

Service Manual

Floor type Gas Convection Steamer



Series: Gemini Models 24CGA6.2ES, 24CGA10.2ES

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 Cleveland

FOR THE INSTALLER

FOR YOUR SAFETY

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

WARNING

Disconnect power before servicing

WARNING

Improper installation, adjustment, alterations, services or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

IMPORTANT

IT IS IMPORTANT TO POST INSTRUCTIONS WHICH ARE TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS. THESE INSTRUCTIONS SHOULD BE LOCATED IN A PROMINENT LOCATION, AND BE FULLY UNDERSTOOD BY ALL USERS OF THIS EQUIPMENT. THIS INFORMATION SHOULD BE OBTAINED FROM YOUR LOCAL GAS SUPPLIER.

ALL SERVICE MUST BE PERFORMED BY A QUALIFIED CLEVELAND RANGE AUTHORIZED TECHNICIAN.

The wiring diagram is located on the back of the lower front panel.

RETAIN THIS MANUAL FOR YOUR REFERENCE

Cleveland STATEMENT OF POLICIES

LIMITED WARRANTY

CLEVELAND RANGE products are warranted to the original purchaser to be free from defects in materials and workmanship under normal use and service for the standard warranty period of one year from date of installation or 18 months from date of shipment, whichever ever comes first.

CLEVELAND RANGE agrees to repair or replace, at its option, f.o.b. factory, any part which proves to be defective due to defects in material or workmanship during the warranty period, providing the equipment has been unaltered, and has been PROPERLY INSTALLED, MAINTAINED, AND OPERATED IN ACCORDANCE WITH THE CLEVELAND RANGE OWNER'S MANUAL.

CLEVELAND RANGE agrees to pay any FACTORY AUTHORIZED EQUIPMENT SERVICE AGENCY (within the continental United States, and Hawaii) for reasonable labor required to repair or replace, at our option, f.o.b. factory, any part which proves to be defective due to defects in material or workmanship, during the labor warranty period. This warranty includes travel time not to exceed two hours and mileage not to exceed 50 miles (100 miles round-trip), BUT DOES NOT INCLUDE POST START-UP, TIGHTENING LOOSE FITTINGS, MINOR ADJUSTMENTS, MAINTENANCE, CLEANING OR DESCALING.

The standard labor warranty allows factory payment of reasonable labor required to repair or replace such defective parts. Cleveland Range will not reimburse the expense of labor required for the repair or replacement of parts after the standard warranty period, unless an Extended Labor Warranty Contract has been purchased to cover the equipment for the balance of the warranty period from the date of equipment installation, start-up, or demonstration.

PROPER INSTALLATION IS THE RESPONSIBILITY OF THE DEALER, THE OWNER-USER, OR INSTALLING CONTRACTOR, AND IS NOT COVERED BY THIS WARRANTY. Many local codes exist, and it is the responsibility of the owner and installer to comply with these codes. Cleveland Range equipment is built to comply with applicable standards for manufacturers, including UL, ANSI, NSF, ASME/Ntl. Bd., CSA, and others.

BOILER (Steam Generator) MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER-USER AND IS NOT COVERED BY THIS WARRANTY. The use of good quality feed water is the responsibility of the Owner-User (see Water Quality Recommendations below). THE USE OF POOR QUALITY FEED WATER WILL VOID EQUIPMENT WARRANTIES. Boiler maintenance supplies, including boiler hand hole gaskets, are not warranted beyond the first 90 days after the date the equipment is placed into service. Preventive maintenance records must be available showing descaling per applicable Cleveland Operator Manual for Boiler Proration Program considerations.

WATER QUALITY RECOMMENDATIONS

TOTAL DISSOLVED SOLIDS	less than	60 parts per million
TOTAL ALKALINITY	less than	20 parts per million
SILICA	less than	13 parts per million
CHLORIDE	less than	30 parts per million
pH FACTOR	greater than	7.5

The foregoing shall constitute the sole and exclusive remedy of original purchaser and the full liability of Cleveland Range for any breach of warranty. THE FOREGOING IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL, OR IMPLIED, INCLUDING ANY WARRANTY OF PERFORMANCE, MERCHANTABILITY, OR FITNESS FOR PURPOSE, AND SUPERSEDES AND EXCLUDES ANY ORAL WARRANTIES OR REPRESENTATIONS, OR WRITTEN WARRANTIES OR REPRESENTATIONS, NOT EXPRESSLY DESIGNATED IN WRITING AS A "WARRANTY" OR "GUARANTEE" OF CLEVELAND RANGE MADE OR IMPLIED IN ANY MANUAL, LITERATURE, ADVERTISING BROCHURE OR OTHER MATERIALS.

CLEVELAND RANGE'S liability on any claim of any kind, including negligence, with respect to the goods or services covered hereunder, shall in no case exceed the price of the goods or services, or part thereof, which gives rise to the claim. IN NO EVENT SHALL CLEVELAND RANGE BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES IN THE NATURE OF PENALTIES.

LIMITED EXTENDED WARRANTY COVERAGE

The purchase of a Limited Extended Warranty Contract extends the standard warranty coverage to the purchased period of time (one to two years) from the date of installation, start-up, or demonstration, whichever is sooner.

*An additional two years Parts and Labor Warranty can be purchased with each piece of Cleveland equipment for an additional 2% of the List Price per year. The 2% of list price charge will be the net invoice amount for each year of extended warranty purchased.

- Extended warranty must be purchased at the same time the equipment is purchased.
- Extended Warranty has the same exclusions as stated in our standard warranty.

Second year limited extended warranty coverage on Cleveland Steamers when purchased with a water filter applies to water related components only.

CHAPTER 1 PRODUCT IDENTIFICATION

Cleveland Range, Inc. assigns two product identification numbers to each steamer: a model number and a serial number. The model number identifies the product characteristics. The serial number identifies the individual unit.

A. MODEL NUMBER

This manual covers the Gemini Model No. 24CGA6.2S, 24CGA6.2SES, 24CGA10.2, and 24CGA10.2ES Dual Steam Generator and Convection Steamer.

Each character of this model number identifies a characteristic of the steamer. The Gemini Model No. 24CGA10.2ES is 24 inches wide, a **C**onvection steamer, **G**as powered, and an **A**tmospheric steam generator with a capacity for **10** cooking pans, this model has the extra suffix **“.2”** to differentiate it from our standard 10 pan model that does not have two separate generators and **E**nergy **S**aver for models designed for high efficiency operation. This manual covers all standard features and options available on Gemini gas steamers.

Model 24CGA6.2S and 24CGA10.2 are steamers designed for high capacity operation. The burners that supply steam and the condenser spray to the compartments are on continuously while the unit is in timed cooking mode or in the manual cooking mode. The burners and condenser spray stay on until the cooking operation is complete.

Model 24CGA6.2SES and 24CGA10.2ES are steamers designed for high efficiency operation. The energy saver models provide steam in a similar manner to our high capacity models except that the flow of steam is regulated by cycling the burners off once the desired cooking temperatures is reached. When the temperature drops to a set point below the desired cooking temperature the burners will turn back on to bring the cooking compartment back up to temperature. The burners will continue to cycle on and off as necessary to maintain temperature until the cooking operation is complete. The condenser spray is activated periodically to cool the condensate water to the drain automatically through the use of a thermostat control.

NOTE TO INSTALLER: There are some significant differences in the installation procedures between the 24CGA6.2S, 24CGA10.2 and the 24CGA6.2SES, 24CGA10.2ES units. Pay close attention to section headings for specific installation instructions for each model listed.

B. SERIAL NUMBER

During manufacture, Gemini Steamers are assigned individual serial numbers. Whenever any inquiry is made with Cleveland Range regarding a steamer the serial number should be referenced.

C. PRODUCT INFORMATION PLATE

The Product Information Plate on the left side of the unit lists the model and serial number of the steamer. Figure 1-1 illustrates a typical Gemini Product Information Plate. The rating plate also lists power and wiring requirements.

CLEVELAND RANGE, LLC
CLEVELAND, OHIO

MODEL NO 24CGA10.2
SERIAL NO WC - 21711-02B-01
MANIFOLD PRESSURE 3.5 in. W.C.

STEAM GENERATOR(S) 2 AT 72,000 BTU PER HR EACH
ANSI Z83.11 NATURAL GAS
• CGA 1.8 2002 1,000 BTU PER CU FT

FOOD SERVICE EQUIPMENT FOR USE ON COMBUSTIBLE FLOORS

COMBUSTIBLE CONSTRUCTION		NONCOMBUSTIBLE CONSTRUCTION	
BACK	3 IN	MINIMUM CLEARANCE	3 IN
SIDE	3 IN		3 IN

VOLTS 115 PHASE 1 HZ 60 AMPS 3.0

CAUTION: FOR SUPPLY CONNECTION USE ONLY COPPER WIRE SUITABLE FOR AT LEAST 60 °C

INTENDED FOR OTHER THAN HOUSEHOLD USE

1000091 D

Figure 1-1 Gemini Product Information Plates

D. GENERATOR VENT – IMPORTANT

IMPORTANT

When installing this steamer, under no circumstances should the Steam Vent (See Figure 1-2), be removed, capped or attached to piping of any kind.

This fitting is an auxiliary safety intended to prevent any pressure from building up in the generator in the unlikely event the steam outlets of the steamer should become plugged or restricted.



Figure 1-2 Generator Vent

CHAPTER 2 INSTALLATION INSTRUCTIONS

A. GENERAL

This equipment should only be installed by qualified, professional plumbers, pipe fitters, and electricians.

- The steamer is to be installed to comply with the applicable Federal, State or Local Plumbing Codes, with the National Fuel Gas Code, ANSI Z223.1-(latest edition) or the Natural Gas Installation Code CAN/CGA-B149.1 or the Propane Installation Code CAN/CGA-B149.2 as applicable, The National Electrical Code, ANSI/NFPA No. 70-(latest edition) or the Canadian Electrical Code, CSA C22.2 as applicable, the Food Service Sanitation Manual of the Food and Drug Administration (FDA) and all applicable state and local codes and regulations.
- The installation instructions must be read in their entirety before starting the installation of this steamer.

WARNING

DEATH, INJURY, AND EQUIPMENT DAMAGE could result from the improper installation, adjustment, alteration, service or maintenance of a steamer or installation of a unit damaged during shipment or storage. Any of these conditions could also void the equipment warranty.

DO NOT INSTALL a Gemini steamer that has been damaged.

Install the Gemini steamer according to the policies and procedures outlined in this manual.

- To install this steamer, the following requirements must be considered when selecting a location.
 - a. A suitable drain must be available within 12 ft. of the steamer. Do NOT install the appliance directly over a drain. Steam rising up out of the drain will adversely affect operation, hamper cooling air circulation, and damage electrical and electronic components. NOTE: The drain MUST NOT be located beneath the steamer itself.
 - b. An electrical supply matching the power requirements found on the rating plate must be available, which is not of the GFCI (Ground Fault Interrupter Circuit) type.
 - c. A gas supply matching the fuel requirements found on the rating plate must be available.
 - d. The location must have sufficient space to meet the clearance requirements of the steamer as outlined in Chapter 2, Section B, Part 1, “Locating the Steamer”.
 - e. A water supply meeting the requirements outlined in Chapter 2, Section B, Part 6 “Water Supply Requirements and Installation” must be available.

B. INSTALLATION OF THE STEAMER

After selecting the steamer's operating location the steamer can be positioned, and installed.

CAUTION

Malfunctions and equipment damage may result from improper mounting. Malfunctions and/or damage resulting from improper mounting are not covered by the equipment warranty. The steamer **MUST BE LEVEL BOTH FRONT TO BACK AND SIDE TO SIDE** in all mounting arrangements. Catastrophic damage will result from shifting the steamer more than 10° out of level with power supplied to the unit.

1. Locating the Steamer

a. Location and Clearance Requirements of the Steamer

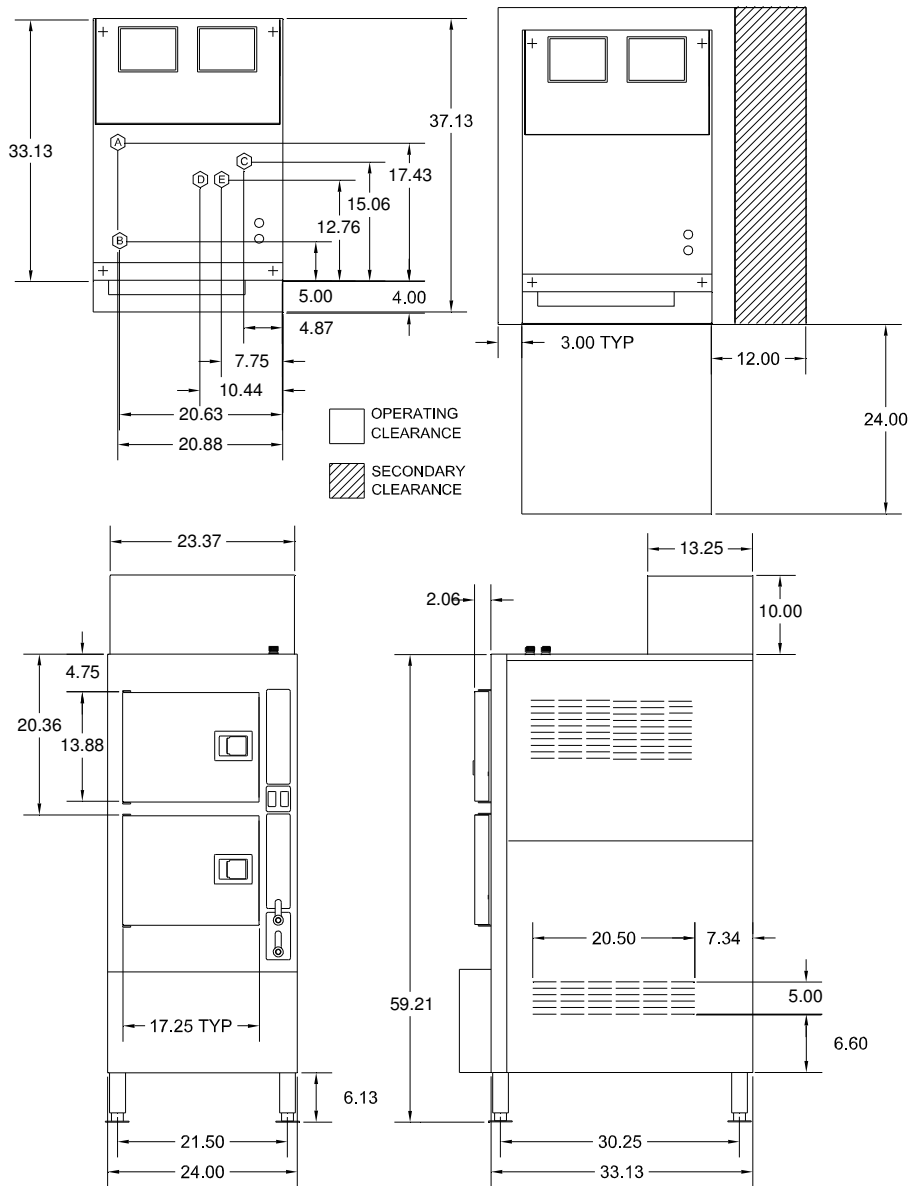
For safe and efficient operation, observe the following criteria when selecting an operating location for the Gemini steamer.

- 1) The unit should be installed in an area that is free and clear of combustible materials.
- 2) Do NOT install the appliance directly over a drain. Steam rising up out of the drain will adversely affect operation, hamper cooling air circulation, and damage electrical and electronic components.
- 3) A proper air supply for combustion and ventilation is critical to safe, efficient operation of Gemini gas steamers.
- 4) Do not install any heat producing equipment near the air vents of the equipment. Do not block the air vents of the unit. Do not store articles on top of the unit.

WARNING

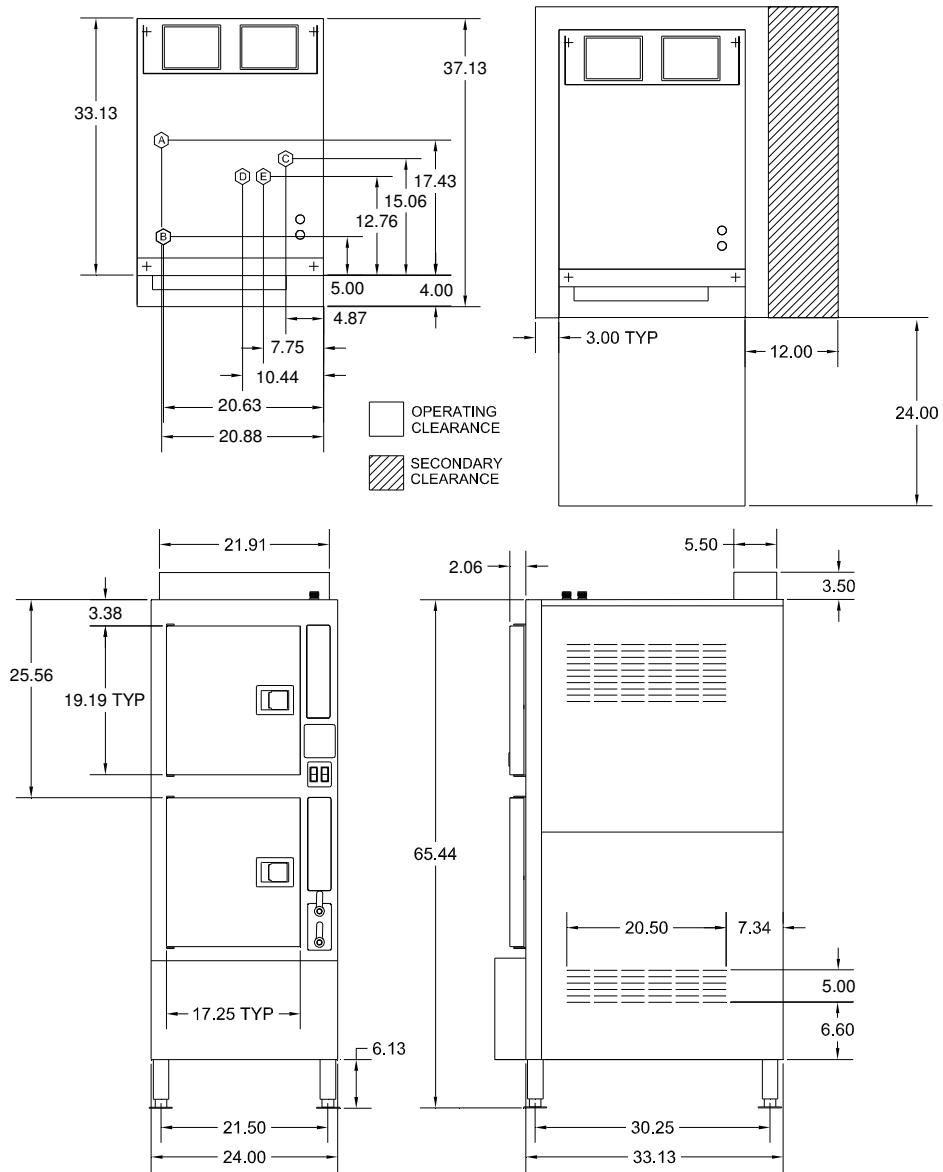
All clearance requirements above, below, and around the unit are the same for non-combustible locations as for combustible locations.

- 5) Figure 2-1, 2-2, 2-3, and 2-4 illustrate the dimensions and clearances required for these steamers. Maintain the following minimum dimensions around the unit for safe and efficient operation, maintenance and service.
 - Maintain a 3-inch operating clearance at the sides of the unit, and at least a 3-inch clearance at the back.
 - A 12 in clearance is recommended on the right side for servicing the steamer.
 - Approximately 24 inches of clearance is recommended in front of the unit for opening the door and standard pan clearance.
- 6) The steamer must be level both front to back and side to side. Select an operating surface that is level enough to allow leveling the unit without extreme adjustment of the legs.
- 7) The location selected must be capable of supporting 650 lbs. for a Gemini steamer. This includes the weight of the water and the food.



A GAS			B ELECTRIC	COLD WATER	CLEARANCE	C DRAINAGE
1-1/4" IPS line size, 3/4" connection			115V-1Phase, 60 Hz.	35 PSI minimum	RIGHT = 12.00" for service	2" dia. O.D.
NATURAL	PROPANE	BTU	2 Fans & controls	60 psi maximum	SIDES = 3.00"	Do not connect other units to this drain. Drain must be free air vented.
Piping 3/4" NPT	Piping 3/4" NPT.	50,000 each	150 watts each	(1) 1/2" dia. IPS for D Condenser	REAR = 3.00"	
Supply pressure	Supply pressure	Generator		(1) 3/8" dia. IPS for E Generator	FRONT = 24.00"	Drain plumbing must be able to withstand 140°F (60°C).
4.50" W.C. Min. 14.00" W.C. Max.	11.00" W.C. Min. 14.00" W.C. Max.	100,000 total				The drain must not be located beneath the steamer itself.
Manufacturer must be notified if unit will be used above 2,000 feet						

Figure 2-2 Gemini 24CGA6.2SES Dimensions and Clearances



A GAS			B ELECTRIC	COLD WATER	CLEARANCE	C DRAINAGE
1-1/4" IPS line size, 3/4" connection			115V-1Phase, 60 Hz.	35 PSI minimum	RIGHT = 12.00" for service	2" dia. OD
NATURAL	PROPANE	BTU	2 Fans & controls	60 psi maximum	SIDES = 3.00"	Do not connect other units to this drain. Drain must be free air vented.
Piping 3/4" NPT	Piping 3/4" NPT.	50,000 each	150 watts each	(1) 1/2" dia. IPS for D Condenser	REAR = 3.00"	
Supply pressure	Supply pressure	Generator		(1) 3/8" dia. IPS for E Generator	FRONT = 24.00"	Drain plumbing must be able to withstand 140°F (60°C).
4.50" W.C. Min. 14.00" W.C. Max.	11.00" W.C. Min. 14.00" W.C. Max.	100,000 total				The drain must not be located beneath the steamer itself.
Manufacturer must be notified if unit will be used above 2,000 feet						

Figure 2-4 Gemini 24CGA10.2ES Dimensions and Clearances

Exhaust Hood Requirements

The Gemini gas steamer MUST be installed under a suitable ventilation hood as required by the National Fuel Gas Code, ANSI Z223.1/NFPA 54. The venting hood system must also include an interlock to prevent the operation of this steamer without the operation of the ventilation hood.

