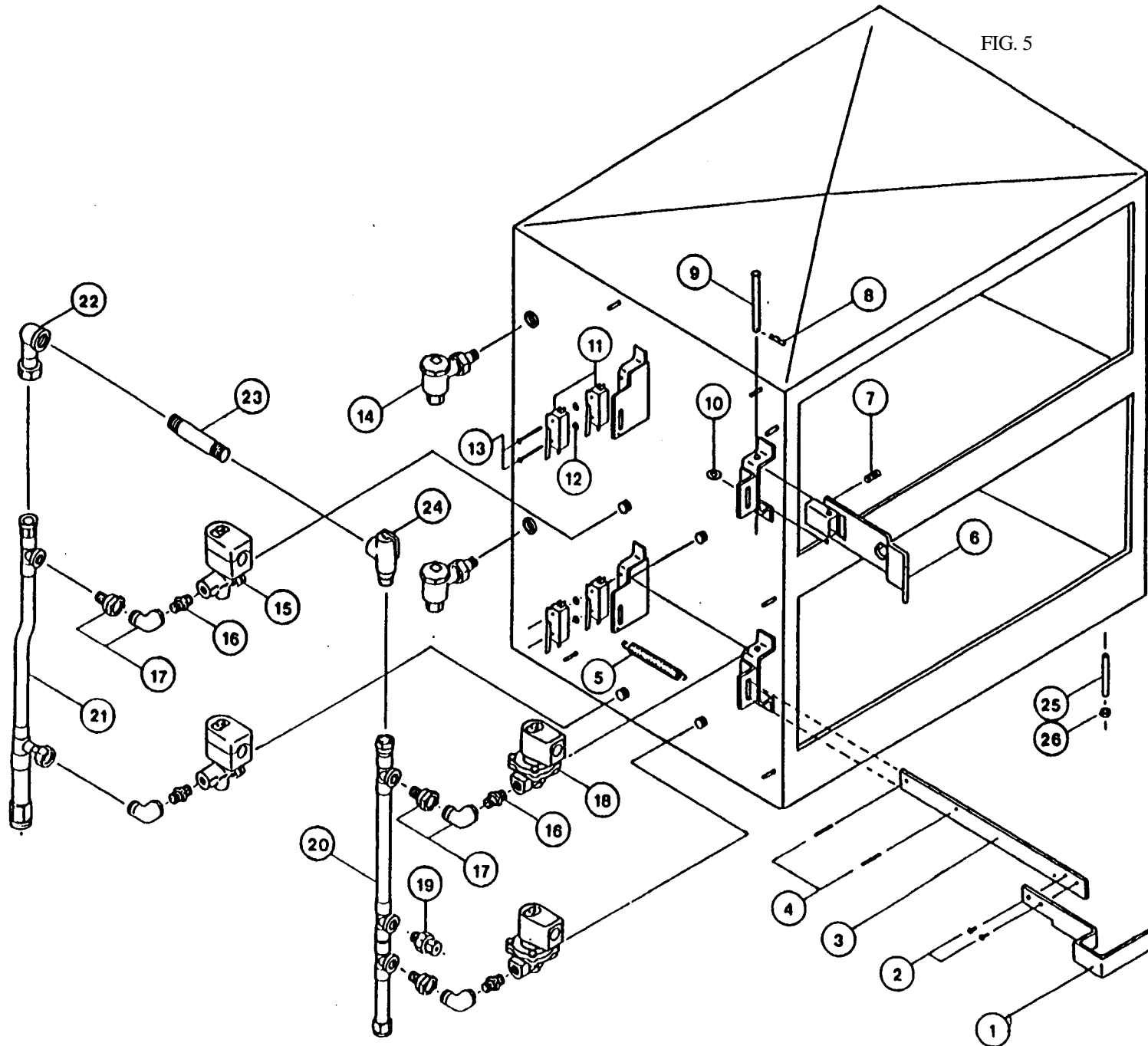
SECTION 7:

COMPARTMENT DOOR ASSEMBLY

From Fig. 4

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	1-55S4	Gasket Screw	8
2	8-1176	Finger Hook	2
3	8-1177	Gasket Panel	1
4	8-1178	Door Gasket	1
5	8-1179	Aluminum Plate	1
6	1-55S4	Support Angle Screw	3
7	8-1180	Support Angle	1
8	8-1181	Alignment Screw	2
9	1-69CO	Nut	2
10	8-1182	Thrust Bar	1
11	8-1183	Thrust Screw	1
12	2-W1B6	Washer	1
13	8-1184	Compartment Door	1
14	8-1187	Bronze Bushing	2
15	1-T6S8	Tension Pin	2
16	8-1188	Hinge	2
17	8-1189	Hinge Pin	2
18	2-011R	'O' Ring	6
19	1-65S4	Hinge Screw	6
20	8-1190	Aluminum Bushing	1
21	8-1191	Handwheel	1
22	2-W9S8	Hasher	1
23	8-1193	Open-Close Label	1
24	1-65S6	Handwheel Screw	1
25	1-K5U5	Thrust Screw Key	1
26	1-59CO	Nut	2
27	2-57U5	Shoulder Screw	2

FIG. 5



## PARTS LIST

SECTION 7:

COOKER ASSEMBLY

From Fig. 5

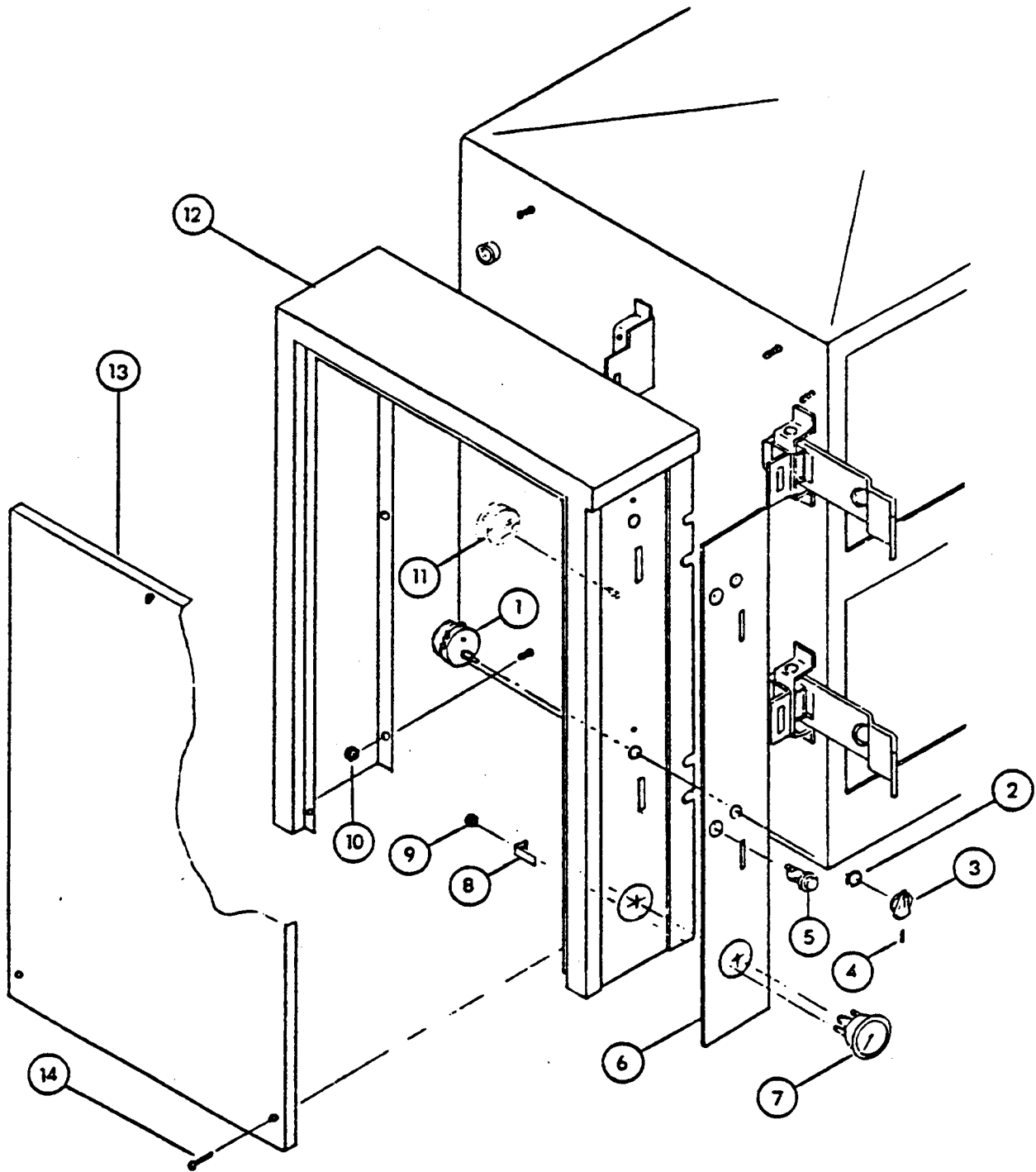
REQUIRED FOR EACH COMPARTMENT

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	8-1247	Operating Handle	1
2	1-32C3	Operating Handle Screw	2
3	8-1248	Operating Ann	1
4	2-T4U6	Tension Pin	2
5	2-ES89	Extension Spring	1
6	8-1249	Hasp	1
7	1-CS78	Compression Spring	1
8	1-PCS8	Hasp Pin Clip	1
9	2-P8C9	Hasp Pin	1
10	8-1251	Hasp Alignment Spacer	1
11	4-M633	Microswitch	2
12	1-S7C5	Miroswitch Spacer	2
13	2-M3C9	Microswitch Screw	2
14	3-CV42	Compartment Vent	1
15	3-S467	Exhaust Solenoid Valve	1
16	3-22DO	Brass Nipple	2
17	3-U4BE	Union Elbow	2
18	3-S422	Steam Solenoid Valve	1

REQUIRED FOR EACH COOKER

19	3-68BC	Connector (to Pressure Gauge Tube)	1	
20	8-1226	Steam Header (2 Comp.)	1	
	or	8-1227	Steam Header (3 Comp.)	1
21	8-1228	Exhaust Header (2 Comp.)	1	
	or	8-1229	Exhaust Header (3 Comp.)	1
22	8-1246	Header Union Elbow	1	
23	8-1231	Header Connecting Pipe	1	
24	3-SRV1	Safety Relief Valve (8 p.s.i.)	1	
25	2-78U7	Cooker Hold Down Bolt	4	
26	1-89CO	Nut	4	

FIG. 6



## PARTS LIST

SECTION 7:

COOKER CONTROLS

From Fig. 6

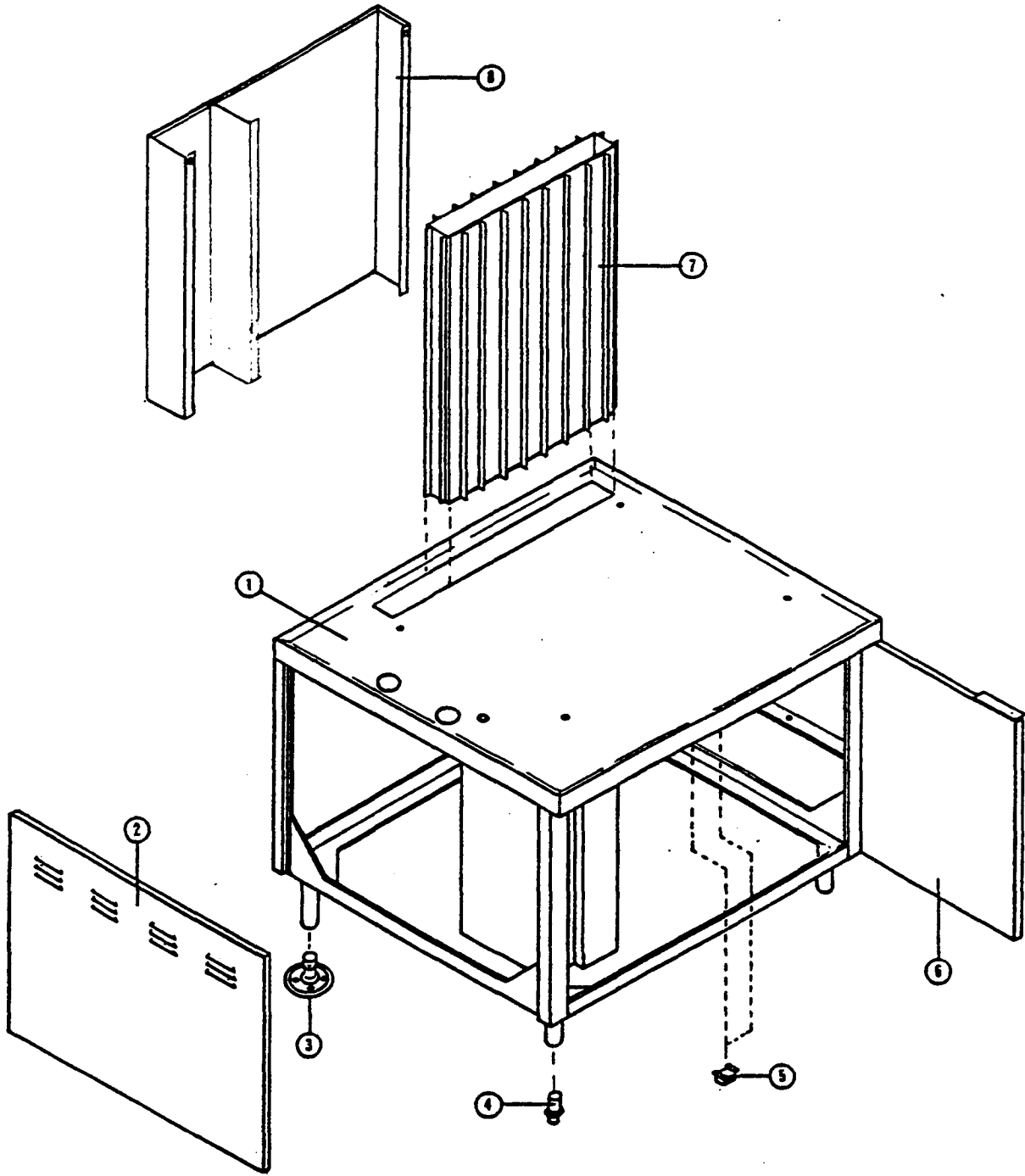
REQUIRED FOR EACH COMPARTMENT

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	4-T209	Timer	1
2	2-79CO	Timer Nut	1
3	4-TK08	Timer Knob	1
4	1-16C3	Knob Set Screw	1
5	4-P5TN	Pilot Light	1

REQUIRED FOR EACH COOKER

6	8-1204	Cooker Instruction Label (2 comp.)	1	
	or	8-1205	Cooker Instruction Label (3 comp.)	1
7	3-PG15	Pressure Gauge	1	
8	3-15PG	Gauge Fastening Bracket	2	
9	1-39CO	Pressure Gauge Nut	2	
10	1-59CO	Enclosure Fastening Nut (2 comp.)	8	
	or		Enclosure Fastening Nut (3 comp.)	9
11	4-BU09	Buzzer	1	
12	8-1207	Cooker Control Enclosure (2 comp.)	1	
	or	8-1208	Cooker Control Enclosure (3 comp.)	1
13	8-1211	Cooker Enclosure Cover (2 comp.)	1	
	or	8-1212	Cooker Enclosure Cover (3 comp.)	1
14	1-34S8	Enclosure Cover Screw	3	

FIG. 7





## PARTS LIST

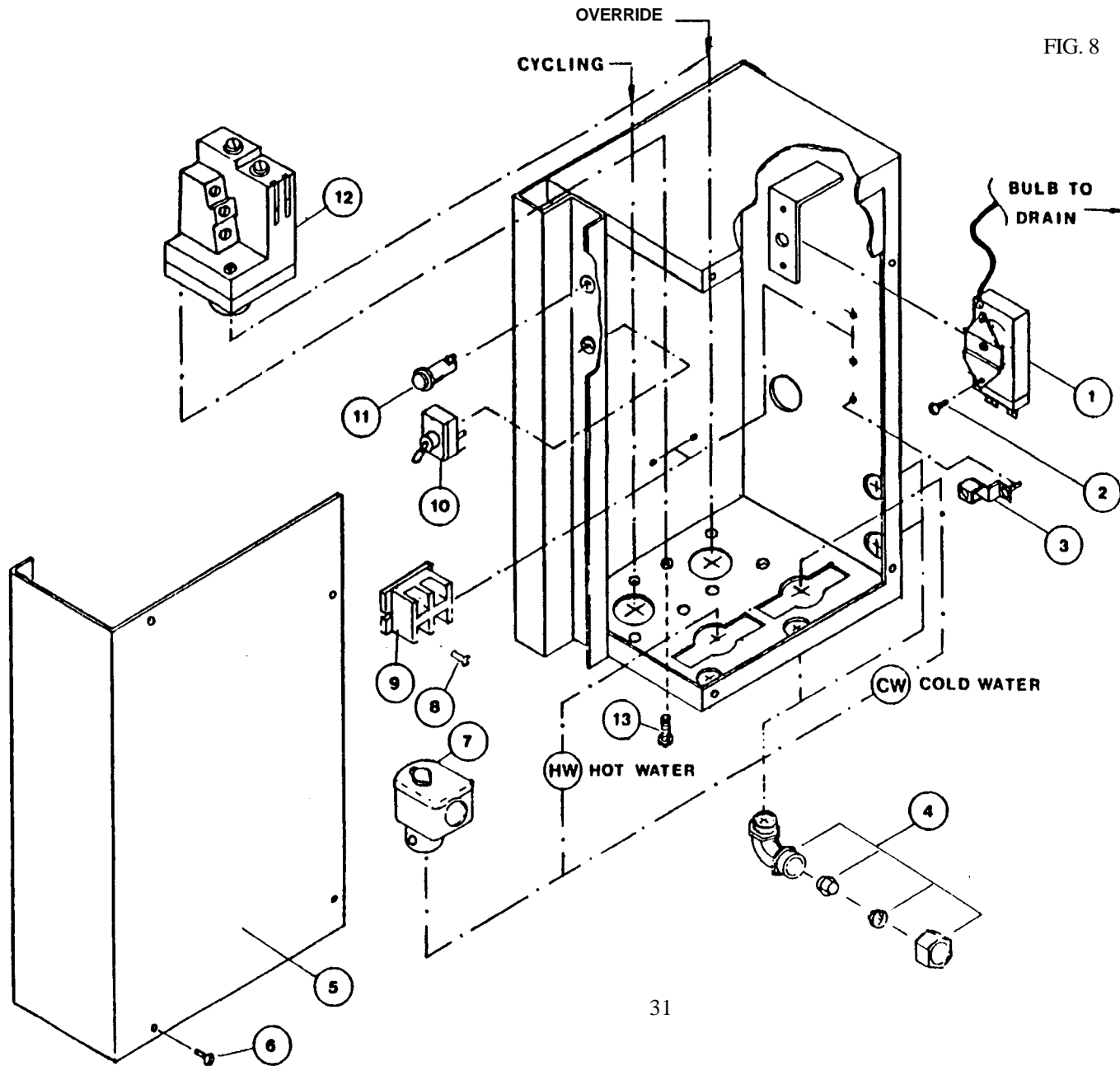
SECTION 7:

MODELS: GC-2 & GC-3  
CABINET

From Fig. 7

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	8-1412	Cabinet Assembly (Galv. Back)	1
	8-1413	Cabinet Assembly (Stainless Back)	1
2	8-1305	Side Panel	2
3	8-1308	Flanged Adjustable Foot (Rear)	2
4	5-FS64	Adjustable Foot Insert (Front)	2
5	5-MC02	Magnetic Door Catch	2
	1-11C2	Magnetic Door Catch Screws	8
6	8-1303	Right Hand Door (Shown)	1
	8-1304	Left Hand Door	1
7	8-1414	Flue Stack (2 Compartment) or	1
	8-1415	Flue Stack (3 Compartment)	1
8	8-1416	Stack Cover (2 compartment) or	1
	8-1417	Stack Cover (3 compartment)	1

Note: Item No. 3, "Flanged Adjustable Foot", may be specified as an option on all four legs at time of order.



## PARTS LIST

MODELS: GC-2 &amp; GC-3

SECTION 7:

GENERATOR CONTROL BOX ASSEMBLY

From Fig. 8

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	4-TH04	Drain Thermostat	1
2	1-13C3	Thermostat Screw	2
3	4-70EU	Ground Terminal	1
4	4-LQE7	Liquid Tite Elbow Assembly	3
5	8-1244	Control Box Cover	1
6	1-33C3	Cover Bolts	4
7	3-S162	Solenoid Valve	2
8	1-23C3	Terminal Block Screw	4
9	4-22T8	Terminal Block	2
10	4-S191	Power Switch	1
11	4-PL04	Pilot Light	1
12	3-PA26	Pressure Switch c/w 3-RD20 Transducer	2
13	1-55C8	Pressure Switch Bolt	8

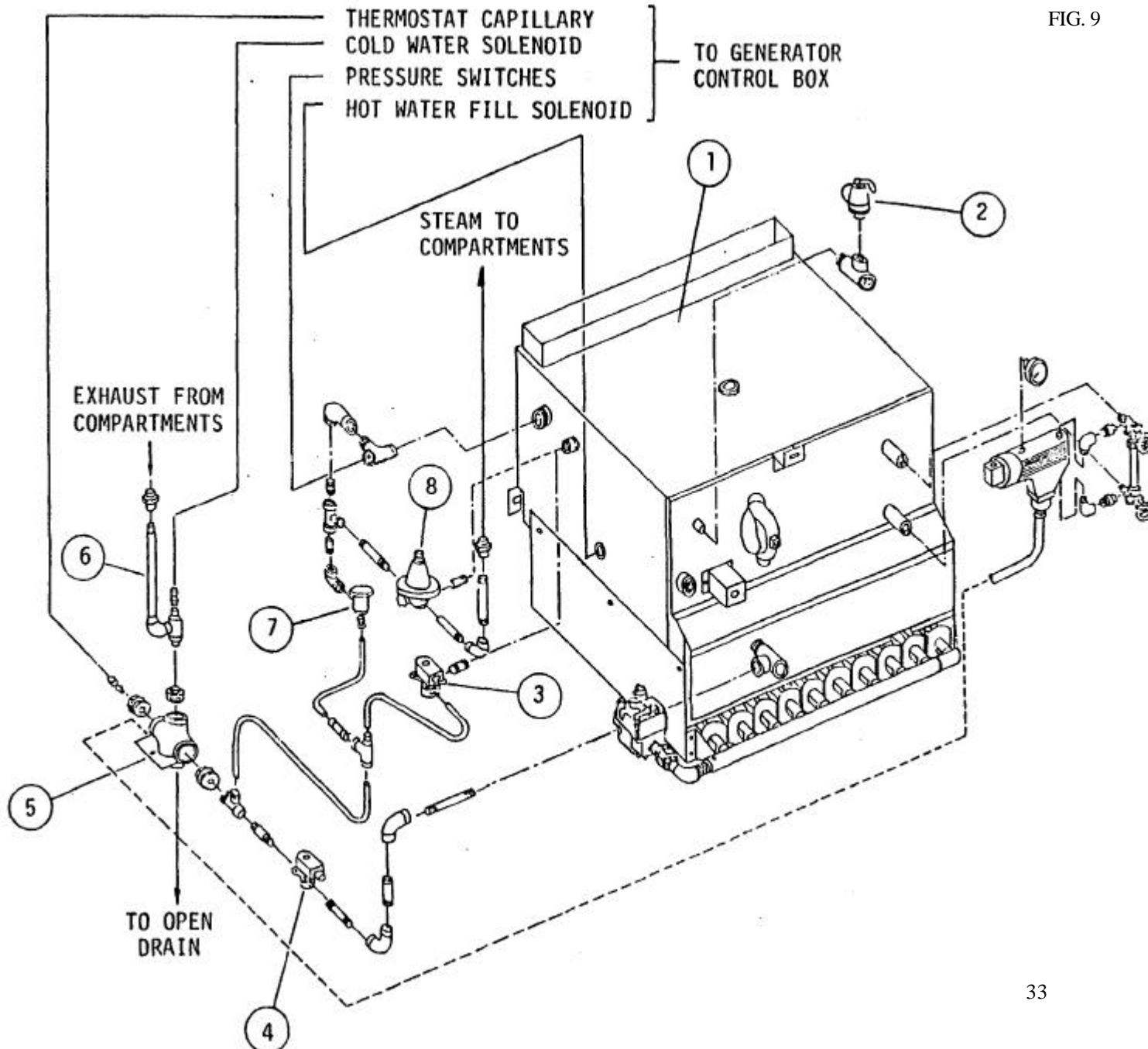


FIG. 9

PARTS LIST

MODELS: GC-2 & GC-3  
GENERATOR ASSEMBLY

SECTION 7:

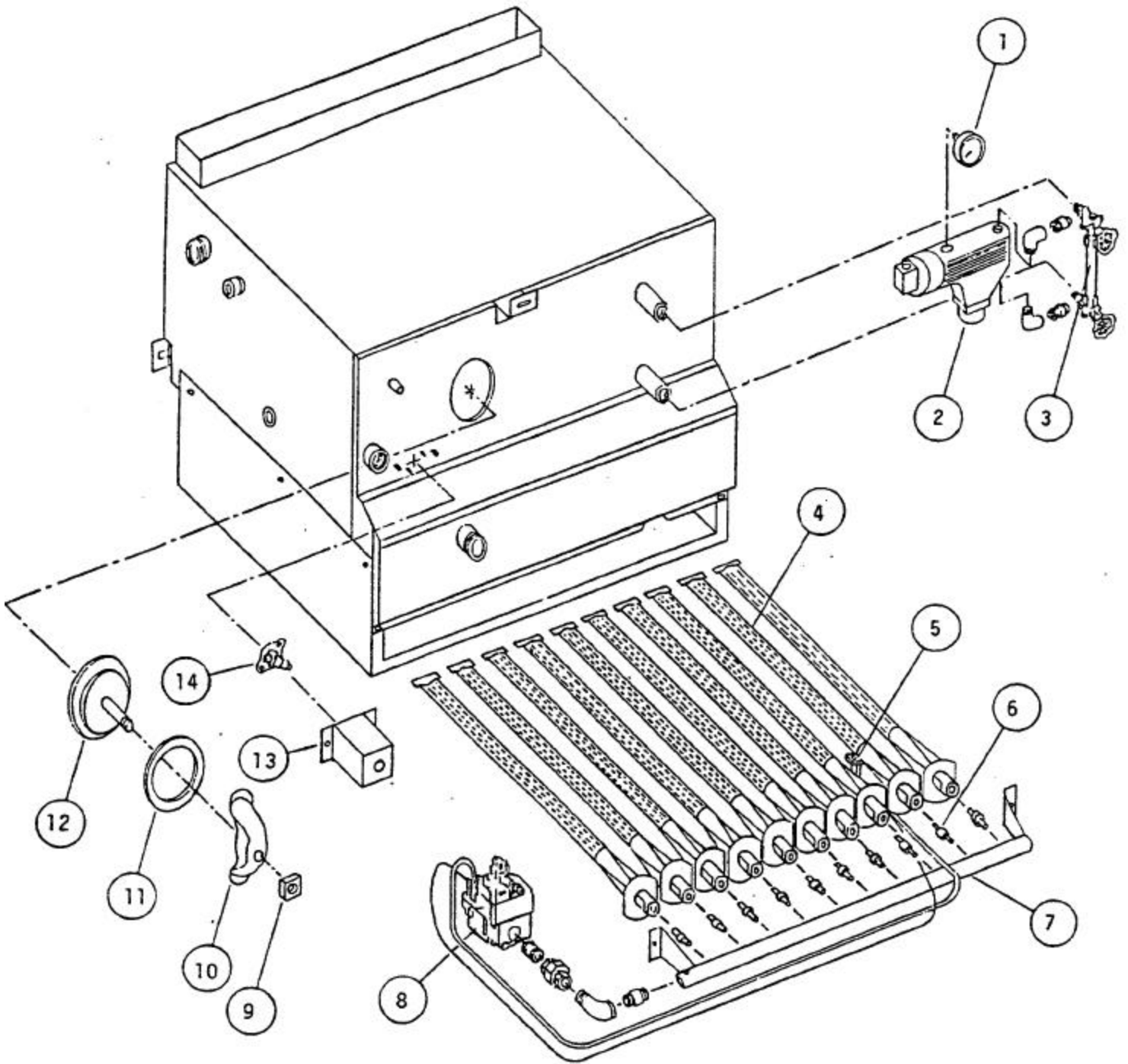
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From Fig. 9

<u>ITEM NO.</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	8-1800	Gas Boiler	1
2	3-SRV3	Boiler Safety Valve	1
3		Override Solenoid Valve	1
4	3-S567	Blow down Solenoid Valve	1
	3-BVEO	Manual Valve	1
5	8-1254	Appliance Drain Assembly	1
6	8-1255	Exhaust Drain Assembly	1
7	3-TST1	Thermostatic Steam Trap	1
8	3-PR52	Pressure Regulator	1

SECTION 7:

FIG. 10



BOILER RATED @  
250,000 BTU/HR

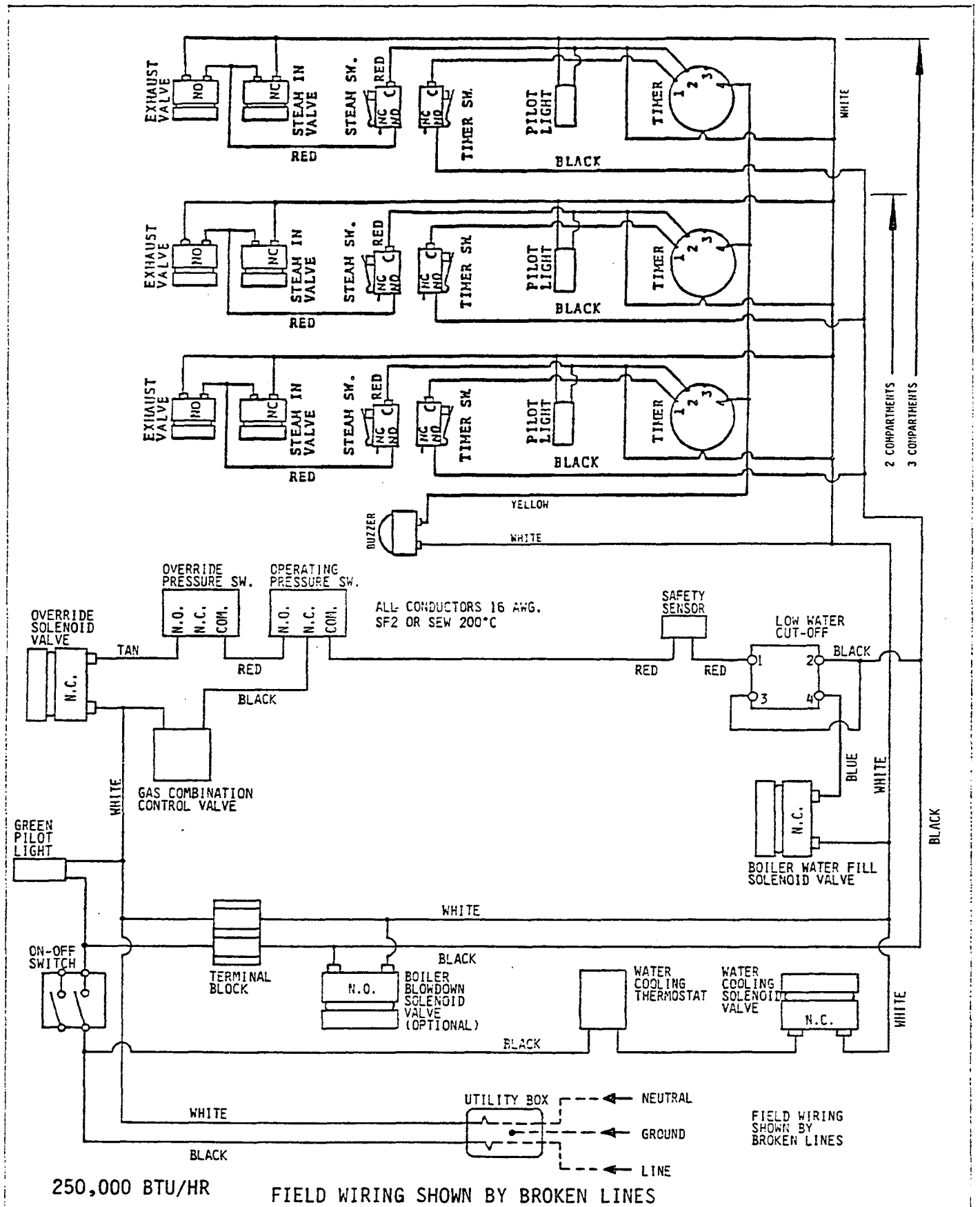
## PARTS LIST

SECTION 7:

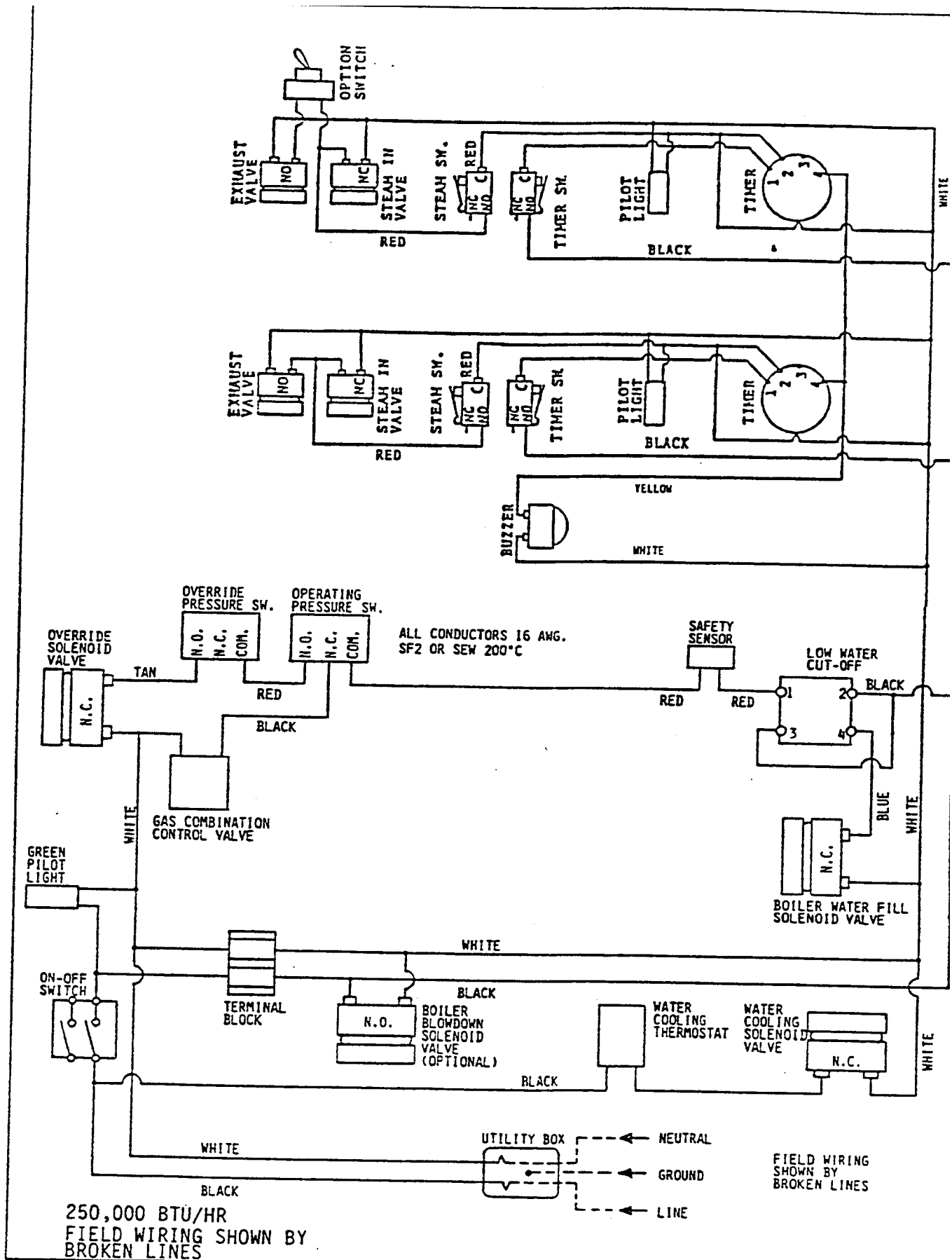
GAS BOILER ASSEMBLY

From Fig. 10

<u>ITEM NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	6-36SS	Safety Sensor	1
2	8-1400	Sensor Cover Box	1
3	8-1408	Handhole Cover Plate	1
4	2-75U9	Fastening Bolt	1
5	8-1409	Handhole Gasket	1
6	8-1410	Yoke	1
7	2-75U0	Fastening Nut	1
8	9-1401	Hood and Spud	6
9	8-1404	Gas Manifold	1
10	6-36TB	Thermocouple with Bulb	1
n	6-36C0	Gas Combination Control Valve	1
12	6-36PB	Pilot Burner Assembly	1
13	8-1406	Burner	5
	8-1407	Burner (with bracket for pilot)	1