The exhaust hood must extend over the gas flue opening on top of the steamer and meet the following requirements:

- 1). The Gemini gas steamer must be vented in accordance with all local, state and national codes for venting gas fired appliances.
- 2). The exhaust hood must be sized for the cumulative ventilation requirements of all the gas-fired appliances in the area including the Gemini. Figures 2-1, 2-2, 2-3 and 2-4 contains the dimensions, gas flow, and BTU per hour data required to calculate the minimum required hood dimensions and minimum ventilation capacity (c.f.m.) for the Gemini 6 and 10 pan steamers.
- 3). Do not connect the exhaust hood directly to the flue outlet of the steamer.
- 4). If an existing hood cannot be used, a new one should be constructed over the steamer.

b. Positioning and Leveling the Steamer

NOTE: If there is not enough room to work on the drain, electrical, gas and water lines with the unit in place, postpone positioning and leveling the unit until all site preparation is completed. After the lines are prepared, position and level the steamer then connect the utility lines.

WARNING

INJURY AND EQUIPMENT DAMAGE could result from improper lifting. A Gemini Steamer weighs approximately 545 pounds. Use enough workers with experience lifting heavy equipment to place the steamer on the supporting surface

Move the steamer into position. Using a level, adjust the adjustable legs until the unit is level.

2. Install Slide Racks

- a. Refer to Figure 2-5. Each rack has four loops: two at the top and two at the bottom. Hold the slide rack so the ends of the hanger loops are towards the cavity wall, as shown in the figure.
- b. Slide one rack into the compartment with loops toward one side.
- c. Hook the loops over the top and bottom pins.
- d. Repeat steps a. through c. for the other racks.

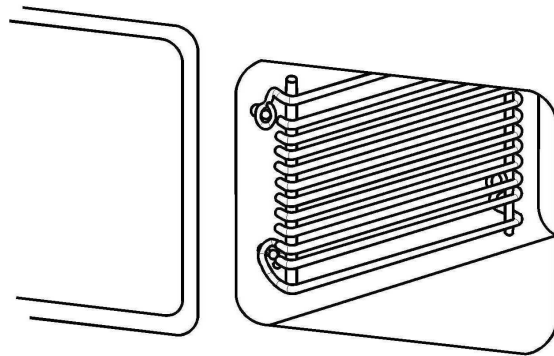


Figure 2- 5 Slide Rack Installation

3. Drain Installation for Models 24CGA6.2SES & 24CGA10.2ES (high efficiency) Only

Furnishing and installing the drain line is the responsibility of the owner and/or installer. Figure 2-7 illustrates a drain layout recommended by Cleveland Range.

WARNING

DEATH, INJURY, AND EQUIPMENT DAMAGE could result from improper installation of the drain outlet lines.

Improper installation of these lines could void the Gemini Steamers warranty. The following restrictions are critical to the safety of personnel and equipment, and must not be violated under any circumstances.

Do not connect the drain line into any drain material that cannot sustain 140° F.

Do not connect drains from any other equipment to the drain line of the Gemini Steamer.

Do not connect the drain outlet extension line directly to a floor drain or sewer line.

The drain line must be free air vented, have gravity flow from the steamer, and terminate outside the perimeter of the unit.

1. The drain lines must be installed in compliance with the Food Service Sanitation Manual of the Food and Drug Administration (FDA) and WITH THE applicable Federal State, or Local plumbing codes.
2. Do not install the steamer directly over a drain. Steam rising up out of the drain will adversely affect operation, cooling air ventilation and may damage electrical components.
3. The total length of pipe and number of bend fittings required to reach the open drain determines the pipe size used to extend the drain line to an open drain.
 - If the drain outlet extension requires 6 feet or less of pipe, and no more than two elbows are required, 1- 1/2 inch ID pipe and fittings are acceptable.
 - If the drain outlet extension requires 6 to 12 feet of pipe, or requires three or more elbows, 2-inch ID pipe and fittings are required.
4. The drain line must have a gravity flow from the steamer drain outlet to the floor drain. Do not install a trap in the drain line.
5. Free air venting requires a minimum of 1 inch of clearance between the end of the drain line and the top of the floor drain.
6. Do not connect the steamer drain directly to drains or plumbing of any other equipment.
7. Connect the drain to the steamer as described below:
 - The steamer is supplied with a 2 in tube connection at the bottom of the unit and a no-hub connector, included (Figure 2-7).
 - When assembling the pipes and fittings of the drain outlet extension, apply a hardening type pipe sealant to the threads, and thread them together FINGER TIGHT ONLY. DO NOT USE A WRENCH.

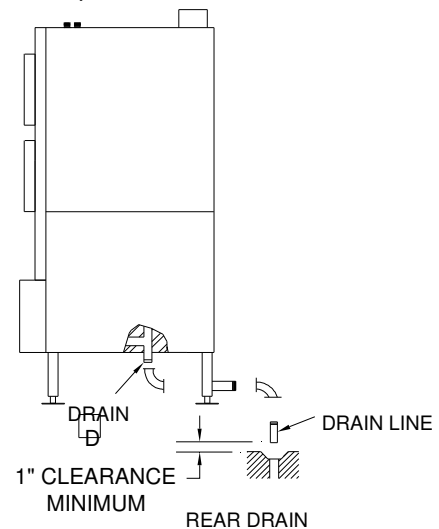


Figure 2-7
Typical Drain Connection

4. Install Gas Supply Lines

a. Gas Supply Requirements

- 1) Make sure the gas supply type matches the type of gas shown on the rating plate.
- 2) Make sure that the gas supply pressure does not exceed 14" water column, and falls within the acceptable gas pressure range shown below:
 - Natural gas pressure must be between 4½" – 14" water column.
 - Propane gas pressure must be between 11" – 14" water column.

b. Install Gas Supply lines

The installer/owner is responsible for furnishing and installing the gas supply lines, valves, regulators, and accessories. When installing the gas supply lines and accessories, observe the following:

- 1). The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 (latest edition) or the Natural Gas Installation Code, CAN/CGA-B149.1 or the Propane Installation Code, CAN/CGA-B149.2 as applicable.
- 2). THE GAS SUPPLY PRESSURE TO THE STEAMER MUST NEVER EXCEED 14" WATER COLUMN (½ psi). If the gas supply pressure exceeds 14" water column; a pressure regulator must be installed in the gas supply plumbing to reduce the pressure to the steamer.
- 3). Refer to Figure 2-8 for the recommended layout of the gas supply lines. Refer to Figure 2-1, 2-2, 2-3, or 2-4 depending on which model you have, Detail **A** for the location of the ¾ inch gas inlet of the steamer.
- 4). Install a manual shut off valve between the gas supply and the steamer. See Figure 2-8. From now on this valve will be referred to as the Main Manual gas valve.
- 5). It is recommended that a sediment trap (drip leg) be installed in the gas supply line. See Figure 2-8.
- 6). Use a pipe sealant compound, which is resistant to LP gas.

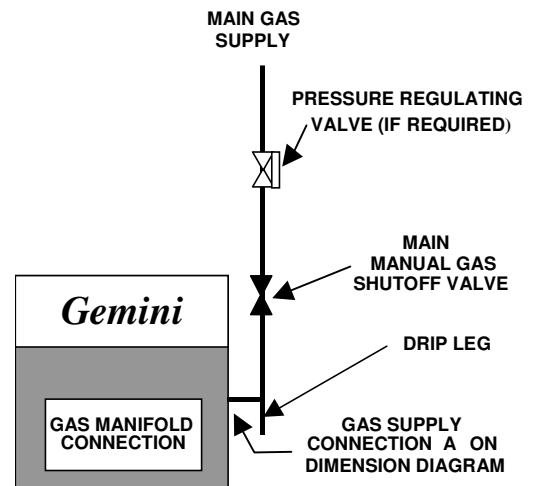


Figure 2-8, Recommended Gas Supply Line Layout

c. Testing Gas Supply Lines

WARNING

FIRE OR EXPLOSION HAZARD

LEAKING GAS CAN CAUSE FIRE OR EXPLOSION WITH PROPERTY DAMAGE, INJURY OR LOSS OF LIFE. If the installer smells gas, or suspects there is a gas leak, immediately refer to the posted gas leak instructions. The posted instructions are provided by the local gas supplier, and supersede any other instructions. Until the leak is stopped observe the following precautions in addition to the posted instructions:

Do not light or start any appliance.

Do not touch any electrical switch.

Do not use any phone in the building.

Immediately call the gas supplier from a phone away from the building.

Follow the gas supplier's instructions.

If the gas supplier cannot be reached call the fire department.

1). Leak Testing the appliance

Before permanently turning on gas to the steamer or after any service to the gas supply, test all pipe joints for leaks with a soap and water solution. All leaks must be corrected before attempting to operate the steamer.

2). Pressure Testing the Gas Supply Lines

The steamer must be isolated from the gas supply system during any pressure testing as follows:

- The appliance and its main manual shut-off valve must be **disconnected** from the gas supply piping system during any pressure testing of the system at test pressures in excess of 14" water column ($\frac{1}{2}$ psi or 3.45 kPa). Be sure to leak test all fittings with a soap and water solution after reconnecting the gas supply.
- The appliance must be isolated from the gas supply piping system by closing its main manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 14" water column ($\frac{1}{2}$ psi or 3.45 kPa).

5. Install Electric Power Lines

The electrical supply must match the power requirements specified on the steamers rating plate and be made in accordance with the following requirements.

- a. The steamer must be grounded and have the electrical power lines installed in accordance with local codes and/or the National Electric Code, ANSI/NFPA No. 70-LATEST EDITION (USA) or the Canadian Electrical Code, CSA C22.2, as applicable. The wiring diagram is located on the back of the lower front panel.
- b. Power connection
 - This unit is not suitable for connection to a GFCI (Ground fault Circuit Interrupter).
 - Cleveland Range recommends that the unit be connected to the electrical system, using a flexible conduit system compliant with the applicable codes.
- c. A main disconnect switch and a separate fuse or breaker should be installed near the unit as shown in Figure 2-8. See Figure 2-1, 2-2, 2-3, or 2-4 for the steamers power requirements. Throughout the

remainder of this manual the fused disconnect switch is referred to as the main external power switch.

- d. Refer to the connection diagrams in Figure 2-10, and connect the wires to the terminal block and ground connector accordingly.

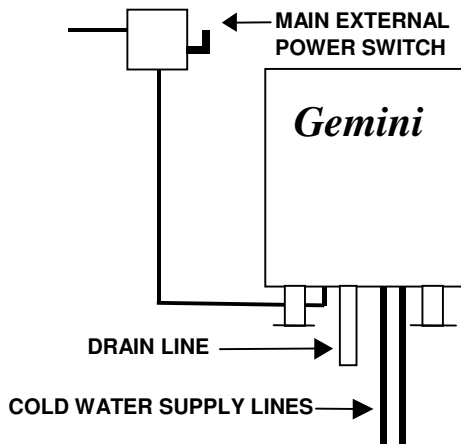


Figure 2-9, Recommended Electrical Layout

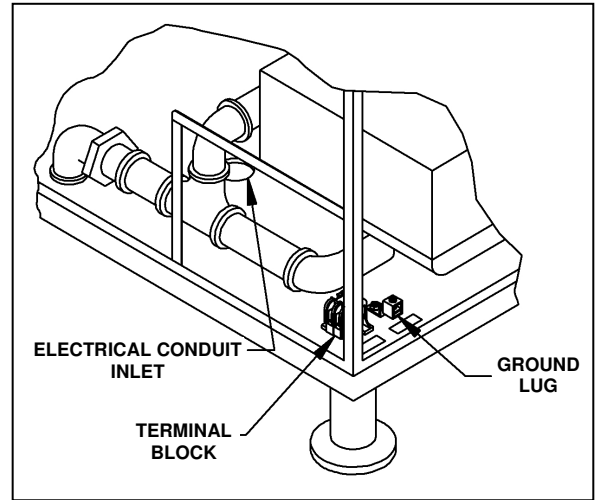


Figure 2-10, Electrical Connections

6. Water Supply Requirements and Installation

a. Water Supply Requirements

⚠ CAUTION

Using water not within the limits specified in this manual could void or reduce Cleveland Range's warranty coverage of the steamer.

1). Water Quality

As with any steam generating equipment, poor water quality degrades the performance of the steamer.

Check the quality of supply water as described below before starting construction of the water supply lines. If a water treatment system must be installed to achieve acceptable water quality, install it before connecting the water supply lines to the Gemini Steamer.

If softened or chlorinated water is used in a Gemini steam generator, a carbon type filter must be used for the water before it enters the steamer to remove Chlorine or other salts. If the water supply is treated or softened either by the Water Company or on the premises, it may contain chlorine or various salts. These additives are damaging to the steam generator. Salts and chlorine used to soften or treat water cause rapid scale buildup, and/or increased corrosion if allowed to flow into the steamer.

Contact a local water treatment specialist for an on-the-premises water analysis. The recommended minimum feed water quality requirements for the steamer are listed in Table 2-1.

Table 2-1. Minimum Water Quality Requirements

Scale Forming Factors	
Total Dissolved Solids	less than 60 parts per million
Silica	less than 13 parts per million
Alkalinity	less than 20 parts per million
Corrosion-Causing Factors:	
Free Chlorine	less than 0.5 parts per million
Chloride	less than 30 parts per million
PH factor	greater than 7.5

2). Water Supply System

Provide a water supply system that fulfills the requirements of the limits listed in Table 2-1. The supply must provide a minimum dynamic pressure of 35 psi (2.4 kg/cm²) and a maximum static pressure of 60 psi (4.1 kg/cm²).

- If analysis shows that the supply water is NOT within the required limits, either a water treatment system and/or carbon filter must be installed in the line feeding the steam generator or the frequency of maintenance, cleaning, and descaling must be increased beyond that recommended in the maintenance schedule (Chapter 3). If more frequent descaling is selected as the means of protecting the steamer from premature failure, the “DESCALE REQUIRED” light timing should be readjusted to reflect the increased cleaning schedule.

b. Setting the Descale Required Light

The Descale Required Light feature tracks the number of hours the unit has been operating since it was last reset, and lights when it is time for descaling.

1). General

The Descale Required Light consists of an indicator light, a solid state timer module, and a reset/rocker switch. (The light and reset switch consist of a single device on the front panel identified by the “DESCALE REQUIRED” label.) See Figure 2-11. The timer is a digital clock module inside the unit that keeps track of how many hours your steamer has been in operation since the last reset of the timer.

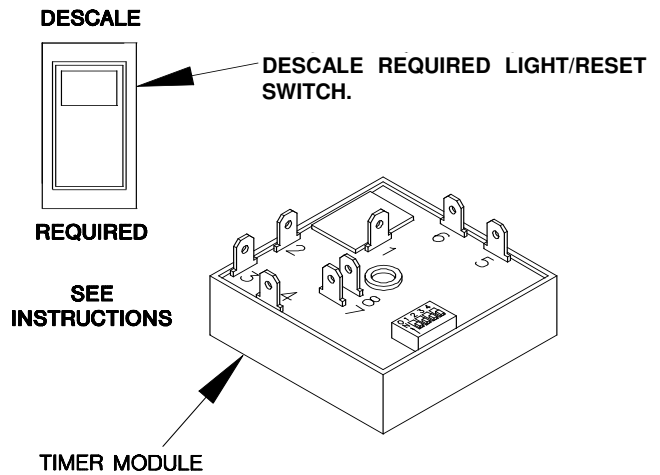


Figure 2-11 Descale Required Light and Timer Module

2). Determining the Timer Setting

The recommended setting of the Descale Required light is determined by the quality of the water supply. Table 2-2 suggests appropriate timer settings.

3). Switches Determine Timer Setting

The Timer Module contains a bank of miniature switches that determine the timer setting. The switches can be placed in either the ON or OFF positions.

Each switch has a specific value. The total timer setting is the sum of the values of all of the switches that are in the ON position. (See Figure 2-12 for switch values).

The Descale Required Light timer is preset at the factory with switches 1 and 2 turned ON. Adding the values of these switches results in a setting of 384 hours (128+256=384).

Suggested Timer Settings
Based on Water Quality/Hardness

Quality of Feed Water	Hardness (grains/gal.)*	Timer Settings
Poor	25	128 hours
Average	15	256 hours
Good	7	384 hours
Very Good	3 or less	512 hours

*17.1 ppm = 1 grain/gal of hardness

Table 2-2

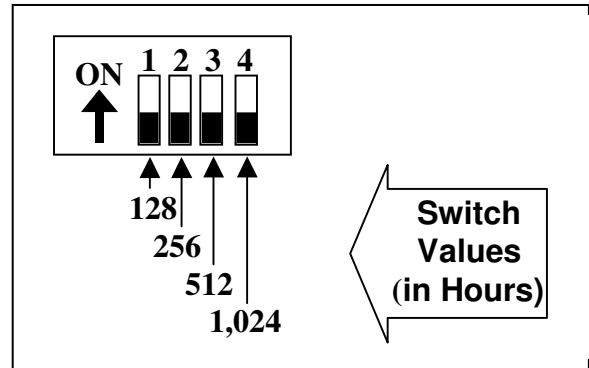


Figure 2-12 Switch Values

4). Procedure to Change Descale Required Light Timer Switch Settings

Read this procedure completely before starting. The Descale Required Light Timer setting should be changed only by qualified maintenance technicians familiar with electrical safety procedures.

WARNING

Disconnect the electrical power before servicing.

- Make sure all power to the unit is OFF.
- Determine the time you want to set.
- Locate the timer modules, which are located horizontally in the front, at the right and left of the electrical drawer.
- Set the timer switches. It is a good idea to turn them all OFF first then turn ON the desired switches.
- Verify that the switches are in the desired position. Replace the electrical drawer cover.

c. Install Water Supply Lines

The installer/owner is responsible for the correct water connection of the unit. When connecting the water supply lines observe the following instructions and all national and local codes and regulations:

- 1). Never connect the unit to HOT WATER. The condenser system of the steamer will not work properly if it is connected to HOT or WARM water.
- 2). The water supply should have a minimum flow pressure of 35-psi (2.4 kg/cm²) and a maximum static pressure of 60-psi (4.1 kg/cm²). If the static pressure is above 60 psi, a pressure regulator must be used set at approximately 50 psi. Pressure above 60 psi can damage the solenoid valves.
- 3). The Gemini Steamers are supplied with two connection points for incoming water, one feeds the condensers and the second supplies feed water to the generators. If the local water supply is of poor quality (see Chapter 2, Section 6, Part a.1 for details of water quality), it is recommended that treated or otherwise filtered or conditioned water be used to supply the feed water to the generators. In the case of using a separate water supply, use the layout shown in Figure 2-14.
- 4). Pay attention to the following requirements and recommendations when connecting the steamer to the water supply:
 - a) Cleveland Range recommends the plumbing layout illustrated in either Figure 2-13, for installations using a single water supply or Figure 2-14 if a separate conditioned water supply is being used for boiler feed. Note: If using a single water feed to the system the supply piping to the tee fitting should be of at least the next largest size of pipe to the connection provided at the steamer.
 - b) The steamer has IPS fittings for the water connections to the generator and to the condenser. These fittings are detailed as **D** and **E** in Figure 2-1, 2-2, 2-3 or 2-4, depending on model.
 - c) Install a manual water valve between the main cold water supply line(s) and the steamer supply lines.
 - d) This steamer must be installed with adequate backflow prevention in all supply lines, to comply with federal, state or local codes having jurisdiction.
 - e) The water supply line(s) should be designed so that the unit can be moved for service.

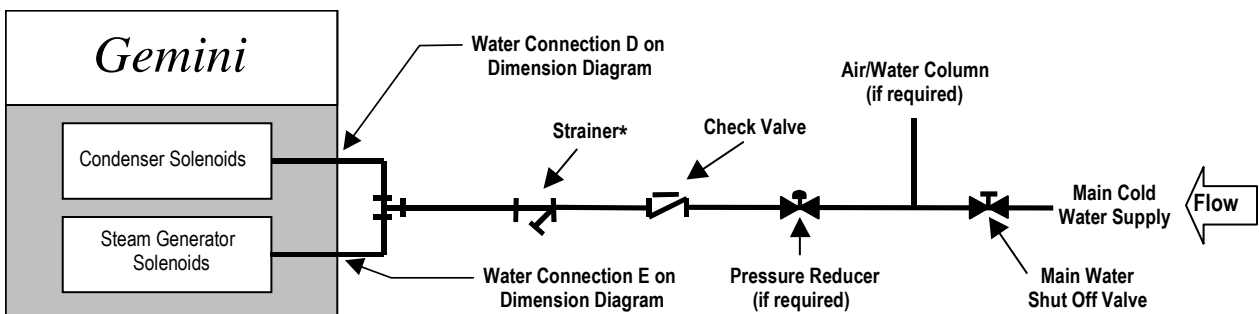


Figure 2-13 Cleveland Range Single Water Supply Arrangement

[* Installed internal on all Gemini models]

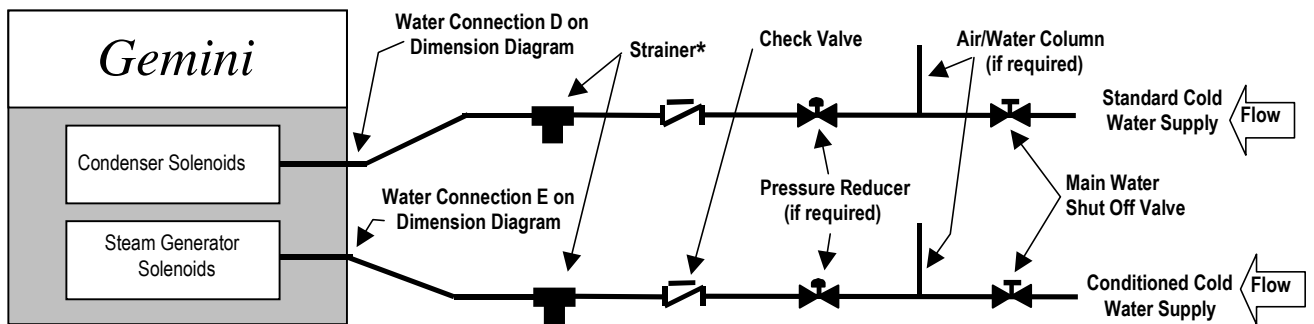


Figure 2-14 Cleveland Range Single Water Supply Arrangement when Using Separate Conditioned Feed Water Supply

[* Installed internal on all Gemini models]

- f) A 40 or 50-mesh water strainer (dirt filter) of one of the types and construction illustrated in Figure 2-15, Cleveland Range part number 106684 or 19870 is supplied with the unit and should be installed where indicated in the plumbing layout. **Note:** On some Models the strainer has already been installed as part of the internal water piping.

- Make sure the arrow on the strainer body points in the direction of flow into the steamer.
- Install the strainer so the access nut points down.

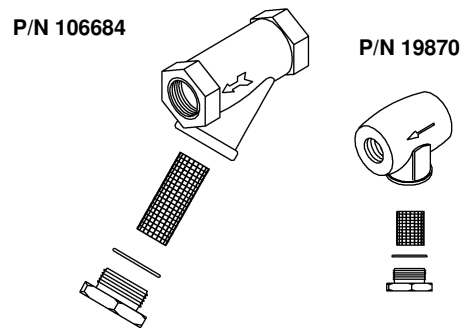


Figure 2-15 Water Strainer Assembly

- g) Construct all supply lines up to the point of installing the strainer. Flush the water supply lines before connecting the strainer.
- h) Apply pipe dope or Teflon tape to any threaded connection.

d. Testing Water Supply Lines

- 1). Check all connections for proper tightness. Remove the side panel to inspect water connections inside the steamer.
- 2). Open the water supply valves.
- 3). Check all lines and connections for leakage, both inside and outside the steamer.
- 4). If Startup and Checkout will be performed next, leave the right side panel off; otherwise, replace the side panel and secure it to the unit.

C. STARTUP AND CHECKOUT

The Startup and Checkout procedure prepares a recently installed or repaired steamer for operation. The procedures check proper electrical, gas, water, and drain connections to the steamer, and verify basic steamer operation.

1. Installation Checkout

Use the Installation Checklist Table 2-3, to check the overall installation.

Table 2-3. Installation Check List

TASK	REFERENCE Page No.	COMPLETED
Preparation		
Verify Electric Power Requirements	Rating Plate	_____
Verify Gas Supply Requirements	11	_____
Verify Exhaust Hood Requirements	8	_____
Test supply water quality	13	_____
Check operating location clearances	3	_____
Installation		
Verify steamer is level	8	_____
Check drain line connection	9	_____
Check Exhaust Hood	8	_____
Check electrical line connection	12	_____
Check water supply connection	16	_____
Test water supply lines	17	_____
Check Gas Supply Connection	11	_____
Leak Test Gas Supply Connection	12	_____
Check Burner Ignition Test	19	_____
Perform Startup and checkout	20	_____

Notes on installation:

CHAPTER 3 GENERAL OPERATION

A. MAIN EXTERNAL POWER SWITCH

Usually the steamers main external power switch is left ON. If the main external power switch was left in the OFF position, turn it ON as follows.

1. Check that the water supply valves are open.
2. Turn the ON/OFF levers/switches to the OFF position.
3. The TIMED/MANUAL switch and timer settings are not important in this procedure. The control panel circuits are not powered while the ON/OFF levers/switch is set to OFF.
4. Refer to the main external power switch in Figure 3-1, and turn on electric power to the steamer. The steam generators will immediately start blowdown cycles. The blowdown cycle lasts 3 minutes.

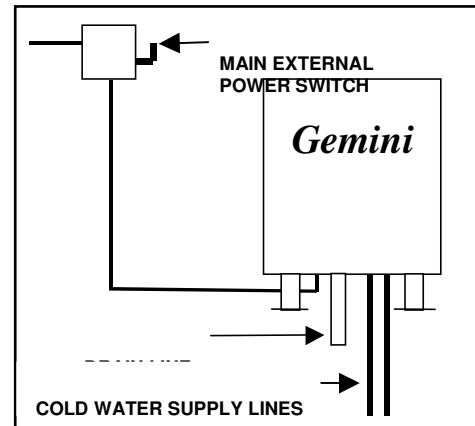


Figure 3-1 Main External Power Switch

B. DOOR INTERLOCK SWITCH

The steamer compartments of the Gemini Steamer are equipped with automatic steam cutoff switches, which turn OFF the production of steam to a cooking compartment whenever the door to that compartment is opened. In addition the action of opening the doors resets the 60 minute Energy Conservation - Idle Timer Described in Chapter 2, Section H. **NOTE:** Even though the continued production of steam ends as soon as a door is opened, it may take up to a minute for residual steam in the system to clear from the steam lines and the cooking compartment. To avoid possible injury always wait until this residual steam has cleared before reaching into the cooking compartment.

C. POWER ON (AUTOMATIC FILL)

When each steamer compartment is turned ON, it automatically fills its steam generator with water. Use this procedure at the beginning of a shift to prepare the steamer for operation without starting steam generation. When ready to start steam cooking, begin either the Timed or Manual Operating Procedure.

1. Press the TIMED (top) end of the TIMED/MANUAL switch (for ON/OFF models set the selector switch to OFF).
2. Turn the ON/OFF lever/switch to the ON position to energize the steamer control panel. The red indicator light on the control panel lights, the combustion blower turns ON to purge the generator and water fills the steam generator.

NOTE: The ON/OFF lever/switch must be turned fully to the ON position to START the steamer.

3. When the generator is full, the steamer automatically stops water flow.
4. Once the water has reached the minimum operating level, the blower turns OFF and the pilot/standby burner lights to heat the water to the standby temperature.

D. LIGHTING AND SHUTDOWN INSTRUCTIONS

DO NOT TRY TO LIGHT THE BURNERS OR PILOT WITH A FLAME. THE PILOT AND BURNERS ARE SELF IGNITING.

The Gemini Steamer has an electronic ignition system, which automatically lights the pilot and burners, senses the flame and controls gas flow. This provides precise burner control, safety ignition, and shutdown.

WARNING

DEATH, INJURY OR EQUIPMENT DAMAGE may result from an improperly adjusted gas control and ignition system. Do not alter any adjustments on this electronic control or gas valve.

If adjustment is required, contact an authorized service center. Cleveland Range is in no way responsible for the operation or safety of this equipment if the controller, valve, or igniter probe are adjusted by anyone other than a Cleveland Range authorized service representative.

The following START-UP SUMMARY is for quick reference ONLY. For safe operation and use of this equipment, the operators should comply with all safety and operating instructions in this manual.

Lighting Instructions

1. Turn the ON/OFF lever/switch to the ON position.
 - Blower will start and boiler will fill with water (about 3 minutes).
 - Pilot will attempt to light for 90 seconds.
 - If no ignition occurs the system will automatically reset in 6-7 minutes.
2. System may be reset manually by turning the ON/OFF lever/switch to the OFF position for 5 minutes and then back to ON.
3. Turn ON a cooking compartment.
4. Blower will start and main burner will light.
5. Each compartment has its own control system, and must be started independently.

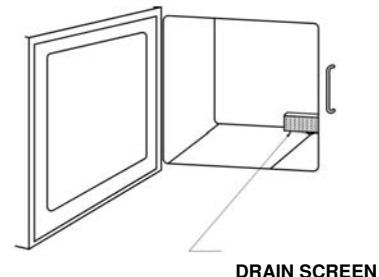
Shutdown Instructions

Turn the ON/OFF lever/switch to the OFF position. The burners and pilots will immediately be extinguished and the unit will begin the automatic 3-minute blowdown cycle and drain. NOTE: Each compartment has its own control system, and must be shut off independently.

E. INSPECTING THE COOKING COMPARTMENT

At the back of the cooking compartment, a drain screen covers the drain (Refer to Figure3-2). The screen prevents large food particles from entering and blocking the drain line. Any blockage of the drain line or screen can reduce drainage from the cooking compartment resulting in reduced cooking performance, equipment damage, and a hazard to the operator. A blocked or slow drain may cause:

- Hot water to collect in the compartment and spill out when the compartment door opens.
- Pressure fluctuations in the compartment, resulting in steam leaks around the door gasket, or compartment implosion.
- Reduced convection in the compartment, reducing cooking performance.



**Figure 3-2 Compartment
Drain Screen**

⚠ CAUTION

Steam leaks around the door, cooking compartment flooding, reduced cooking performance, and compartment implosion can be caused by a blocked drain or drain screen. Inspect and clean the drain and drain screen before each use.

Before every steaming operation, inspect the cooking compartment and remove any food scraps or debris from the racks, walls, and floor of the compartment. Pay particular attention to the drain and drain screen.

1. DO NOT USE the steamer if water stands in the drain opening. Arrangements must be made immediately to clean the drain in accordance with the instructions found in the Preventative Maintenance and Troubleshooting section of this manual.
2. Remove any food or debris that is blocking the drain or screen.
3. Be sure the screen covers the drain. The screen prevents large pieces of food from entering and blocking the drain.

F. PREHEATING THE STEAMER

Preheating the steamers can help insure that the best productivity and consistent cooking is obtained. To preheat each steamer, run a cooking cycle of approximately 15 minutes with no food in the cooking compartments.

NOTE: If using a steamer with a timer, set only a 1 minute cooking time for the purpose of preheating, since the timer will only begin to countdown once the steamer has reached a cooking temperature.

- **BEFORE PREHEATING**, inspect and clean the compartment. After preheating, the compartment will be too hot to inspect and clean safely.

G. DESCALING REQUIRED LIGHT FEATURE

When the programmed number of hours have elapsed, the “DESCALE REQUIRED” light will turn on, indicating that descaling of the steam generator must be done (See Figure 3-3). More information on this feature and the descaling procedure can be found in the Maintenance section of this manual, Chapter 6, Part A (4), Monthly/Weekly Maintenance.

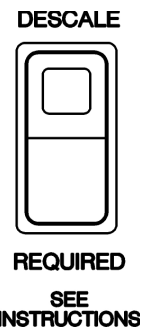


Figure 3-3 Descaling Required Light

H. ENERGY CONSERVATION FEATURES

A. IDLE TIMER - ALL MODELS

In order to conserve energy during long periods of equipment “idleness”, this steamer is equipped with a 60-minute idle timer to help conserve both water and energy and increase equipment life. The idle timer will automatically, shut the burner system down when a cooking compartment is left on (ON/OFF Models), or left in manual mode (timed models) for more than one hour without changing the operating mode or opening the door.

This one hour timer is reset whenever the unit is switched to timed (or switched OFF) and back to Manual mode (or back ON) depending on the steamer control type, or whenever the door is opened. As usage of the steamer will frequently reset this timing function during normal usage, it should generally function only when equipment has been left ON and unattended for long periods between shifts, or if exceedingly long cook times are required. In the later case, operating personnel will need to be aware of this feature, so that the timer can be reset by opening and closing the door during such prolonged cook periods.

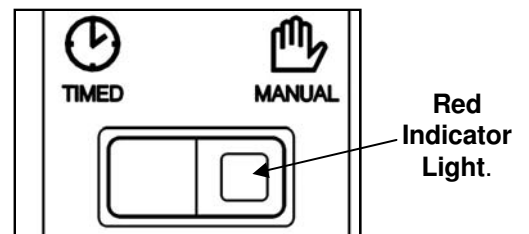


Figure 3-4 Manual Mode Indicator Light

On models equipped with a timer, the red indicator (see Figure 3-4) in the manual side of the TIMED/MANUAL selector switch will go out when the idle timer disrupts power to the heating circuit. This indicator will be lit whenever the unit is in MANUAL mode and is cooking normally.

B. HIGH EFFICIENCY UNITS - “ES” MODELS

Model 24CGA6.2SES and 24CGA10.2ES are steamers designed for high efficiency operation. The energy saver models provide steam in a similar manner to our high capacity models except that the flow of steam is regulated by cycling the burners off once the desired cooking temperatures is reached. When the temperature drops to a set point below the desired cooking temperature the burners will turn back on to bring the cooking compartment back up to temperature. The burners will continue to cycle on and off as necessary to maintain temperature until the cooking operation is complete.

CHAPTER 4 CONTROL PANELS

The standard dial timer control panel (illustrated in Figure 4-1) has a mechanical timer. An optional electronic keypad timer, illustrated in Figure 3-2, and an ON/OFF control panel (not illustrated) are also available. The Electronic and mechanical timers use a temperature compensation circuit, which allows the timer to count down only while the cooking compartment is at cooking temperature. The ON/OFF Control Panel, which is not illustrated, operates exactly like the timed models in manual mode, except a selector switch is used to turn the steam to the cooking compartments ON and OFF.

A. DIAL TIMER CONTROL PANEL

1. Cooking Operations – Dial Timer Control Panel

For safe, efficient operation of the steamer, the operator must, at a minimum, comply with all cautions, warnings and instructions in the detailed operating procedures and be familiar with the control panel shown in Figure 3-1. The operator must be familiar with all the operating features explained in this manual before attempting to operate the steamer.

2. Manual and Timed Modes

The steamer has two operating modes: manual and timed. The TIMED/MANUAL rocker switch selects the operating mode. Pressing the MANUAL end of the switch selects the manual operating mode. Pressing the TIMED end of the switch selects the timed operating mode. Cooking procedures are slightly different for each mode.

a. Manual Mode

The manual mode provides continuous cooking. The operator starts and stops steaming operations manually. See the Operating and Cooking Procedure – Manual mode in Chapter 4, Part B for more information. A thermostat controlled pause light located on each control indicates that the cooking compartment has not yet reached cooking temperature.

Note: These units are equipped with an energy saver timer, that will automatically, shut the burner system down when a cooking compartment is left ON (ON/OFF Models), or left in MANUAL mode (TIMED models) for more than one hour. This one hour timer is reset whenever the unit is switched to TIMED (or switched OFF) and back to MANUAL mode (or back ON) depending on the steamer control type, or whenever the door is opened. As usage of the steamer will frequently reset this timing function during normal usage, it should generally function only when equipment has been left steaming (ON) and unattended for long periods between shifts, or if exceedingly long cook times are required. In the later case, operating personnel will need to be aware of this feature, so that the timer can be reset by opening and closing the door during such prolonged cook periods. On models equipped with a timer, the red indicator in the manual side of the TIMED/MANUAL selector switch will go out when the idle timer disrupts power to the heating circuit.

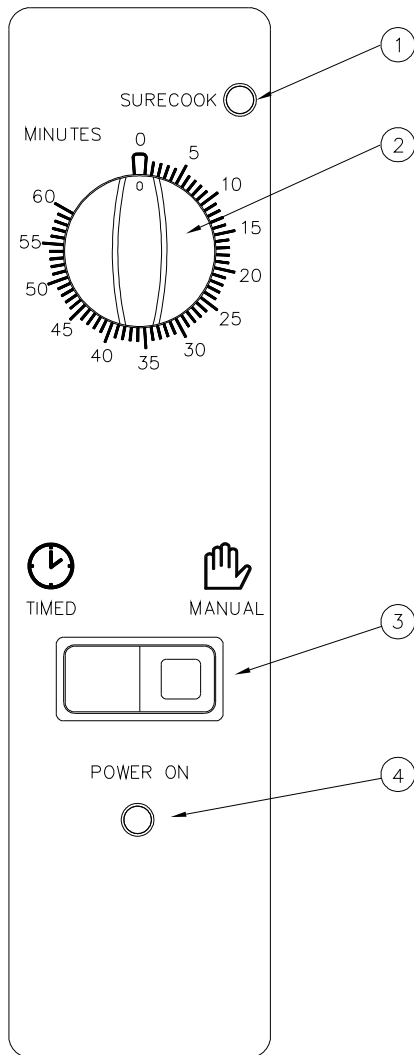


FIGURE 4-1, DIAL TIMER CONTROL PANEL

1). SURECOOK Indicator Light

This light is lit whenever the cooking compartment has not yet reached cooking temperature. Note: when in the timed mode the timer will not count down as long as this light is ON.

2). TIMER

This dial timer sets the operating time from 0 to 60 minutes. Turn the dial clockwise until it points to the required number of minutes. When it reaches 0, a buzzer sounds for 3 seconds.

3). TIMED/MANUAL Switch

The TIMED/MANUAL switch selects the manual or timed operating mode.

- Pressing the MANUAL end of the switch selects the manual mode, and lights the red indicator built into the manual end of the switch. (See also the Note at the top of this page)
- Pressing the TIMED end of the switch selects the timed mode.

4). Power on Indicator Light

When the Red indicator light is on, power is on to the control panel.

5). Descal Indicator Light Switch (not shown)

When the Amber light in the switch lights, it is time to descale the steam generators. Pressing the switch turns off the light and resets the internal timer which tracks steam generator operation.

b. Timed Mode

- The timer provides timed control of steaming operations. The timer starts and stops steaming operations.
- The mechanical timer control uses a temperature compensation circuit that affects only the timer. When operating, the timer **ONLY COUNTS DOWN WHILE THE COOKING COMPARTMENT IS AT COOKING TEMPERATURE**. This provides totally automatic control of the steaming operation and assures uniform cooking as the timer automatically compensates for food product defrosting and/or compartment heat up time. Whenever the steamer is not at cooking temperature, the timer pauses and the PAUSE light is illuminated.
- To use the timer, simply set the timer to the desired time. The steamer will begin cooking as soon as the timer is set. When the timer reaches zero the steaming functions will automatically end and a buzzer will sound for 3 seconds to alert the operator that cooking is complete.
- Note the mechanical timer will not function when the Timed/Manual switch is set to Manual, although the SURECOOK light will still illuminate to indicate that the cooking compartment is not yet at cooking temperature.

B. KEYPAD TIMER CONTROL PANEL

1. Cooking Operations – Keypad Timer Control Panel

For safe, efficient operation of the steamer, the operator must, at a minimum, comply with all cautions, warnings and instructions in the detailed operating procedures and be familiar with the control panel shown in Figure 4-2. The operator must be familiar with all the operating features explained in this manual before attempting to operate the steamer.

2. Manual and Timed Modes

The steamer has two operating modes: manual and timed. The TIMED/MANUAL rocker switch selects the operating mode. Pressing the MANUAL end of the switch selects the manual-operating mode. Pressing the TIMED end of the switch selects the timed (automatic) operating mode.

a. Manual Mode

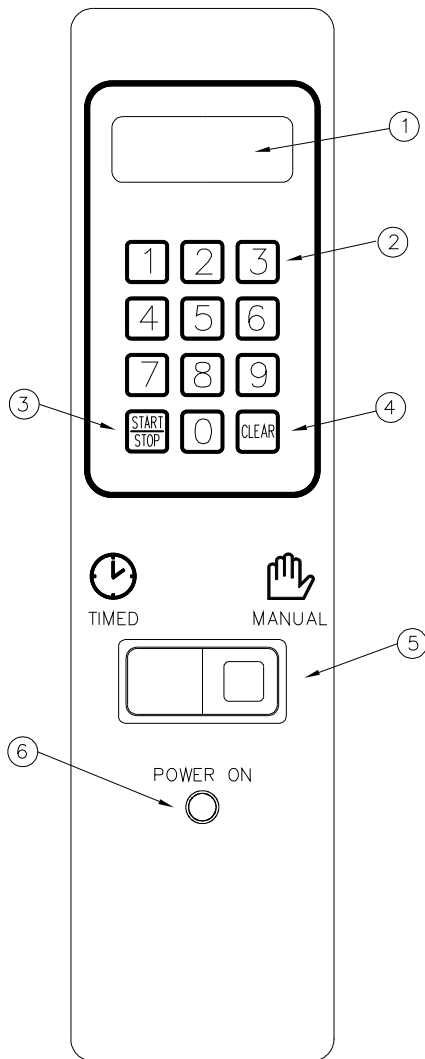
The manual mode provides continuous steaming. The operator starts and stops steaming operations manually. See the Operating and Cooking Procedure – Manual Mode in Chapter 4, Part B for more information.

b. Timed Mode and Use of the Timer

1). Timer Use and Temperature Compensation

- The keypad timer control starts and stops steaming operation, and monitors cooking time and compartment temperature for accurate, efficient, uniform steam cooking.
- The keypad control uses a temperature compensation circuit that effects only the timer. When operating, the timer **ONLY COUNTS DOWN WHILE THE COOKING COMPARTMENT IS AT COOKING TEMPERATURE**. This provides totally automatic control of the steaming operation and assures uniform cooking as the timer automatically compensates for food product defrosting and/or compartment heat up time. Whenever the steamer is not at cooking temperature, the timer pauses and the display shows “PAUS”. Once temperature is reached, a digital display of the remaining time is displayed. When the timer counts down to zero a buzzer will sound, to indicate that cooking is complete and the steam generator will shut down.
- The timer will operate similarly when the steamer is being operated in the manual mode including counting down only when the steamer is at cooking temperature, except that the timer does not start or stop the steaming cycle.