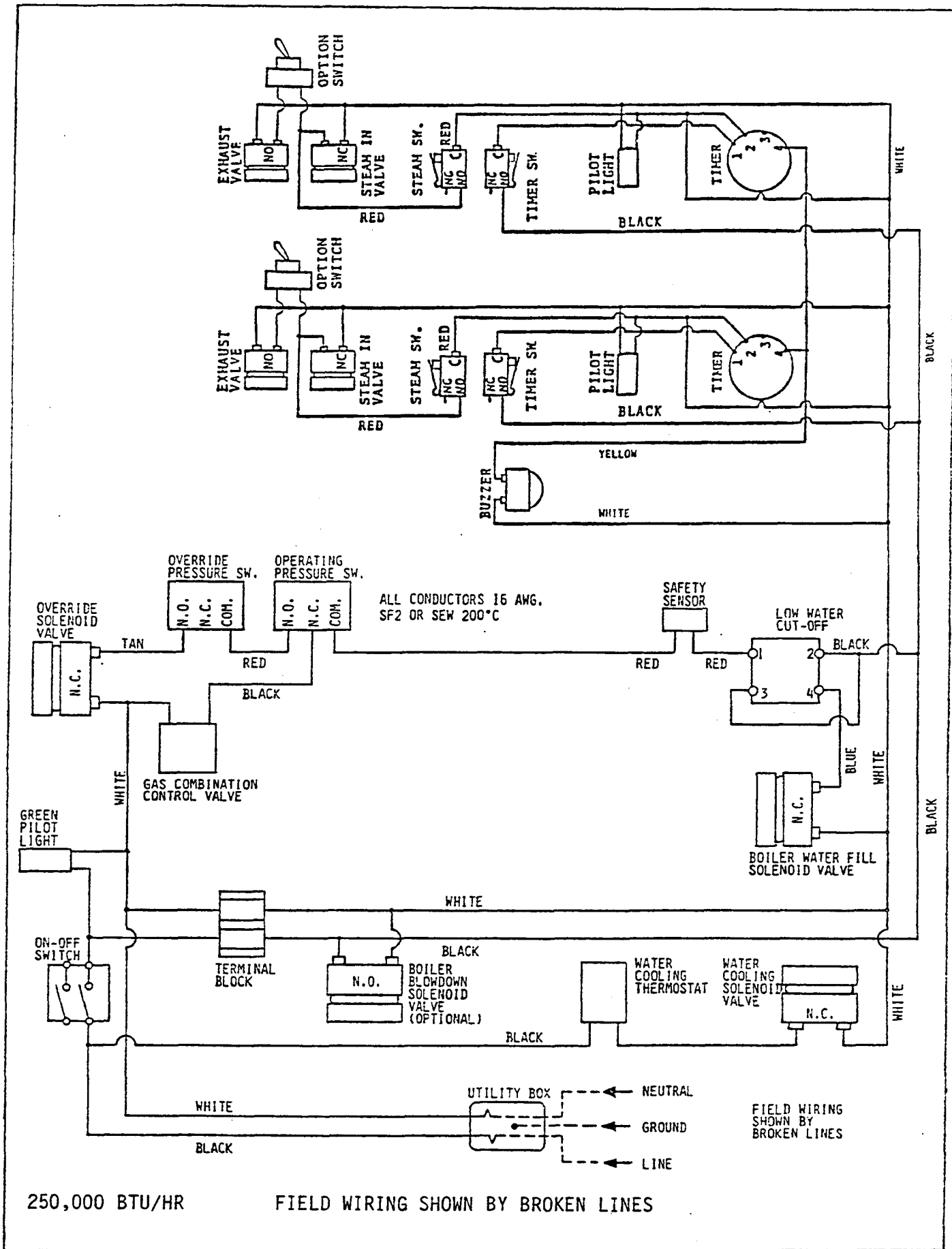




WIRING DIAGRAM

SECTION 8:

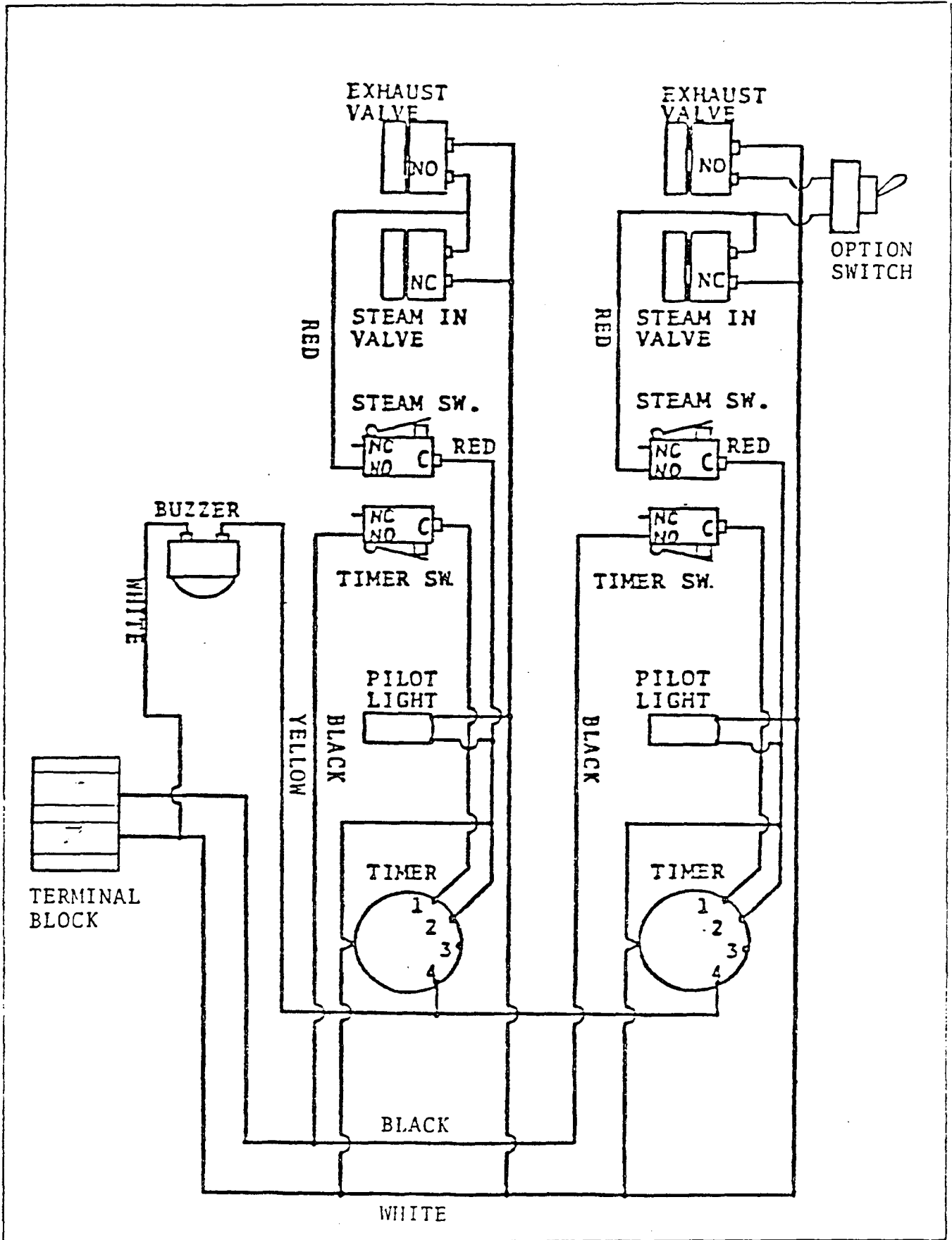
MODEL: GHD-2



WIRING DIAGRAM

MODELS: EDA-2, SCDA-2, GDA-2  
& DDA-2

SECTION 9:

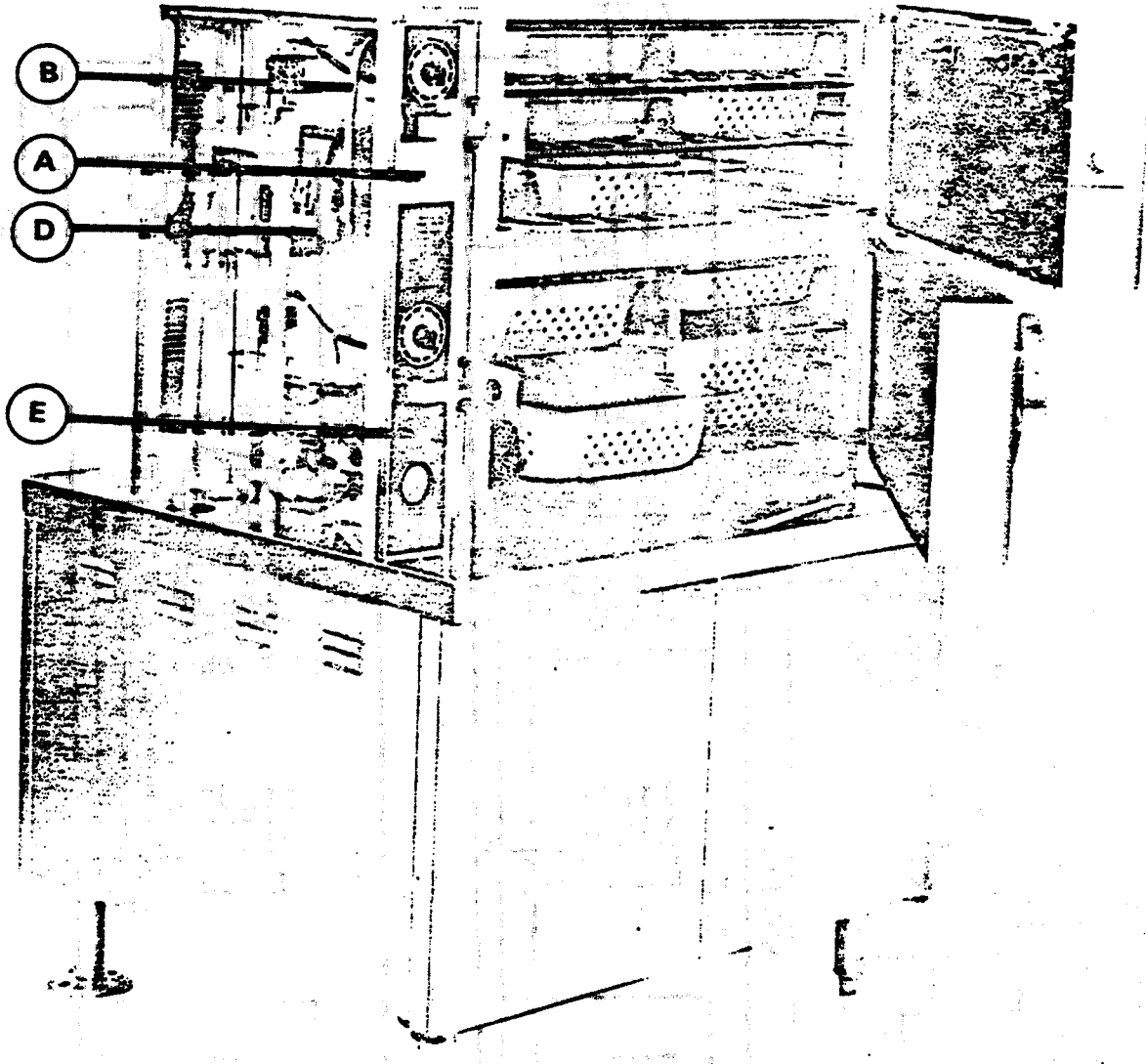


DO-ALL COOKERS

SECTION 9:

MODELS: DDA-2, SCDA-2  
EDA-2 & 8DA-2

FIG. 11



<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
A	4-S001	Pressure Option Switch	1
B	8-1275	Formed 5 Brass Tube	1
C	8-1274	Steam Diverter Assembly (Not Visible)	1
D	3-S322	Steam Solenoid Valve (Replaces Steam Solenoid Valve 3-S422)	1
E	8-1206	Instruction Panel	1

SUPPLEMENT

# COMPARTMENT STEAMER GAS BROILER

A product with the Southbend name incorporates the best in durability and low maintenance. We all recognize however, that replacement parts and occasional professional service may be necessary to extend the useful life of this unit. When service is needed, contact a Southbend Authorized Service Agency, or your dealer. To avoid confusion, always refer to the model number, serial number, and type of your unit.



A MIDDLEBY COMPANY

PART NUMBER A44-00014

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