 CAUTION
Press keypad with fingertips only. Do not use kitchen utensils or anything sharp to operate the keypad.



TIMER Display

This four-digit display indicates the minutes and seconds remaining in the count down. The display reads from zero (00:00) to 99 minutes and 99 seconds (99:99). It reads pause (PAUS) when the count down is halted either by the START/STOP key or by the temperature compensating circuit.

1). Number Pad Keys

These keys set the number of minutes and seconds in the timer count down. Pressing the number keys 1 2 3 4 in this sequence, sets the timer for 12 minutes and 34 seconds (12:34).

2). START/STOP Key

This key starts and stops the timer. In TIMED mode the steaming functions are linked to the timer. In MANUAL mode, the steaming functions are independent of the timer.

3). CLEAR Key

This key resets the timer to zero (00:00) after it has been stopped. The timer must be zeroed by pressing this key before a new time can be set.

4). TIMED/MANUAL Switch

The TIMED/MANUAL switch selects the manual or timed operating mode.

- Pressing the MANUAL end of the switch selects the manual mode, and lights the red indicator built into the manual end of the switch. (See also the Note at the bottom of this page)
- Pressing the TIMED end of the switch selects the timed mode.

5). Power on Indicator Light

When the Red indicator light is ON, power is ON to the control panel.

6). Descale Indicator Light Switch (not shown)

When the Amber light in the switch lights, it is time to descale the steam generators. Pressing the switch turns off the light and resets the internal timer which tracks steam generator operation. (See Chapter 6, Part A)

FIGURE 4-2, KEYPAD TIMER CONTROL PANEL

Note: These units are equipped with an energy saver timer, that will automatically, shut the burner system down when a cooking compartment is left ON (ON/OFF Models), or left in MANUAL mode (TIMED models) for more than one hour. This one hour timer is reset whenever the unit is switched to TIMED (or switched OFF) and back to MANUAL mode (or back ON) depending on the steamer control type, or whenever the door is opened. As usage of the steamer will frequently reset this timing function during normal usage, it should generally function only when equipment has been left steaming (ON) and unattended for long periods between shifts, or if exceedingly long cook times are required. In the later case, operating personnel will need to be aware of this feature, so that the timer can be reset by opening and closing the door during such prolonged cook periods. On models equipped with a timer, the red indicator in the manual side of the TIMED/MANUAL selector switch will go out when the idle timer disrupts power to the heating circuit.

Timer Operation

a) Setting the Timer

To set the cooking time, the timer must first be zeroed by pressing the clear key. The timer can be set only when the cooking time display is clear (00:00). The cooking time display contains four digits. The left two digits are minutes, and the right two digits are seconds. The display 12:34 is set for 12 minutes and 34 seconds. To set the cooking time:

- (1) Change the required cooking time to minutes and seconds.
- (2) Press the number keys for minutes, and then, for the seconds.
- (3) If the cooking time is 99 seconds or less, only press the number keys for seconds.

b) Starting/Stopping the Timer

Press the START/STOP key to start or stop the timer. When the START/STOP key is pressed, the steam generator begins heating the water to steam. Shortly, steam fills the cooking compartment.

- (1) The timer display reads "PAUS" until the cooking compartment reaches proper cooking temperature, or when the timer cycle is paused by pressing the START/STOP key again after the timer has started.
- (2) When the cooking compartment reaches proper cooking temperature, the timer display shows the count down.

NOTE: A timer setting of 10 minutes may in fact take 11 or 12 minutes for the timer to count down and the alarm to sound. This is normal. Heating the compartment and food to cooking temperature uses the additional time.

c) Shutting Off Buzzer AFTER Timer has Reached Zero

When the timer counts down to zero, the buzzer sounds continuously, the generator stops steaming, and steam flow to the cooking compartment gradually stops.

Press the START/STOP key to silence the buzzer. The cooking time display returns to the last time set. Either run this same setting again or clear and reset the timer.



CAUTION

Press keypad with fingertips only. Do not use kitchen utensils or anything sharp to operate the keypad.

CHAPTER 5 COOKING WITH THE STEAMER



WARNING

When checking inside the steamer always open the door slowly and stand to the side and back away from the steamer. Water leaking from the door gasket can be a sign of a blocked drain. If the drain is blocked, hot water can accumulate inside the compartment and spill out when the door is opened.

OPERATING AND COOKING PROCEDURE – TIMED MODE

WARNING

Even though the production of steam ends as soon as a door is opened, it may take up to a minute for residual steam in the system to clear from the steam lines and the cooking compartment. To avoid possible injury always wait until this residual steam has cleared before reaching into the cooking compartment.

In timed mode, the timer starts and stops the steaming operation.

1. Inspect and clean the drain and cooking compartment as required. Refer to INSPECT THE COOKING COMPARTMENT IN Chapter 3 Part E.
2. If necessary, preheat the cooking compartment. Refer to PREHEATING THE STEAMER, in Chapter 3, Part F.
3. Slide the pans of food into the slide racks inside the steamer. Do not place pans or anything else on the bottom of the compartment.

CAUTION

Some foods drip juices. Use a solid catch pan under perforated pans when steaming food that will drip juices. Failure to use a catch pan can cause a clogged drain.

- For best cooking results, use shallow, 2-1/2 inch deep, perforated pans without covers. These give the best heat transfer and shortest cooking time.
4. Close the steamer door.
 5. Check the control settings. At this point the settings should be:
 - The ON/OFF lever/switch is in the ON position.
 - The TIMED/MANUAL switch is in the TIMED position.
 6. Set the required cooking time. For KEYPAD MODELS press the START/STOP key to start the cooking cycle. Shortly after the door is closed, steam fills the cooking compartment.
 7. When the timer reaches zero, a buzzer will sound, the steam generator stops steaming, and steam flow to the cooking compartment gradually stops. The cooking cycle is complete.
 - For DIAL timers the buzzer will stop after 3 seconds.
 - For KEYPAD timers, press the START/STOP key to silence the alarm.

WARNING

SEVERE BURNS may result from exposure to steam.

Do not open the steamer door before steam flow stops. Stand back when opening the compartment door. Open the door slightly to allow steam to vent before looking or reaching into cooking compartment. Do not reach into cooking compartment until the steam has cleared.

Do not reach into steamer or handle hot items without wearing heatproof gloves. Wet or damp gloves conduct heat, and may cause burns when touching hot items.

8. Carefully open the cooking compartment door, and remove the pans from the slide racks.
 - If the steamer will be used again in a few minutes shut the door to maintain the cooking compartment temperature.
 - If another use is not planned for more than half an hour, leave the cooking compartment door slightly open to reduce internal pressure while the steam condenses and the compartment cools.
 - If the steamer is not being used again during this shift, perform the Power OFF and Shut Down and Cleaning Procedures, found in Chapter 5.

A. OPERATING AND COOKING PROCEDURE – MANUAL MODE

Manual mode allows the operator to personally control the cooking functions. The operator starts and stops the steaming operations, and sets the cooking time including time for steam generator, compartment and food heat-up time. Use the manual-cooking mode for:

- A continuous supply of steam (24CGA6.2S & 24CGA10.2 only).
- Cooking times longer than the timer can measure. See Part 2, “Longer Cooking Times in Manual Mode” below, for more information on extended cooking with a Gemini Steamer.
- Maintaining the compartment temperature between cooking batches.

1. Using the Timer in Manual Mode

The KEYPAD timer may be used when the steamer is operating in the manual mode, but it will not start or stop the steaming cycle.

2. Longer Cooking Times in Manual Mode

As discussed In Chapter 3, Section H “Energy Conservation Feature – Idle Timer”, this unit has a timer built into the manual mode or the ON Mode (for ON/OFF Models), which interrupts the operation of the steamer after 60 minutes of “unattended” use (no opening of steamer compartment, and no changing of modes). However, A Gemini Steamer can still be used to cook foods that require longer cooking times, than the Timer can address, simply use the standard cooking procedure outlined for Manual Cooking below along with any of the following modifications:

- If the food is going to be checked, and the door opened at least hourly during the cooking process, no change is operating procedure will be required. The “idle” timer, will automatically reset every time the door is opened.
- If there is not a need to check the food during the cooking process, it will be necessary for the operator, to either switch the TIMED/MANUAL switch from MANUAL to TIMED and back to MANUAL (or for ON/OFF Control Models, OFF and back ON) or open and close the compartment door at least hourly. Either action will reset the internal “idle” timer, and allow the cooking process to not be significantly interrupted.

3. Manual Cooking Procedure

Follow this procedure when cooking with the steamer in manual mode.

- 1) Inspect and clean the drain and cooking compartment as required. Refer to INSPECT THE COOKING COMPARTMENT in Chapter 3 Part E.
- 2) In manual mode, the operator can bring the compartment to cooking temperature by either preheating or increasing the cooking time. If the operator chooses to preheat the cooking compartment manually, refer to Chapter 3, Part F, PREHEATING THE STEAMER.
- 3) Slide the pans of food into the slide racks inside the steamer. Do not place pans or anything else on the bottom of the compartment.



CAUTION

Some foods drip juices. Use a solid catch pan under perforated pans when steaming food that will drip juices. Failure to use a catch pan can cause a clogged drain.

- For best cooking results, use shallow, 2-1/2 inch deep, perforated pans without covers. These give the best heat transfer and shortest cooking time.
- 4) Close the steamer door. Select the manual mode by pressing the MANUAL end of the TIMED/MANUAL rocker switch. The steaming cycle starts as soon as the switch is pressed. Shortly after the door is closed, steam fills the cooking compartment.
 - 5) If the KEYPAD timer is used to monitor cooking.
 - a) Set and start the timer. (Remember that when the KEYPAD timer is used in this way it will only count down time when the steamer is at cooking temperature.)
 - b) When the timer reaches zero, the buzzer will sound, and cooking is done. Remember, in manual mode, the timer does not stop the steaming functions.
 - 6) To stop manual mode steaming, press the TIMED end of the TIMED/MANUAL rocker switch and verify that the timer is OFF (timer electronic models) or at zero (Dial timers). The generator stops steaming, and steam flow to the cooking compartment gradually stops.



WARNING

SEVERE BURNS may result from exposure to steam.

Do not open the steamer door before steam flow stops. Stand back when opening the compartment door. Open the door slightly to allow steam to vent before looking or reaching into cooking compartment. Do not reach into cooking compartment until the steam has cleared.

Do not reach into steamer or handle hot items without wearing heatproof gloves. Wet or damp gloves conduct heat, and may cause burns when touching hot items.

- 7) Carefully open the cooking compartment door, and remove the pans from the slide racks.
 - If the steamer will be used again in a few minutes shut the door to maintain the cooking compartment temperature.
 - If another use is not planned for more than half an hour, leave the cooking compartment door slightly open to reduce internal pressure while the steam is condensing and cooling.
 - If the steamer is not being used again during this shift, perform the Power OFF and Shut Down and Cleaning Procedures, found in Chapter 6

CHAPTER 6 SHUTDOWN AND CLEANING PROCEDURES

A. STEAM GENERATOR BLOWDOWN

1. Power Off (Automatic Blowdown)

Blowdown occurs automatically when each steamer compartment is turned OFF at its ON/OFF lever/switch. During blowdown, the steam generator drain valve is rinsed with fresh water, and the boiler is drained. Blowdown at frequent intervals helps decrease mineral buildup in the steam generators, and reduces the frequency of descaling and other maintenance.

2. Blowdown Frequency

The supply water quality determines how often blowdown must be performed. The more the steamer is used and the higher the content of total dissolved solids and particulates in the feed water, the more frequently blowdown must be performed. A determination should be made at the time of installation whether additional blowdown frequency will be required as part of the daily maintenance based on the water quality analysis done as part of the installation. This information should be noted in the daily maintenance program developed for the equipment. After it has been determined whether the local water supply meets the minimum supply water quality standards, observe the following guidelines to establish proper blowdown scheduling.

- When using a supply water system that does not meet the minimum supply water quality standards, blowdown must be performed after every 4 hours of operation and at the end of each shift.
- For units using water that meets the minimum supply water quality standard, whether naturally or by using a water treatment system, blowdown must be performed at the end of each shift.

3. Blowdown Procedure

When each steamer is turned OFF, its blowdown cycle starts and runs automatically. The complete cycle takes approximately 3 minutes.

- (1) Turn the ON/OFF lever/switch to the OFF position to turn OFF the steamer. The red indicator light turns OFF and the drain valve is opened. Do not turn power OFF at the main external power switch during blowdown.
- (2) The drain valve begins to draw water from the steam generator.
- (3) The fill valve operates for 3 minutes to help flush any debris through the drain valve as the generator drains.
- (4) At the end of the 3-minute blowdown cycle, the fill valve closes.
- (5) When blowdown is complete, the steamer can be restarted, or the shut down procedure completed.
 - To restart the unit, refer to POWER ON (AUTOMATIC FILL) in Chapter 2, Part C.
 - To shut down the unit, refer to SHUT DOWN AND CLEANING, below.

NOTE: The ON/OFF lever/switch must be turned fully to the OFF position to properly START the automatic blowdown of the steamer.

B. SHUT DOWN AND CLEANING

This procedure should be performed at the end of each day or shift.

WARNING

Do not use a hose or water jet to clean this appliance

1. Refer to Power OFF (Automatic Blowdown), and turn off the steamer compartment. Allow 3 minutes for the complete blowdown cycle.

WARNING

SEVERE BURNS may result from exposure to steam.

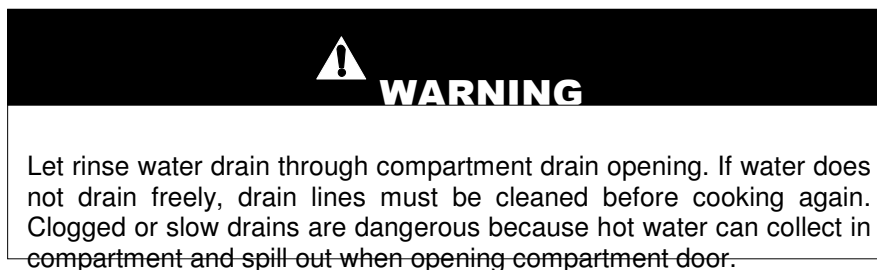
Do not open the steamer door before steam flow stops. Stand back when opening the compartment door. Open the door slightly to allow steam to vent before looking or reaching into cooking compartment. Do not reach into cooking compartment until the steam has cleared.

Do not reach into steamer or handle hot items without wearing heatproof gloves. Wet or damp gloves conduct heat, and may cause burns when touching hot items.

2. Open the steamer door and allow steamer to cool.



3. Remove the slide racks. Wash and rinse racks separately or clean them in a dishwasher according to health requirements. Do not remove the drain screen.
4. Remove any spilled food from inside compartment and clear any residue from the drain screen. Clean the interior of the compartment thoroughly. Use a soft bristle brush to remove stubborn food particles. Do not use abrasive cleaning compounds or steel wool. Rinse inside of steamer compartment with clean water.



5. Clean the door assembly.
 - Remove the door gasket assembly (see Figure 6-1).
 - Note the keyhole slots on the door and the retaining pins on the gasket assembly. Grasp the gasket assembly at the sides and lift up and towards you to remove the assembly.
 - Clean all surfaces of the gasket assembly, as well as the inside of the door, by wiping with a damp cloth.
 - Rotate the gasket assembly 180° and replace it by sliding the retaining pins into the keyhole slots. Either long edge of the gasket assembly can be positioned at the top. Periodic rotating of the door assembly will increase the door gasket life.

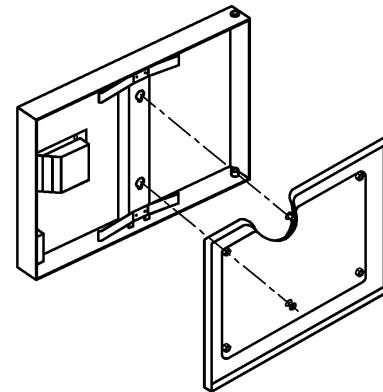


Figure 6-1 Door Gasket

6. Replace the cleaned slide racks.
7. Wipe the exterior with a damp cloth only. NEVER HOSE DOWN THE STEAMER. Electrical components inside the unit will not function correctly if wet or damp.
8. After cleaning, leave the steamer door open until the next steamer operation. This prevents compartment odor buildup and increases gasket life.

CHAPTER 7 PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING

A. MAINTENANCE

Maintenance on the steamer must be performed on a regular basis to keep the unit running properly. By following the maintenance instructions in this chapter and in the separate Installation Manual, problems with the steamer will be kept to a minimum. As with any preventative maintenance schedule, the frequency of steamer maintenance may need to be increased, depending on equipment usage and water quality. If

problems do occur, refer to the Troubleshooting Guide in this chapter. For more information on products and services, contact your sales representative.

1. Maintenance Records

Make a file solely for maintenance records. Keep a written record of daily, weekly, monthly, and yearly maintenance. These records will protect warranty coverage, help personnel to know when to perform various maintenance procedures, and assist service personnel.

2. Daily Maintenance

a. Blowdown Steam Generator


Blowdown each steam generator according to the steam generator blowdown instructions in Chapter 6.

b. Clean the Steamer

Clean interior and exterior of the steamer according to the shutdown instructions in Chapter 6.

3. Weekly Maintenance

Clean Drain

 CAUTION
Steam leaks, pressure buildup in the cooking compartment and poor steaming performance can be caused by a blocked drain line or screen. Blocked or slow drains are dangerous because hot water can collect in the compartment and spill out when opening the compartment door.

This steamer is equipped with a drain screen in the back of each cooking compartment. Never operate the steamer without the screens in place. The screen prevents large food particles from entering and blocking the drain line. Any blockage of the drain line can cause a pressure buildup in the compartment, resulting in steam leaks around the door gasket. Drain line blockage also adversely affects convection action of the steam in the compartment, which is necessary for optimum performance.

- a. Inspect the drain screen and drain line for blockage. Rotate the drain screen 90 degrees to inspect the drain opening. Clean the opening and restore the screen to its operating position.
- b. Clean drain with a USDA approved drain cleaner, once a week. Follow the instructions of the manufacturer of the cleaner.
- c. Flush drain with clean water.

4. Monthly Maintenance

Descale Steam Generator

Steam generators should be descaled at least once a month, depending on scale buildup. If you have serious steam generator scale buildup, a water treatment system should be installed for the steamer or if this is not possible the frequency of descaling should be increased. This unit is equipped with a Descaling reminder light to assist in the scheduling of this maintenance. (Note: the descaling light has been factory set for an operating time of approximately 1 month, if a different descaling frequency is required it will be necessary to have the descaling timer reset to reflect this schedule by a qualified service technician). When this light comes on arrangements should be made to descale the steam generator as soon as feasible. Cleveland Range, recommends the use of **DISSOLVE® Descaler Solution, Cleveland Range Part No. 106174**. No other system of steamer descaling should be used.

NOTE: Part No. 106174 is the Part No. for a case (6 1-gallon containers) of **DISSOLVE®** descaler. It is also available in 5-gallon containers as Part No. 1061741.

THESE INSTRUCTIONS ARE FOR USE WITH *DISSOLVE*[®] DESCALER SOLUTION Cleveland Range Part Nos. 106174 or 1061741 ONLY.

- **Health Hazard Data, Effects of Overexposure** – This product may cause a burning sensation to eyes or skin.
- **Emergency and First Aid Procedures** - In case of eye contact, immediately flush eyes with plenty of water. If irritation persists seek medical attention. In case of skin contact, wash with soap and water. If inhaled, remove to fresh air and if burning persists, call a physician. If swallowed, drink 1 or 2 glasses of water and call a physician.
- **Spill or Leak Procedures** – Rinse with plenty of water to dilute. Sodium carbonate or calcium carbonate may be used to soak up liquid. Considered non-hazardous, spent material may be disposed of in a sewer system with water flush.

WARNING

The liquid solution in Cleveland Range Descaler Solution Part No. 106174 or 1061741 can be harmful if not handled properly. Follow these basic safety rules for handling and using this product.

Wear protective clothing when mixing or applying chemical cleaners.

Wear rubber gloves, and OSHA approved eye protection when descaling to avoid personal injury.

Avoid breathing fumes. If liquid comes in contact with skin, wash with soap and water.

If chemical contacts eyes, flush with water. If irritation persists seek medical attention

If chemical is swallowed or ingested, drink 1 or 2 glasses of water and call a physician.

CAUTION

Do not use any other product or method of descaling other than the *DISSOLVE*[®] Descaler method using Part Nos. 106174 or 1061741.

- a. **MODEL 24CGA6.2S, 24CGA6.2SES, 24CGA10.2 ,and 24CGA10.2ES, ATMOSPHERIC STEAM GENERATOR DESCALING PROCEDURE (For *DISSOLVE*[®] Descaler Solution Part No. 106174 or 1061741)**
Monthly Intervals

1. This procedure will take approximately 1 hour and 30 minutes to complete.

WARNING

This procedure is slightly different depending on the model being descaled. This entire procedure should be read and fully understand as it applies to the model being descaled, before beginning the actual descaling operation.

2. Set both timers to zero or for manual only models, set both compartment ON/OFF selector switches to OFF.

3. Open both doors to the cooking compartments.
4. Set the TIMED/MANUAL switches to TIMED.
5. Set both ON/OFF levers/switches to the OFF position. (The unit will undergo a normal blowdown cycle, which should take approximately 3 minutes to complete).
6. Remove both caps from the descale ports located at the top of the unit (See Figure 6-1),
7. When the unit has completed draining, set both ON/OFF levers/switches to ON, this will refill the generators. Do not start the timer and leave the cooking compartment doors open.

Monthly Maintenance (continued)

NOTE: DO NOT HEAT THE UNIT DURING DESCALING.

8. While the unit is filling with water add 1 gallon of *DISSOLVE*[®] descaler solution into each descaling port.
 - While adding liquid to the unit through the descaler inlets, pour it in slowly so as to avoid overflow.
9. After the automatic fill cycle has ended, turn OFF power at the external main power switch. See Figure 6-2. DO NOT change the position of the ON/OFF levers.

(FOR THE MODELS 24CGA10.2 and 24CGA10.2ES ONLY add cold tap water through one descale port until water enters the cooking compartment through the steam nozzles or until the descaling port overflows (water required varies between 1 to 2 gallons depending on the Model). Repeat with the second descale port.)

10. At the end of 1 hour, set the ON/OFF levers/switches to the OFF position, which will drain the generators (takes about 3 minutes).
11. Restore power to the unit by turning the power back ON at the external main power switch.
12. Set both ON/OFF levers to ON to refill generator. When full, add ½ to 1 gallon (1 to 1½ Gallons for the Model 24CGA10.2) of water through each descale port (to remove foam from the water level controls)
13. Set both ON/OFF levers to OFF to drain the generators.
14. After the unit has drained completely, close the steamer doors and set the ON/OFF levers/switches to the ON position. The unit will fill with water.
15. Set the timers for 20-30 minutes, and turn them on (KEYPAD MODELS). The unit will come up to normal operating temperature.
16. At the end of 20-30 minutes of cooking, turn OFF the alarm (if necessary) and set the ON/OFF levers/switches to the OFF position to drain the generators. Wait at least 5 minutes to ensure complete draining.
17. This is the final blowdown to rinse the unit. The steamer is now ready for normal operation.
18. When done cleaning, reset the descale indicator light timer to zero by pressing the “DESCALE REQUIRED” lighted rocker switches, and resume normal operation.



Figure 6-1 Descaling Port

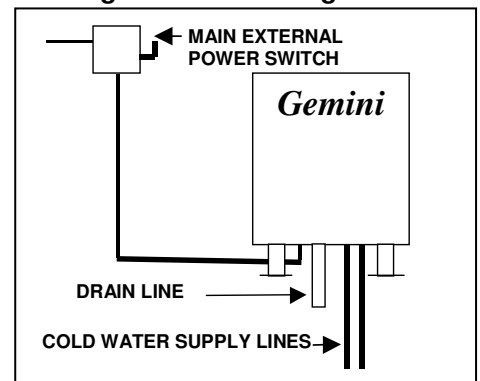


Figure 6-2 Main External Power Switch

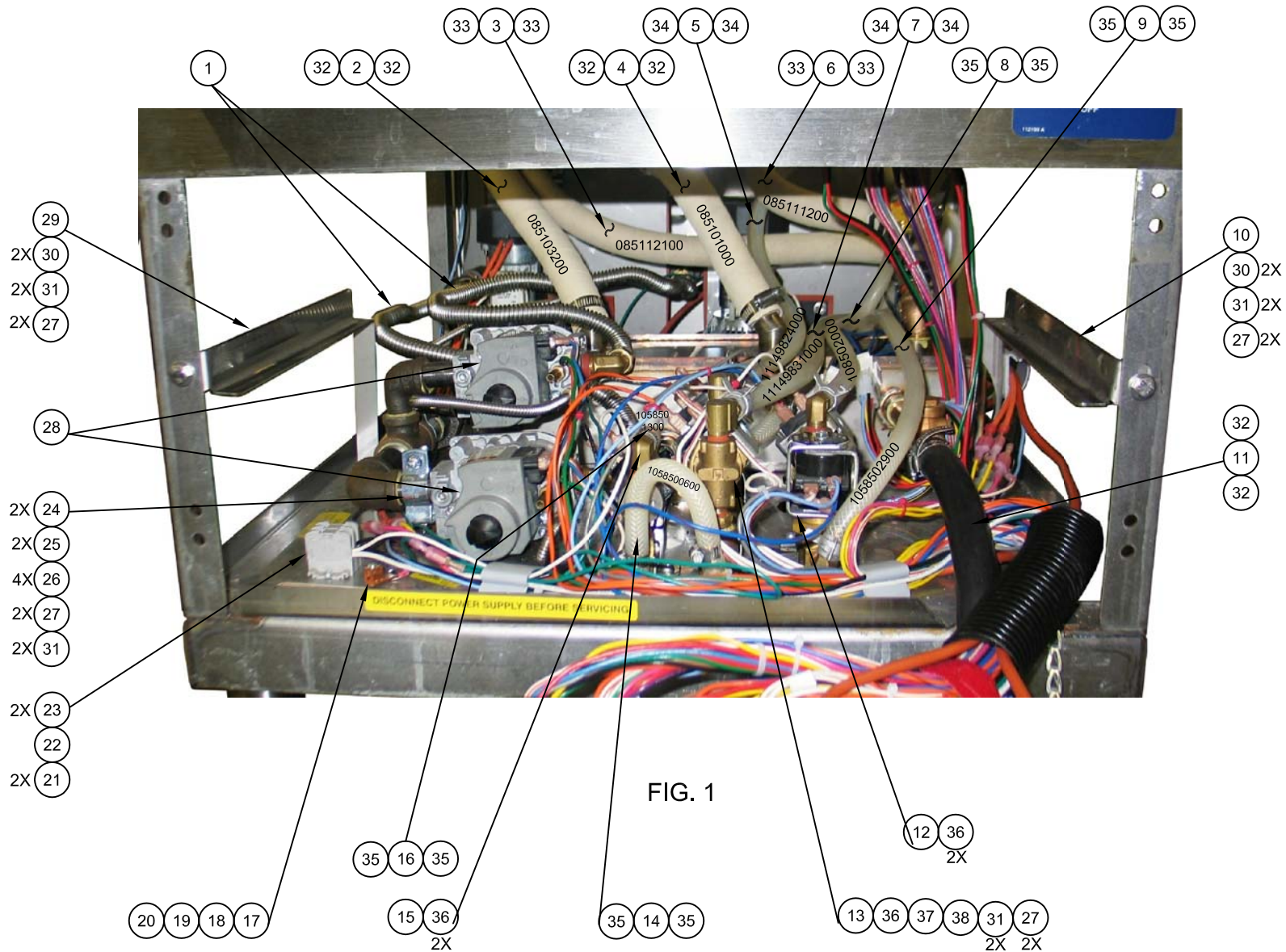
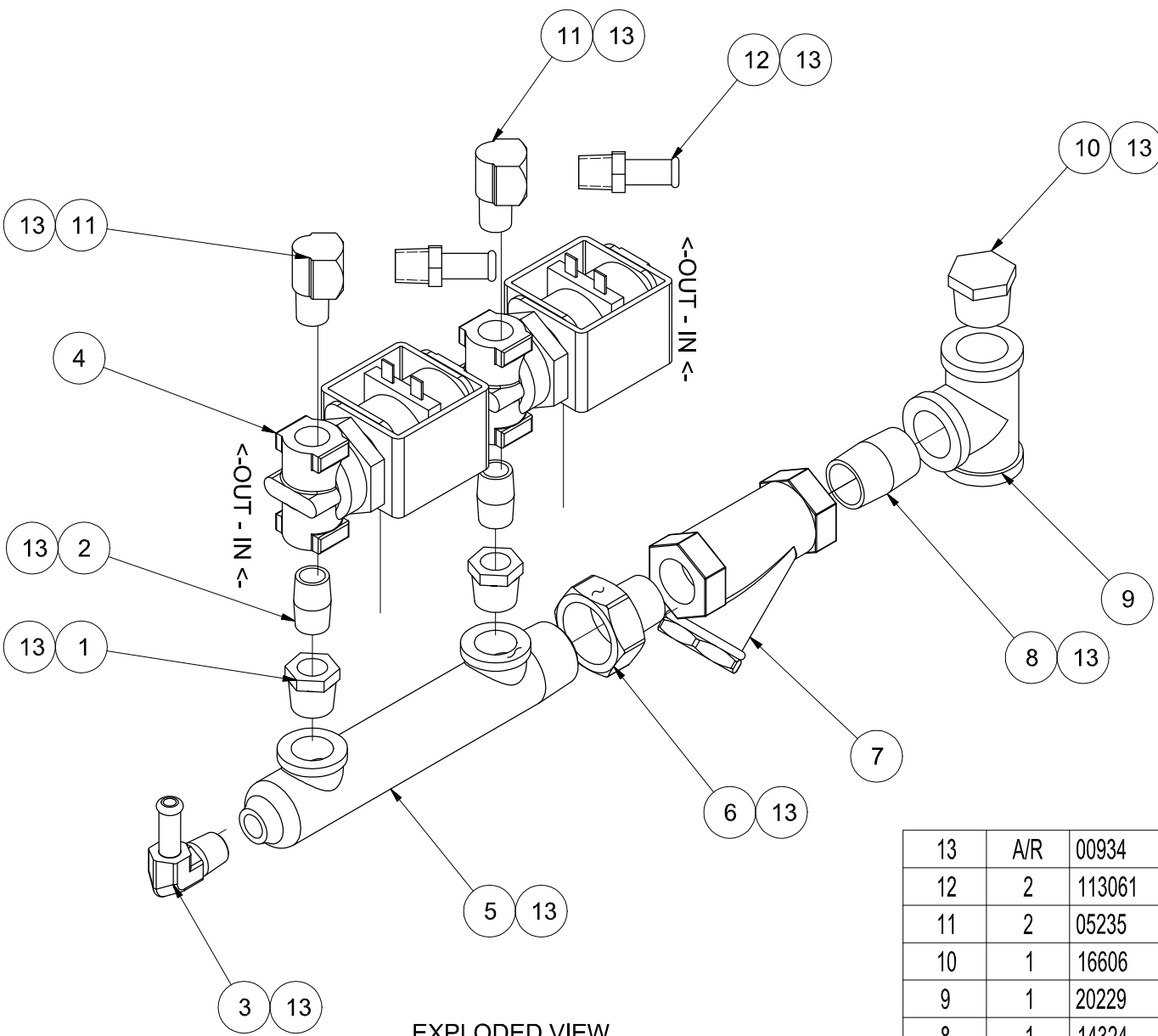


FIG. 1

12	1	1105271	VALVE ASSY, WATER INLET, BOILER FILL
11	1	107010	HOSE, TRAY DRAIN
10	1	108857	RAIL, RIGHT, DRAWER
9	1	1058502900	HOSE, NYLON REINFORCED, 1/4 ID x 29.00 LG
8	1	1058502000	HOSE, NYLON REINFORCED, 1/4 ID x 20.00 LG
7	1	1149831000	HOSE, SILICONE, 0.375 ID x 31.00 LG
6	1	085111200	HOSE, WHITE, EPDM, 3/4 ID x 12.00 LG
5	1	11149824000	HOSE, SILICONE, 0.375 ID x 24.00 LG
4	1	085101000	HOSE, WHITE EPDM, 1.00 ID x 10.00 LG
3	1	085112100	HOSE, WHITE, EPDM, 3/4 ID x 21.00 LG
2	1	085103200	HOSE, WHITE EPDM, 1.00 ID x 33.00 LG
1	2	108928	GAS LINE, MAIN, GEMINI

25	2	107277	SCREW, HEX HD, 1/4-20 x 0.875
24	2	WR50188	CLAMP, PIPE, 3/4
23	2	20301	TERMINAL SECTION
22	1	20302	TERMINAL END SECTION
21	2	106127	SCREW, 6-32 x 1/2, TORX
20	1	14659	NUT, HEX, 10-24
19	1	101231	SCREW, 10-24 x 0.500, TRUSS HD
18	1	23114	WASHER, LOCK, INTERNAL TOOTH, #10
17	1	20304	LUG, GROUND
16	1	1058501300	HOSE, NYLON REINFORCED, 1/4 ID x 13.00 LG
15	1	113084	VALVE ASSEMBLY, COND. BOX FILL, GEMINI ES
14	1	1058500600	HOSE, NYLON REINFORCED, 1/4 ID x 6.00 LG
13	1	113085	VALVE ASSY, WATER INLET, COND. BOX/DRAIN, GEMINI ES

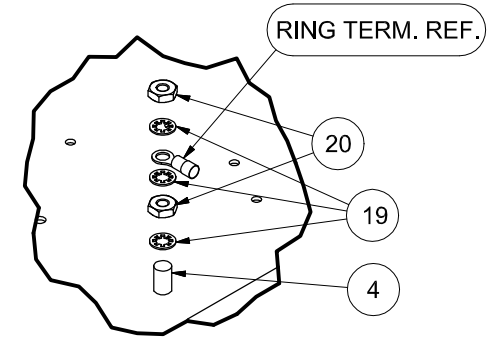
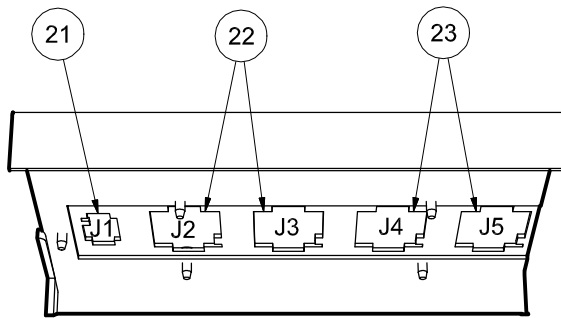
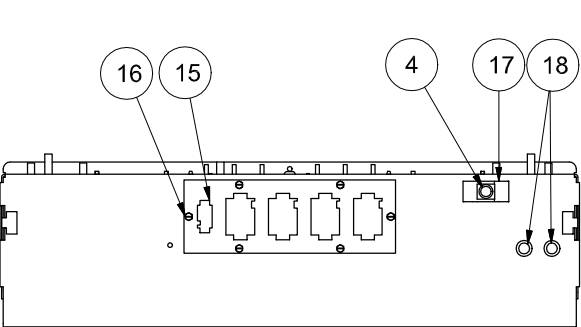
38	1	105970	BOLT, U, 1/4-20, 3/4 IN PIPE
37	1	03197	CLAMP, 1 HOLE, RIGID, 3/4 IN PIPE
36	5	106123	SCREW, 10-32 x 1/2, TORX
35	8	106526	CLAMP, WORM DRIVE, 1/4 - 5/8, 5/16 WIDE, SST
34	4	106219	CLAMP, WORM DRIVE, 1/4 - 11/16, 5/16 WIDE, SST
33	4	107312	CLAMP, HOSE, 1-1/8" OD METAL TENSION BAND
32	6	03204	CLAMP, WORM DRIVE, 0.812 - 1.500
31	6	23116	WASHER, FLAT, 0.281 ID x 0.625 OD
30	4	19170	SCREW, HEX HD, 1/4-20 x 5/8
29	1	108856	RAIL, LEFT, DRAWER
28	1	110623 1106231	GAS VALVE ASSEMBLY, NATURAL GAS GAS VALVE ASSEMBLY, LP GAS
27	8	14665	NUT, HEX, 1/4-20, LOCK
26	4	14618	NUT, HEX, 1/4-20



EXPLODED VIEW

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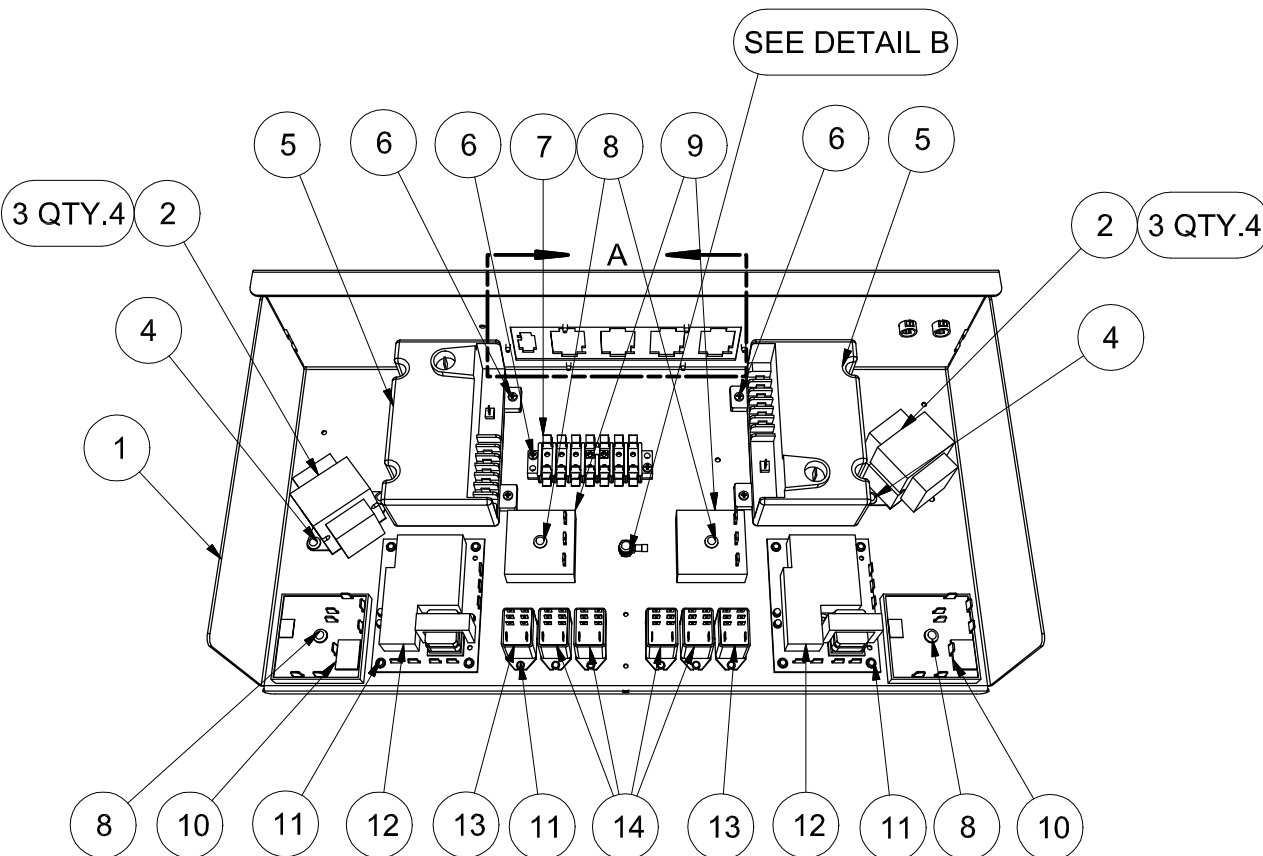
13	A/R	00934	SEALANT, PIPE DOPE
12	2	113061	FTG, HOSE BARB, 3/8 H X 1/4 NPT, BR
11	2	05235	ELBOW, STREET 1/4 X 90° BR, LONG PATTERN
10	1	16606	PLUG, HEX, 1/2, BRASS
9	1	20229	TEE, 1/2" NPT, BRASS
8	1	14324	NIPPLE, 1/2 x CLOSE, BRASS
7	1	106684	STRAINER, "Y", 1/2", NPT
6	1	113080	FITTING, ADAPTER, 3/4 X 1/2
5	1	133012	MANIFOLD STEAM INLET (1/4" NPT HOLE ONE END)
4	2	222231	VALVE, SOLENOID, 1/4, NPT, SPADE TERMINAL, 120V
3	1	111289	FITTING, ELBOW, 90 1/4" HOSE X 1/4" NPT MALE
2	2	14304	NIPPLE .25NPTF, CLOSE, BRASS
1	2	02594	BUSHING, HEX, 3/8 x 1/4, BRASS
ITEM	QTY	PART NO.	DESCRIPTION



DETAIL A
HARNESS PLUG LOCATION

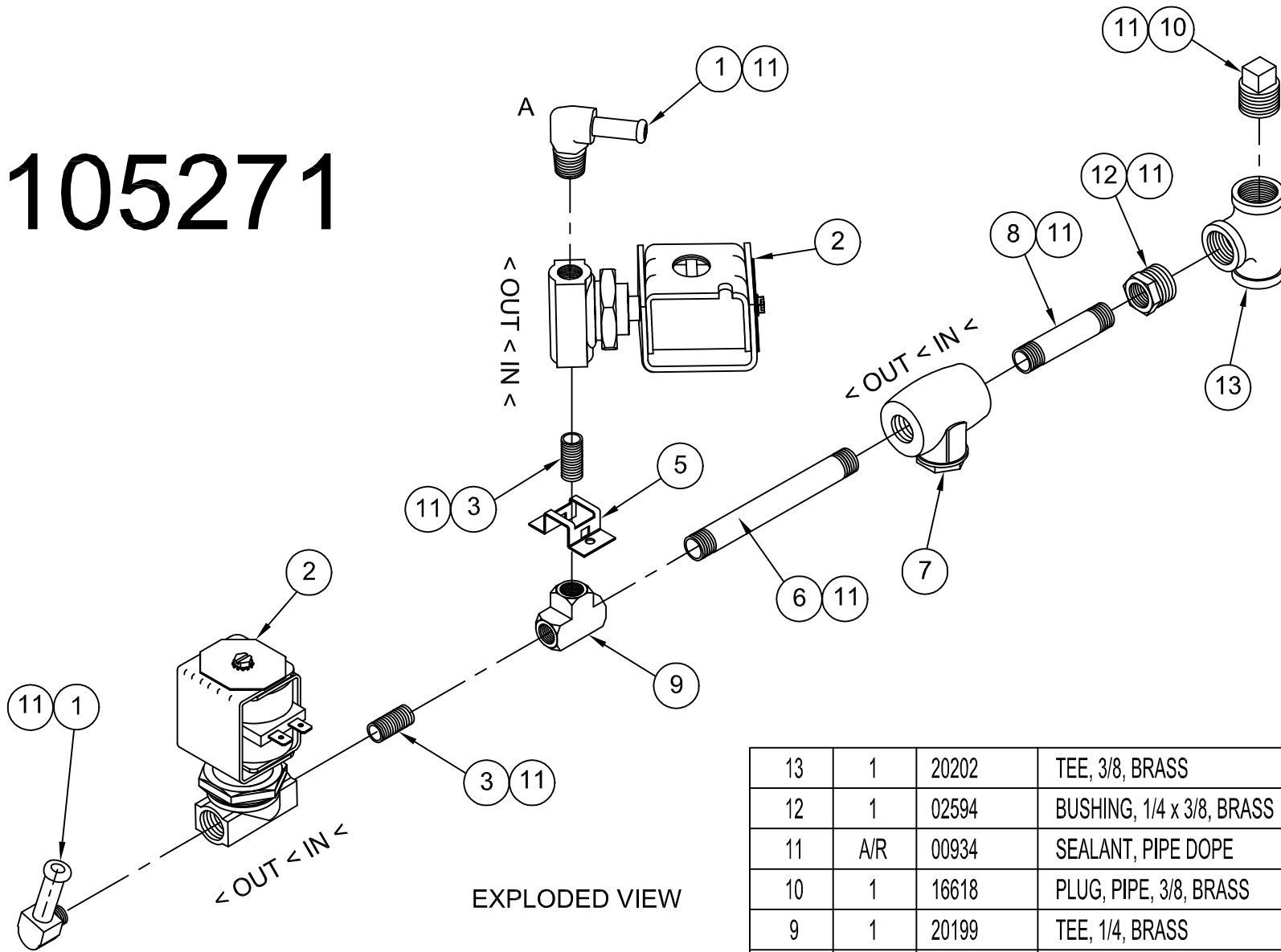
DETAIL B

300736



24	1	300737	WIRE HARNESS, RELAY, (P6 & P7) (NOT SHOWN)
23	1	300102	WIRE HARNESS, RIGHT (J4 & J5)
22	1	300101	WIRE HARNESS, LEFT (J2 & J3)
21	1	300100	WIRE HARNESS, MAIN POWER (J1)
20	2	14645	NUT, HEX, #10-32, ZINC PLATED
19	3	23114	WASHER, LOCK, INTRNL, TOOTH #10 TYPE A OR B, SST
18	2	02616	BUSHING, INSULATOR, 3/8 X 37/64 X 13/32 HIGH
17	1	110656	MOUNT, CABLE TIE
16	6	106754	SCREW, 6-32 X 3/8, HEX/SLOT-WASHER HD.
15	1	110624	PANEL, CONNECTOR COMPONENT DRAWER, GEMINI 10
14	4	105966	RELAY, DPDT-W/MTG TABS
13	2	108285	RELAY, 24V, DPDT-W/MTG TABS
12	2	107241	BOARD, WATER LEVEL CONTROL
11	20	106127	SCREW, 6-32 X 1/2, TORX/PAN HD
10	2	106911	TIMER WITH ADJUSTABLE TIME SETTINGS (DESCALE)
9	2	20478	TIMER, SOLID STATE INTERV 3 MINUTE
8	4	106124	SCREW, TORX/SLOT #10-32 X 1-1/4 LG
7	1	108981	TERMINAL BLOCK ASSY, 7 POLE, GEMIN
6	10	106126	SCREW, 8-32 X 1/2, TORX/SLT.PAN HD
5	2	105693	MODULE, SPARK CONTROL, INTERMITTENT PILOT
4	6	106123	SCREW, 10-32 X 1/2, TORX/ PAN HD, THRD FORMING, ZN
3	8	20351	TERMINAL, SLIPON, FULL INSUL, 0.250
2	2	20528	TRANSFORMER, 120-24V, 40VA, 50/60 HZ, 9" LEADS
1	1	111271	DRAWER, COMPONENT
ITEM	QTY	PART NO.	DESCRIPTION

1105271



13	1	20202	TEE, 3/8, BRASS
12	1	02594	BUSHING, 1/4 x 3/8, BRASS
11	A/R	00934	SEALANT, PIPE DOPE
10	1	16618	PLUG, PIPE, 3/8, BRASS
9	1	20199	TEE, 1/4, BRASS
8	1	14411	NIPPLE, 1/4 x 1.500, BRASS
7	1	19870	STRAINER, 1/4 "V" TYPE
6	1	14476	NIPPLE, 1/4 x 2.000, BRASS
5	1	100064	CLAMP, MOUNTING, 1/4 TEE/ELBOW/TUBE FITTING
4			
3	2	14304	NIPPLE, CLOSE, 1/4, BRASS
2	2	222231	VALVE, SOLENOID, 1/4, NPT, SPADE TERMINAL, 120 V
1	2	111289	FITTING, ELBOW, 90°, 1/4 HOSE X 1/4 NPT MALE, BRASS

A/R	A/R	12	00934	SEALANT, PIPE DOPE
2	0	11	1098771	VLV, GAS REG, LP, 1/2 X 1/2 W/INTERMITTENT PILOT
1	1	10	05259	ELBOW, STREET, 90°, 3/4, BLK
1	1	9	21305	UNION, PIPE, 3/4, BLK, #150, NO WARRICKS
1	1	8	14345	NIPPLE, 3/4 X 2-1/2, BLK
1	1	7	20209	TEE, 3/4 X 3/4 X 1/2, BLACK IRON
1	1	6	14347	NIPPLE, 0.750 X 3.000 SCH 40, BLACK IRON
1	1	5	05252	ELBOW, STREET, 1/2" X 90 DEG, BLACK
1	1	4	05271	ELBOW, 90 DEG., 3/4 X 1/2, BLACK REDUCING
2	2	3	14327	NIPPLE. 1/2 X 2, BLK
2	2	2	06205	FTG, COMP, 1/2 T X 1/2 MPT, 90°
0	2	1	109877	VLV, GAS REG, NAT, 1/2 X 1/2 W/INTERMITTENT PILOT
QTY	QTY	ITEM	PART NO.	DESCRIPTION

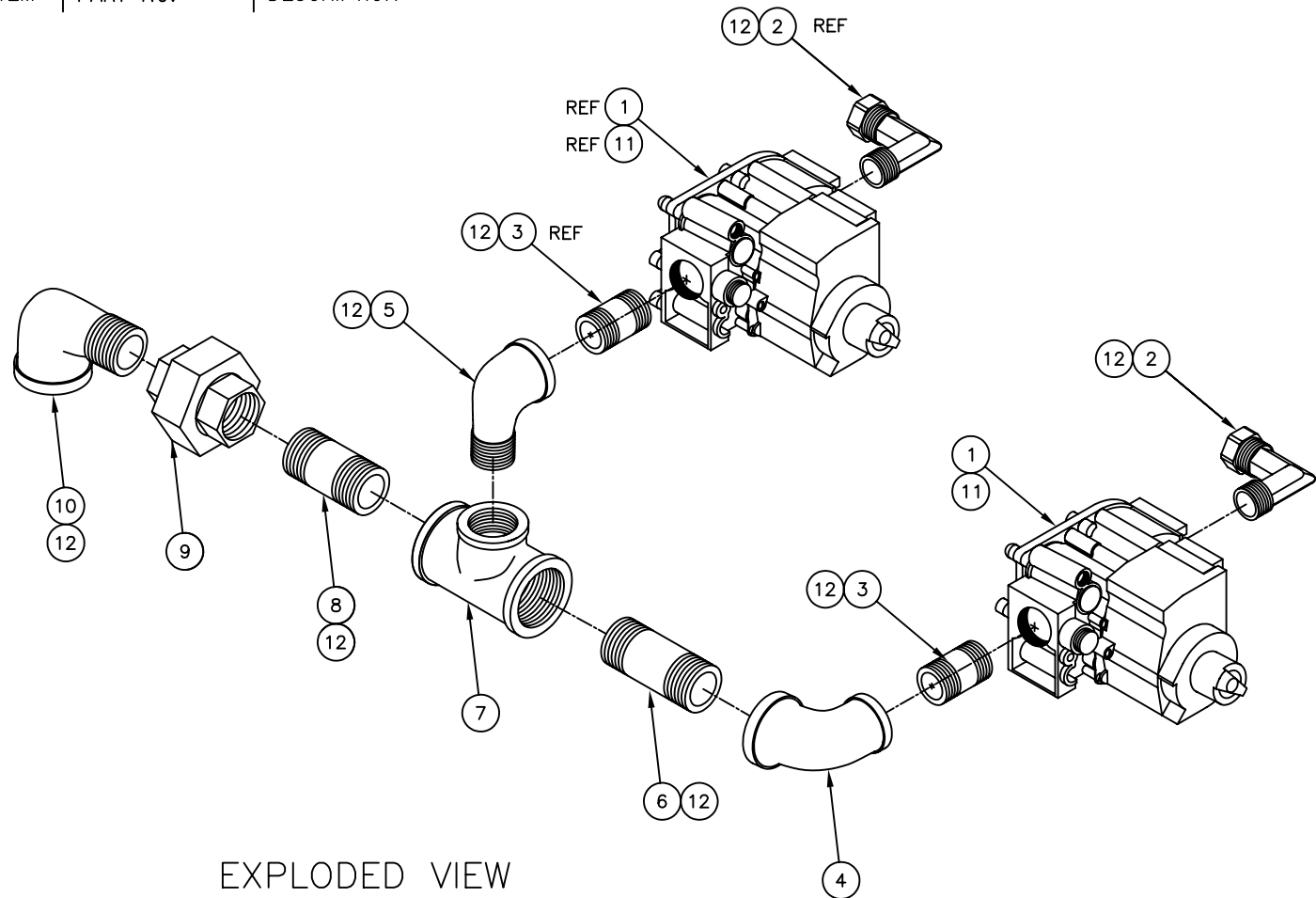
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LP

NAT



EXPLODED VIEW

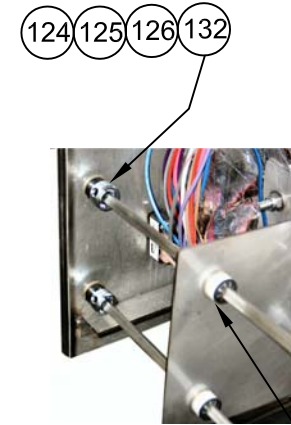
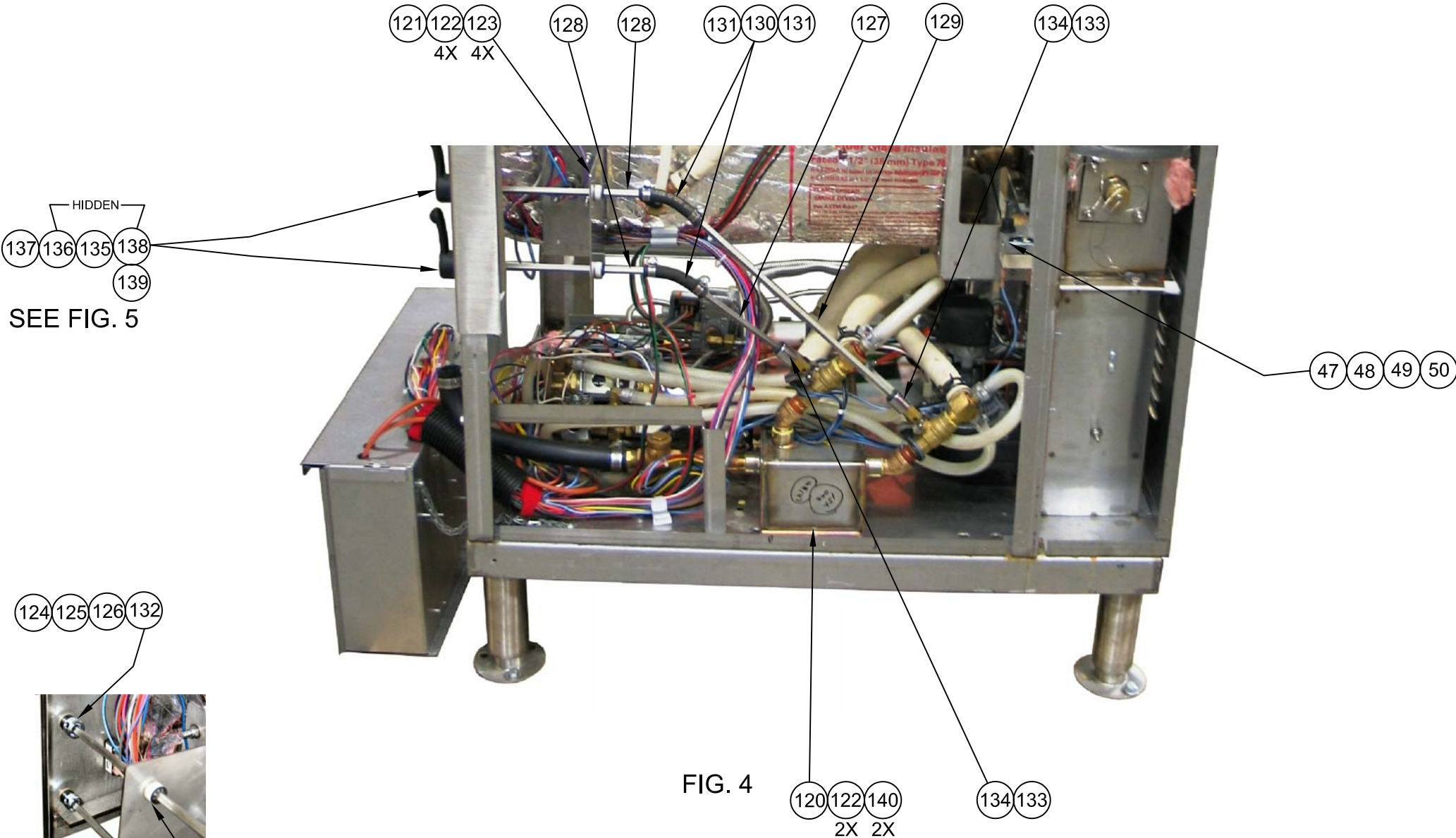
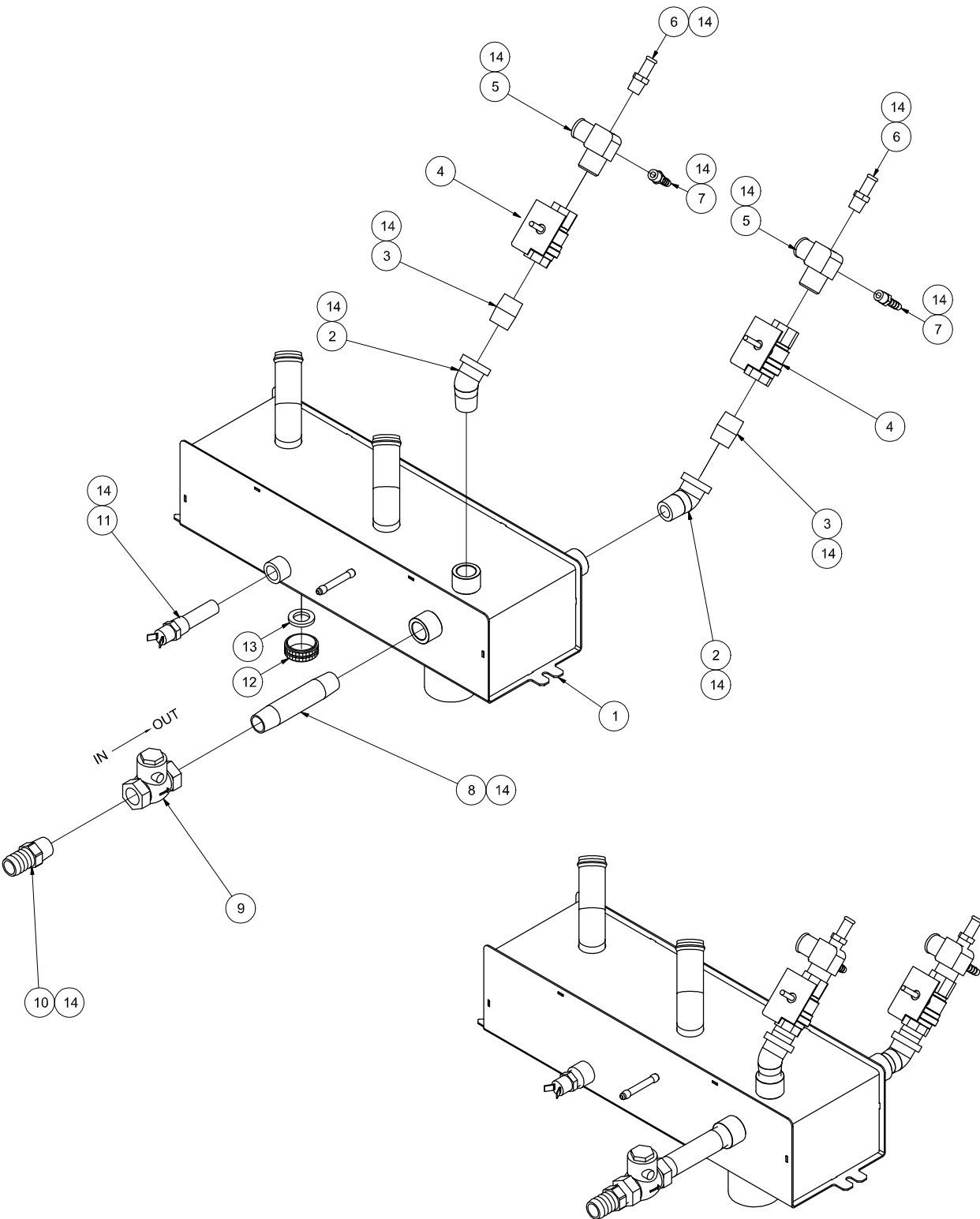


FIG. 4

FIG. 5

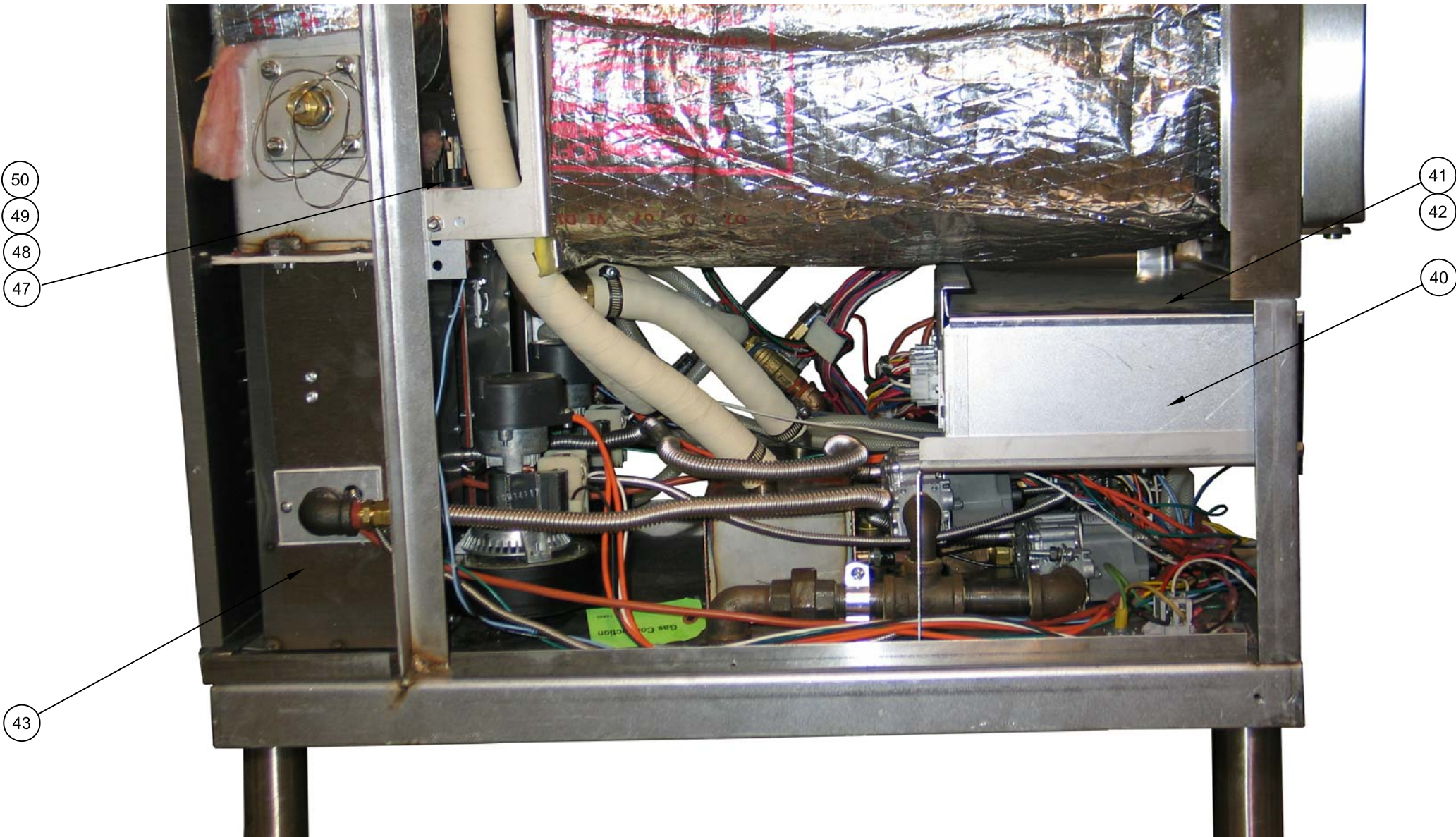
129	1	113119	ROD, REAR LINKAGE, 13,750, GEMINI-ES
128	2	1121771	ROD, LOWER HANDLE
127	1	113120	ROD, REAR LINKAGE, 6,000, GEMINI-ES
126	4	102187	RING, CRESCENT, RETAINING
125	4	112244	BUSHING, INSERT
124	4	112243	BUSHING, SUPPORT
123	4	101873	NUT, HEX, LOCK, THIN, 1/4-20
122	6	23116	WASHER, FLAT, .281 ID X .625 OD X 0.065 THK
121	1	1121451	BRACKET, LINKAGE SUPPORT
120	1	113086	CONDENSER BOX ASSY, DRAIN VALVES, GEMINI - ES

140	2	106123	SCREW, 10-32 X 1/2, TORX PAN HD, THRD FORMING, ZN
139	A/R	107507	LOCTITE, BLUE
138	2	110694	SPACER, CONTROL LEVER
137	2	110652	LEVER, CONTROL, MODIFIED, 1/4" SQ. BORE
136	2	110745	NUT, HEX, #8-32 SMALL PATTERN, SST
135	2	101336	WASHER, FLAT, #8, SST
134	2	110713	SOCKET, 1/4" DR, 9/16" 12 POINT
133	4	112245	CLIP, RETAINING
132	2	112260	SHAFT COLLAR
131	4	106526	CLAMP, HOSE, WORM DR. 1/4 - 5/8, 5/16" WIDE
130	2	112181	FLEXIBLE LINKAGE HOSE



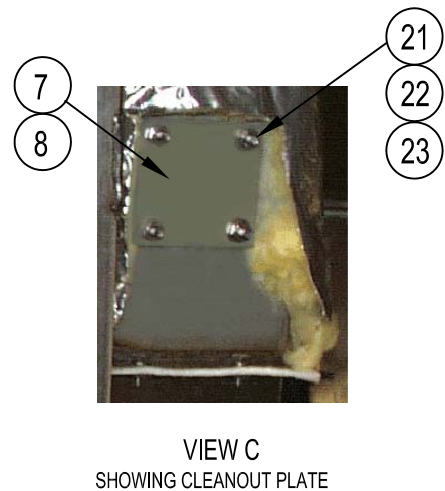
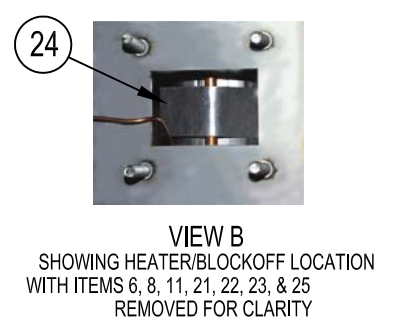
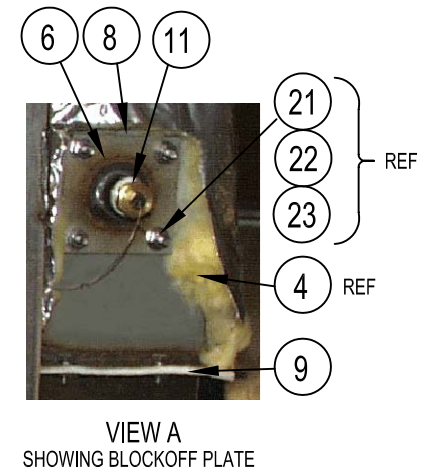
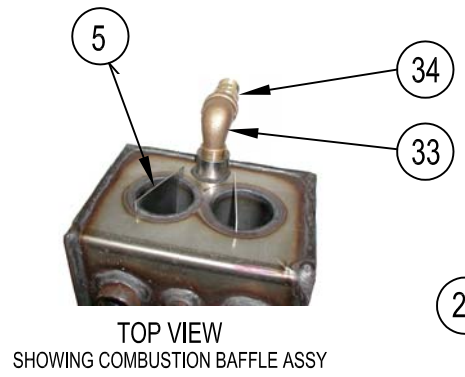
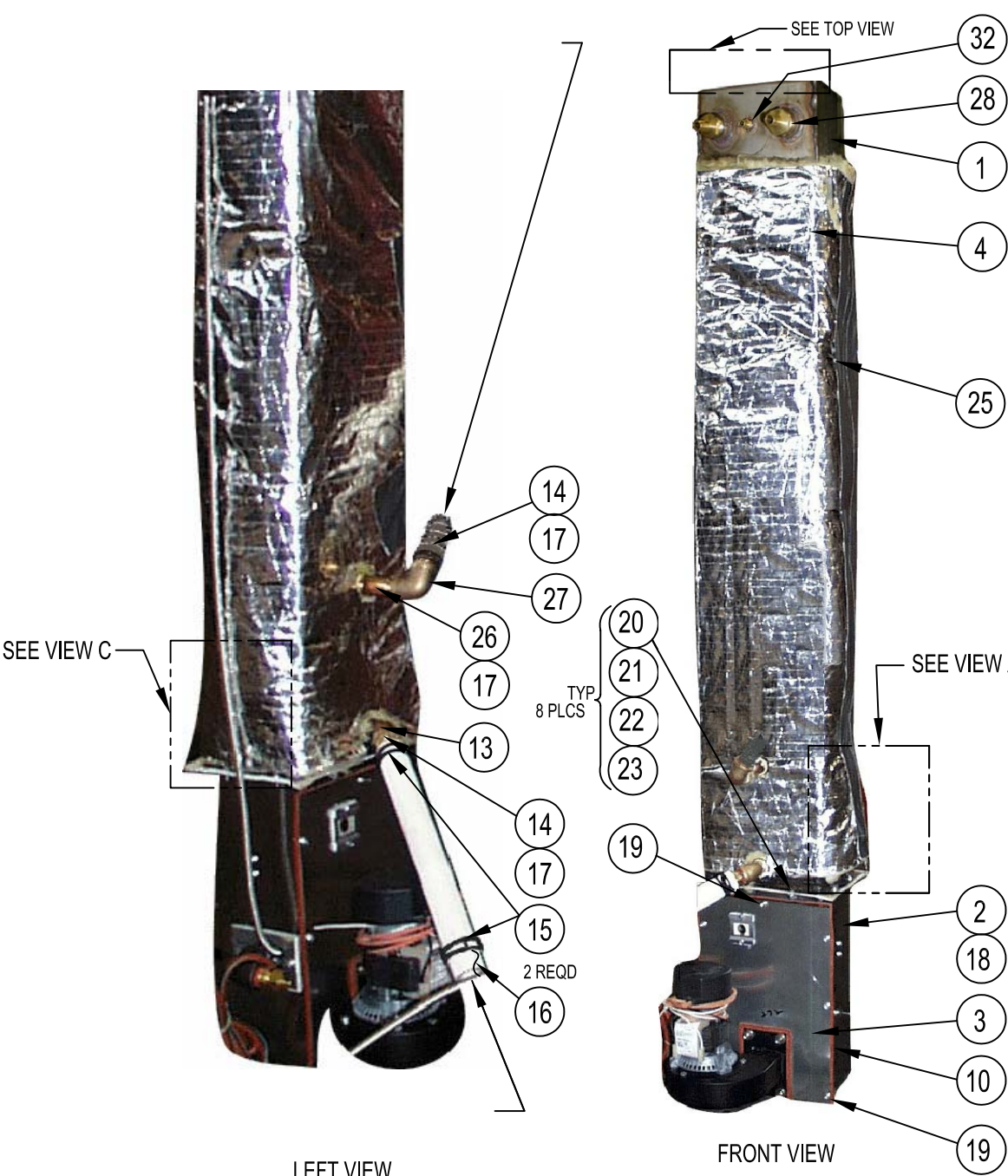
113086

14	A/R	00934	SEALANT, PIPE DOPE
13	1	108034	WASHER 3/4 GHT HOSE
12	1	108031	CAP, HOSE NUT 3/4" HOSE THD.
11	1	106288	SWITCH, THERMOSTAT, 130 DEG.
10	1	06241	FTG, HOSE BARB, 3/4HX1/2MPT, BR.
9	1	22149	VALVE, SWING, CHECK, 1/2" NPT
8	1	14335	NIPPLE 0.500 NPT X 4.000, SCH 40, BRASS, TBE
7	2	104380	FTG, HOSE BARB, 1/4HX1/8MPT, STR, BR
6	2	113061	FTG, HOSE BARB, 3/8 H X 1/4 NPT, BR
5	2	1113543	FTG, BARB, 3/4H X 1/2 MPT X 1/4" FPT, 90 DEG, BRASS
4	2	110613	BALL VALVE ASSEMBLY, DOUBLE SWITCH
3	2	14324	NIPPLE, 1/2 x CLOSE, BRASS
2	2	05223	ELBOW, STREET, 45 DEG., 1/2" NPT, BRASS
1	1	113087	WELDMENT, CONDENSER BOX, GEMINI-ES
ITEM	QTY	PART NO.	DESCRIPTION



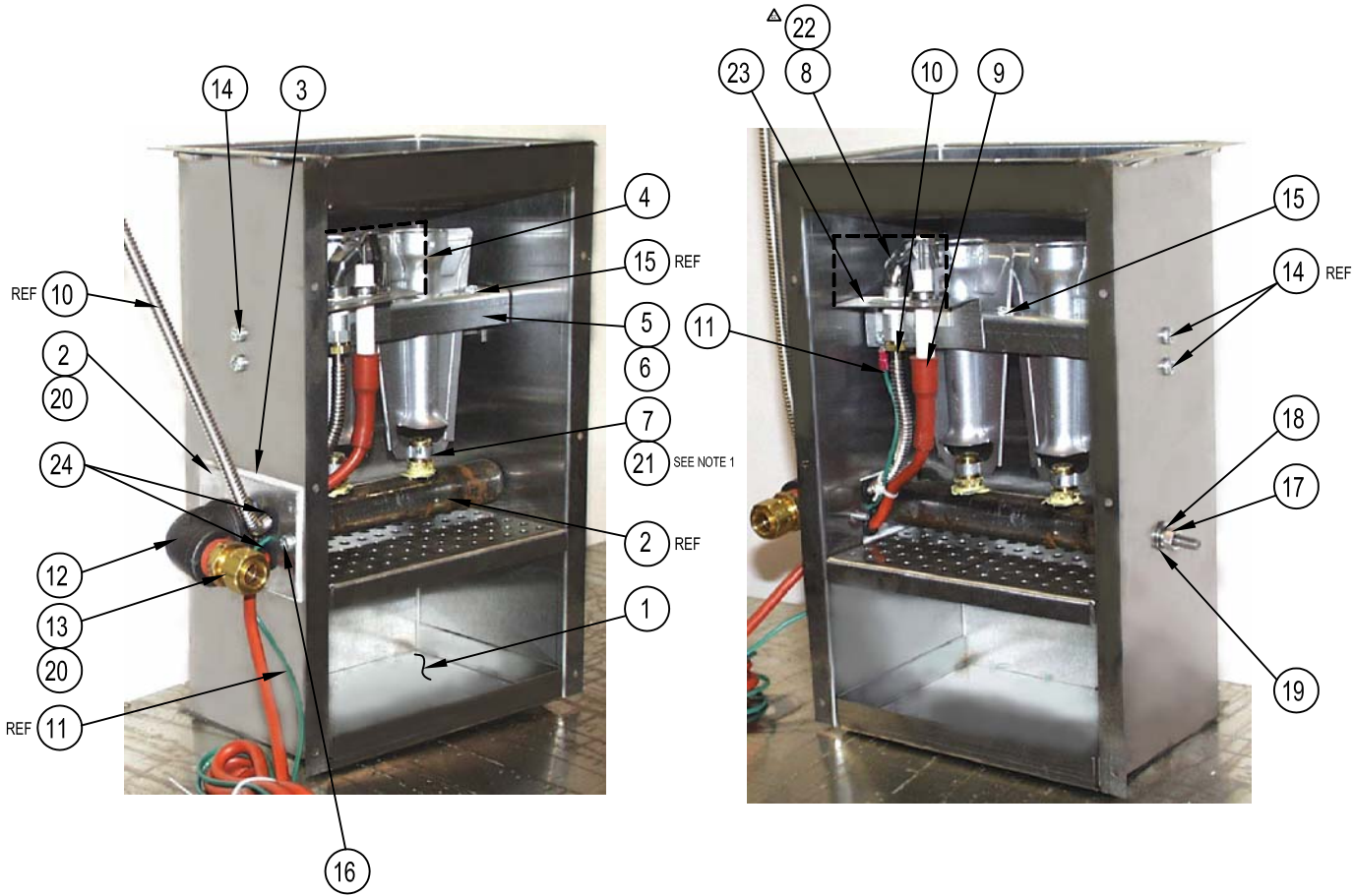
-	-	-	-
43	2	1096081 1096082	GENERATOR, MAIN ASSEMBLY, NATURAL GAS GENERATOR FINAL ASSEMBLY, LP GAS
42	1	106123	SCREW, 10-32 x 1/2, TORX (NOT SHOWN)
41	1	108909	COVER, DRAWER
40	1	300736	ELECTRIC BOX ASSEMBLY

50	4	101873	NUT, HEX, 1/4-20 THIN LOCK
49	4	19170	SCREW, HEX HD, 1/4-20 x 5/8
48	2	109008	BRACKET, MOUNTING, HI-LIMIT RESET SWITCH
47	2	108995	ASSEMBLY, RESET SWITCH, HI-LIMIT
-	-	-	-
-	-	-	-



1	1	34	105575	VALVE, RELIEF, 5 PSI
1	1	33	05253	ELBOW, STREET, 1/2 NPT, BRASS
1	1	32	108207	FTG. HOSE BARB, 1/2H X 3/8NPT
2	2	28	102235	FITTING, HOSE BARB 1/2 X 3/4 NPT BR.
1	1	27	102600	ELBOW 90° 3/4" BRASS
1	1	26	14431	NIPPLE, 0.75 NPT X 2.03SCH
4	4	25	101553	CLIP, INSULATION RETAINER
1	1	24	103484	CLAMP WELD, HIGH LIMIT RETAINING, SMALL
16	16	23	23116	WASHER, FLAT, 1/4 ID X 0.000 OD X 0.065 THK
16	16	22	23105	WASHER, LOCK MEDIUM PATT 1/4 KATLINK STYLE, SST
16	16	21	14618	WMT, 1/4-20, HEX, 200 SST FULL-FINISHED
8	8	20	19170	SCREW, HEX HD, 1/4-20 X 0.0125 LG
7	7	19	109706	SCREW, S-SZ, PHILLIPS PAN HD, 1/2 LG, SST
1	-	18	106032	BURNER BOX, ASSY, LP
1	1	17	10534	SEALANT, PIPE DOBE
1	1	16	10611300	HOSE, WHITE, EPDM, 3/4 ID X 10.000 LG
2	2	15	107312	CLAMP, HOSE, 1-1/2 OD, METAL TENSION BAND
2	2	14	10240	FITTING, HOSE 3/4 X 3/4 NPT
1	1	13	114245	ELBOW, STREET, 45° X 3/4, BRASS
1	1	12	10520	ELBOW 90° 1/2 X 1/2 BRASS
1	1	11	10620	BUSHING, HEX, 1/2 X 1/4 BRASS
1	1	10	107947	GASKET, COVER BURNER BOX
1	1	9	108886	GASKET, BURNER BOX GENERATOR
2	2	8	07128	GASKET, HEATER/BLOCKOFF PLATE
1	1	7	104614	PLATE, GENERATOR CLEWOUT
1	1	6	103002	ASSY, BLOCKOFF PLATE WELDMENT, HLIMIT
2	2	5	105730	BAFFLE, COMBUSTION VERTICAL, BOILER
1	1	4	108654	INSULATION, GENERATOR GEMIN
1	1	3	10610	COVER, ASSY, BURNER BOX
-	1	2	106091	BURNER BOX, ASSY, NAT
1	1	1	108015	BOILER ASSY WELDMENT

LP NAT



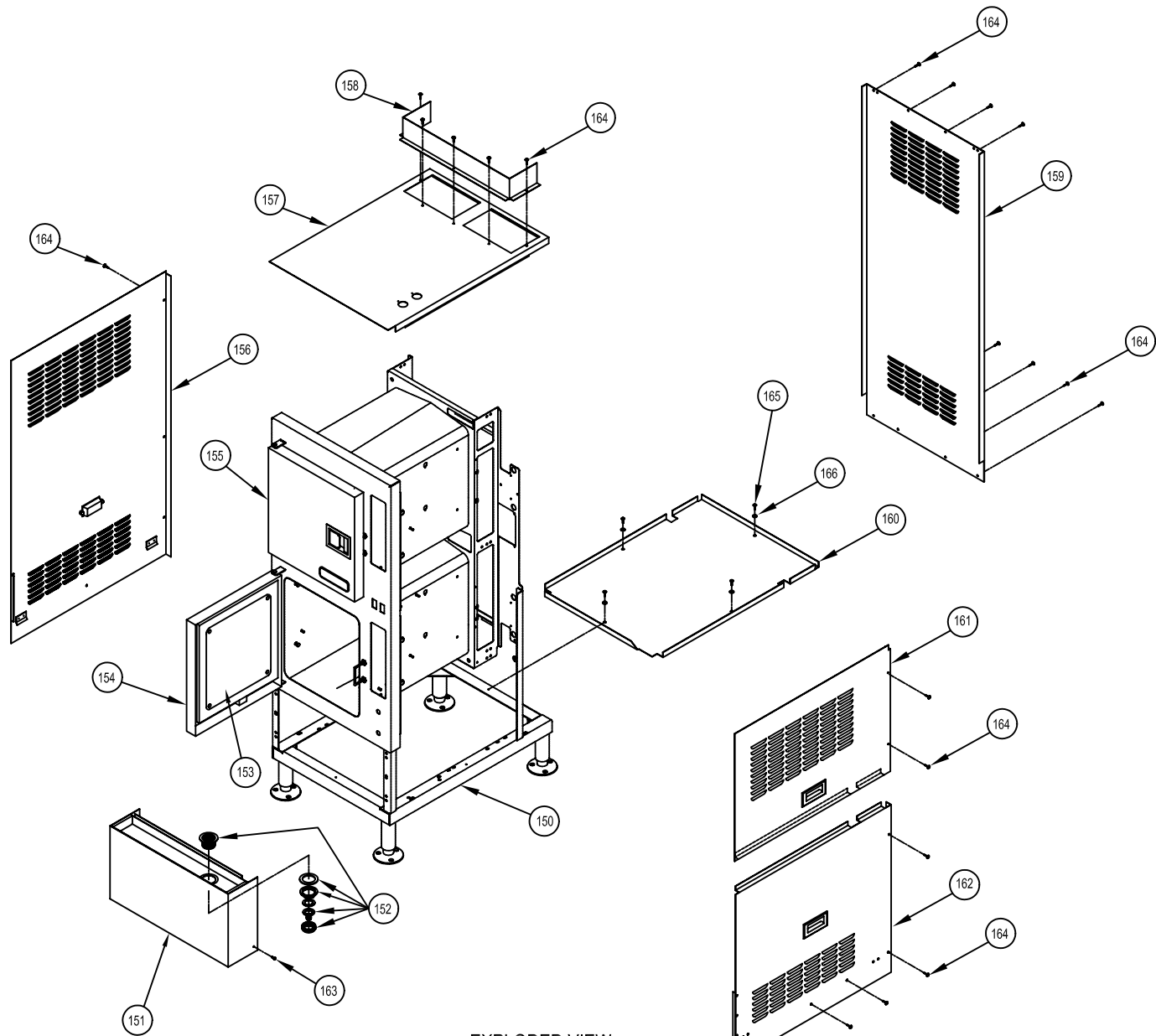
BURNER BOX ASS'Y

1	1	25	300261	TERMINAL, SLIP-ON, 0.032 X 0.187, 22-18AWG, PART. INSUL
2	2	24	106129	GROMMET, RUBBER
1	1	23	106412	BAFFLE, PILOT
1	-	22	1057841	PILOT ASSY, LP
-	-	21	-	ORIFICE, LP GAS
A/R	A/R	20	00934	SEALANT, PIPE DOPE
1	1	19	23116	WASHER, FLAT, 1/4 ID X 0.500 OD X 0.065 THK
1	1	18	23105	WASHER, LOCK, MEDIUM PATT 1/4 KATLINK STYLE, SST
1	1	17	14618	NUT, 1/4-20, HEX, 300 SST, FULL-FINISHED
2	2	16	19287	SCREW, PAN HD, 10-24 X 1/2, SST
3	3	15	101879	SCREW, HEX WASHER HD, THD TYPE F 6-32 X 1/2, ZN
4	4	14	106123	SCREW, 10-32 X 1/2, TORX/PAN, THRD FORMING, ZN
1	1	13	06204	FTG, COMP, 1/2 T X 1/2 MPT
1	1	12	05271	ELBOW 90° 3/4 X 1/2 BLACK REDUCING
1	1	11	106145000	WIRE ASSY GREEN, 1 RING, 1 BARE 50.000
1	1	10	108829	GAS LINE, PILOT GEMINI
1	1	9	108979	CABLE, IGNITOR ASSY
-	1	8	1057842	PILOT ASSY, NAT GAS, GEMINI 6
-	-	7	-	ORIFICE, NATURAL GAS
1	1	6	107919	BRACKET, BURNER MOUNTING GEMINI 6
1	1	5	107920	CLAMP, BURNER GEMINI 6
2	2	4	105781	BURNER, INSHOT, 30,000 BTU VERTICAL BOILER
1	1	3	105940	GASKET, MANIFOLD VERTICAL BOILER
1	1	2	107922	MANIFOLD, ASSY, WELDMENT, GAS BOILER
1	1	1	108840	BACK, BURNER ASSY, WELDMENT
QTY	QTY	ITEM	PART NO.	DESCRIPTION
1096092	1096091			
LP	NAT			

△

ORIFICE CHART NATURAL GAS (REF)				
ALTITUDE	P/N:	QTY	DESCRIPTION	HOLE SIZE
0 - 1999'	110939	2	ORIFICE, #39 DMS, VER GEN	#39(0.100±0.001)
2000 - 2999'	110940	2	ORIFICE, #40 DMS, VER GEN	#40(0.098±0.001)
3000 - 4999'	110941	2	ORIFICE, #41 DMS, VER GEN	#41(0.096±0.001)
5000 - 6999'	110942	2	ORIFICE, #42 DMS, VER GEN	#42(0.094±0.001)
7000 - 8999'	110943	2	ORIFICE, #43 DMS, VER GEN	#43(0.089±0.001)
9000 - 11000'	110944	2	ORIFICE, #44 DMS, VER GEN	#44(0.086±0.001)

ORIFICE CHART LP GAS (REF)				
ALTITUDE	P/N:	QTY	DESCRIPTION	HOLE SIZE
0-1999'	110953	2	ORIFICE, #53 DMS, VER GEN	#53 (0.060±0.001)
2000 - 7999'	110954	2	ORIFICE, #54 DMS, VER GEN	#54 (0.055±0.001)
8000 - 11000'	110955	2	ORIFICE, #55 DMS, VER GEN	#55 (0.052±0.001)

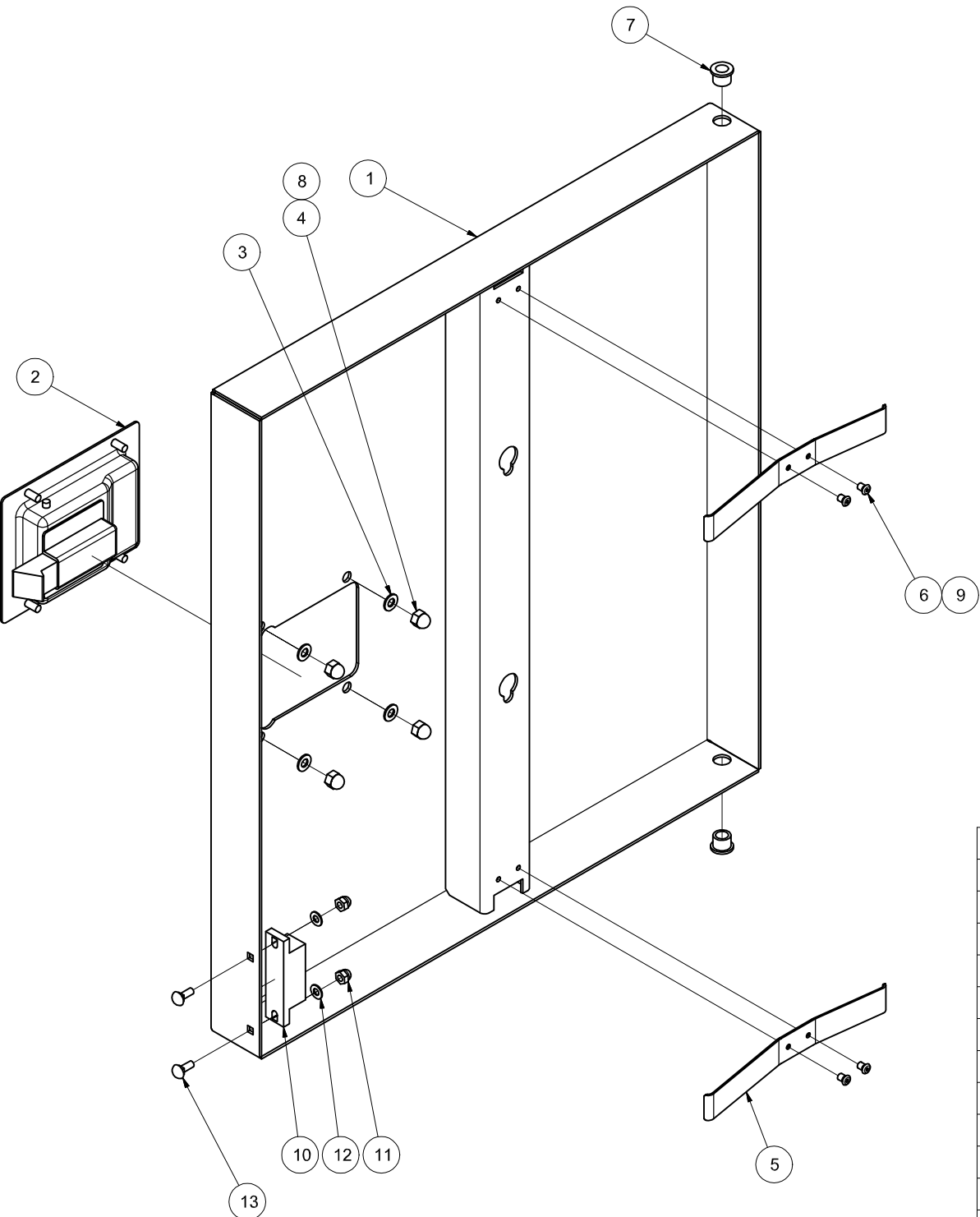


EXPLODED VIEW
EXTERNAL PANELS AND DOORS
(HINGED LEFT SHOWN)

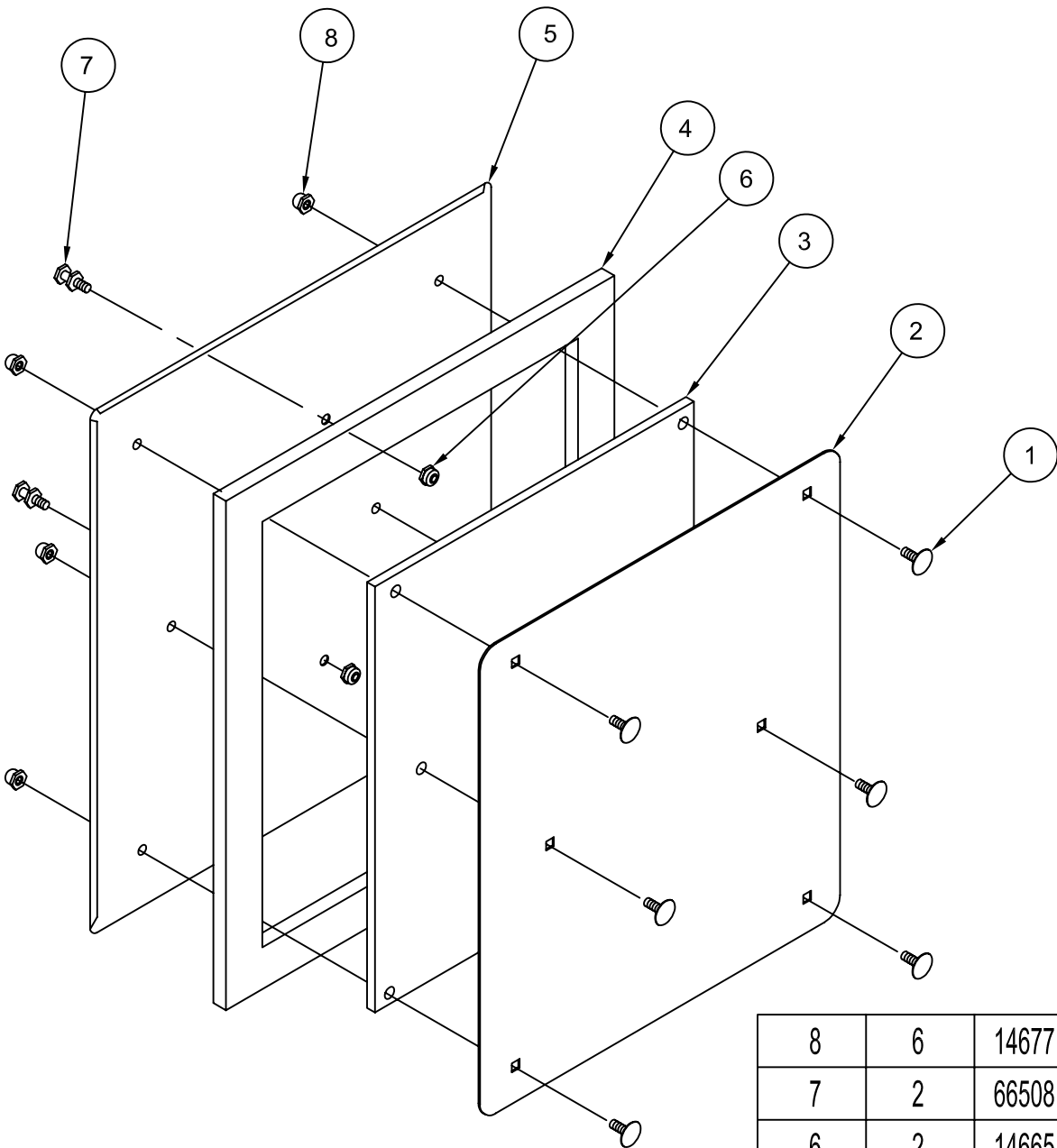
156	1	106043	PANEL, LEFT SIDE, ASSY
-	-	1042061	DOOR, OUTER ASSY, HR, WITH LOGO
155	-	104206	DOOR, OUTER ASSY, HL, WITH LOGO
-	-	1100181	DOOR, OUTER ASSY, HR
154	-	110018	DOOR, OUTER ASSY, HL
153	2	104202	DOOR ASSY, INNER
152	1	106737	DRAIN ASSY
151	1	106907	PANEL ASSY, LOWER FRONT
150	-	-	CAVITY ASSEMBLY

166	4	23116	WASHER, FLAT, 0.281 ID x 0.625 OD
165	4	106123	SCREW, 10-32 x 1/2, TORX/SLOT
164	22	104080	SCREW, #8 x 1/2, PAN HD, PHILLIPS
163	2	107316	SCREW, PAN HEAD #10 x 3/4, THREAD CUTTING
162	1	107272	PANEL, RIGHT SIDE, BOTTOM, ASSY
161	1	107273	PANEL, RIGHT SIDE, TOP, ASSY
160	1	113092	PAN, BASE
159	1	1056701	PANEL, BACK
158	1	106681	HOOD, GAS VENT
157	1	108908	PANEL, TOP, WELDMENT

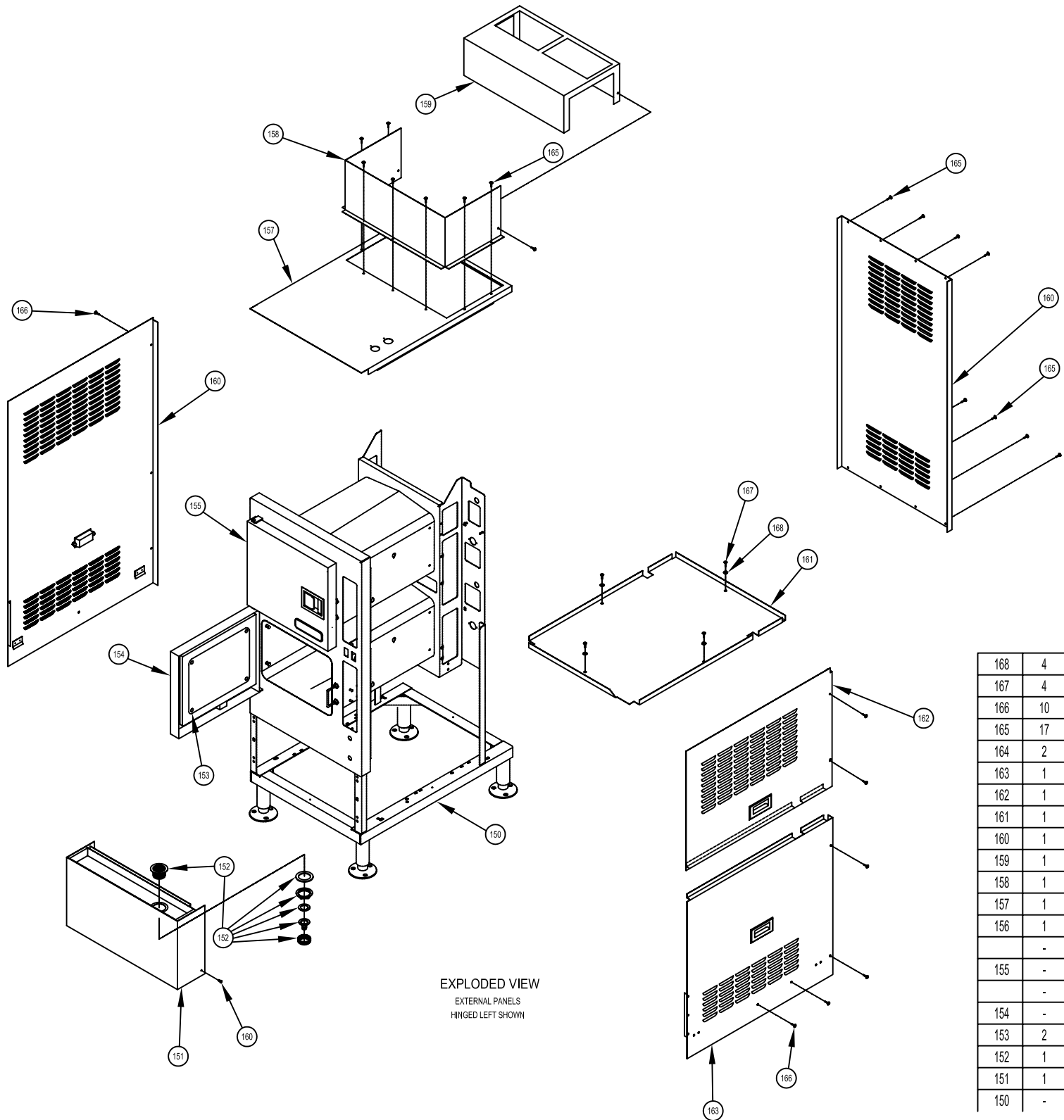
110018



13	-	111592	SCREW, 8-32 X 1/2 CARRIAGE HEAD, SST
12	-	101336	WASHER, FLAT, #8, SST
11	-	109164	NUT, HEX, ACORN, 8-32, SST, W/ THREAD LOC
10	-	108879	MAGNET, DOOR STEAM CUTOFF
9	A/R	00933	SEALANT, RTV, CLEAR
8	A/R	104146	LOCKTITE #222 LOW STRENGTH
7	2	103641	BUSHING, DOOR HINGE
6	4	18357	RIVET, FLUSH BREAK, 0.125 DIA, 0.126/0.187 GRIP, SST
5	2	102228	SPRING, DOOR, 3/5 PAN
4	4	14679	NUT, #10-24 ACORN, SST
3	4	101655	WASHER, FLAT, #10, SST
2	1	103643	LATCH, DOOR-PADDLE TYPE
1	1	104207	OUTER DOOR WELDMENT, HL
ITEM	QTY	PART NO.	DESCRIPTION



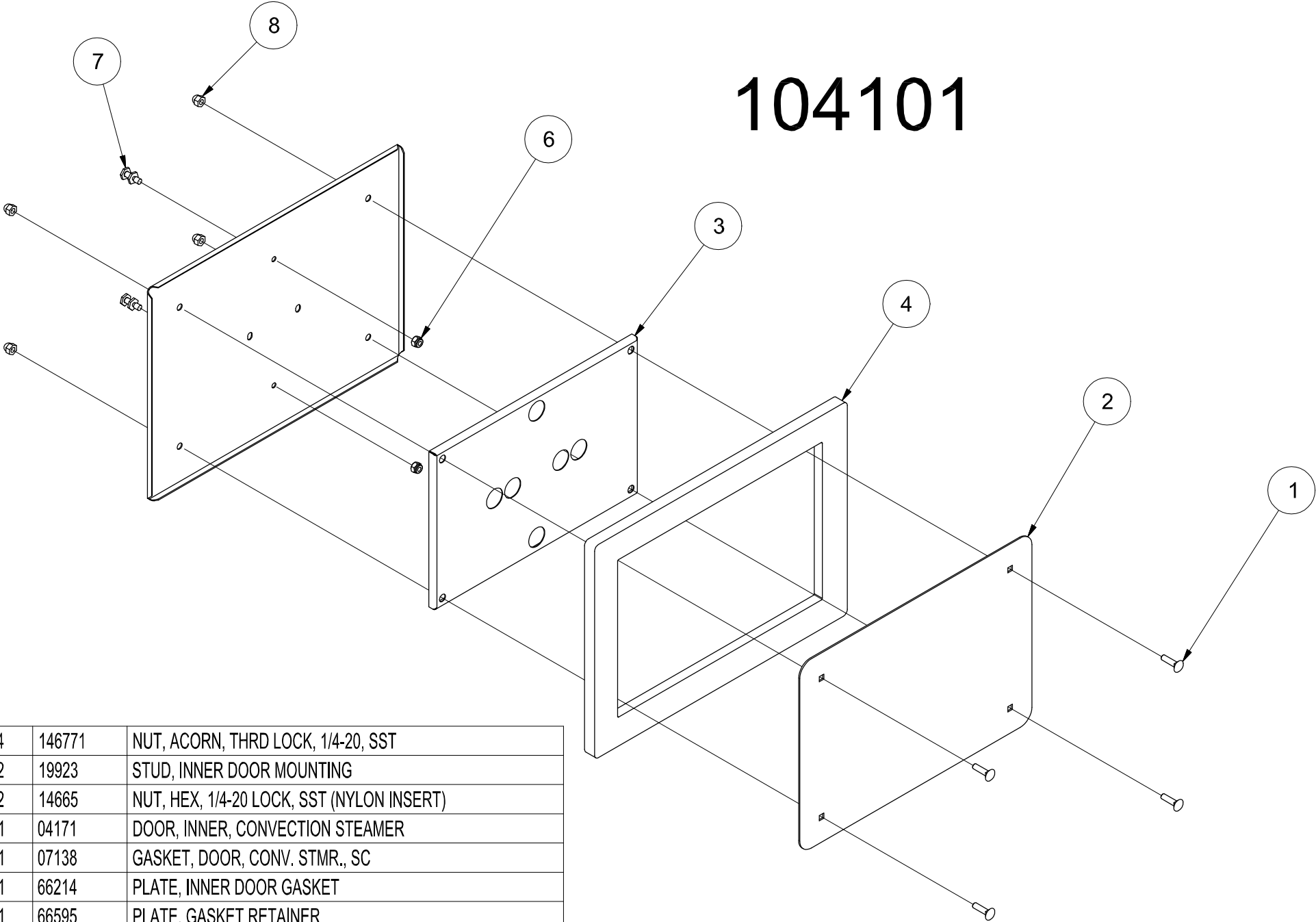
8	6	146771	NUT, ACORN, THRD LOCK, 1/4-20, SST
7	2	66508	STUD, DOOR MOUNTING, INNER
6	2	14665	NUT, HEX LOCK, 1/4-20 SST
5	1	104023	DOOR, INNER, S/C 5.1
4	1	104026	GASKET, DOOR S/C 5.1
3	1	104022	PLATE, INNER GASKET RETAINER, S/C 5.1
2	1	104021	PLATE, GASKET RETAINER, S/C 5.1
1	6	104719	BOLT, CARRIAGE 1/4-20 X 1.000 LG



EXPLODED VIEW
EXTERNAL PANELS
HINGED LEFT SHOWN

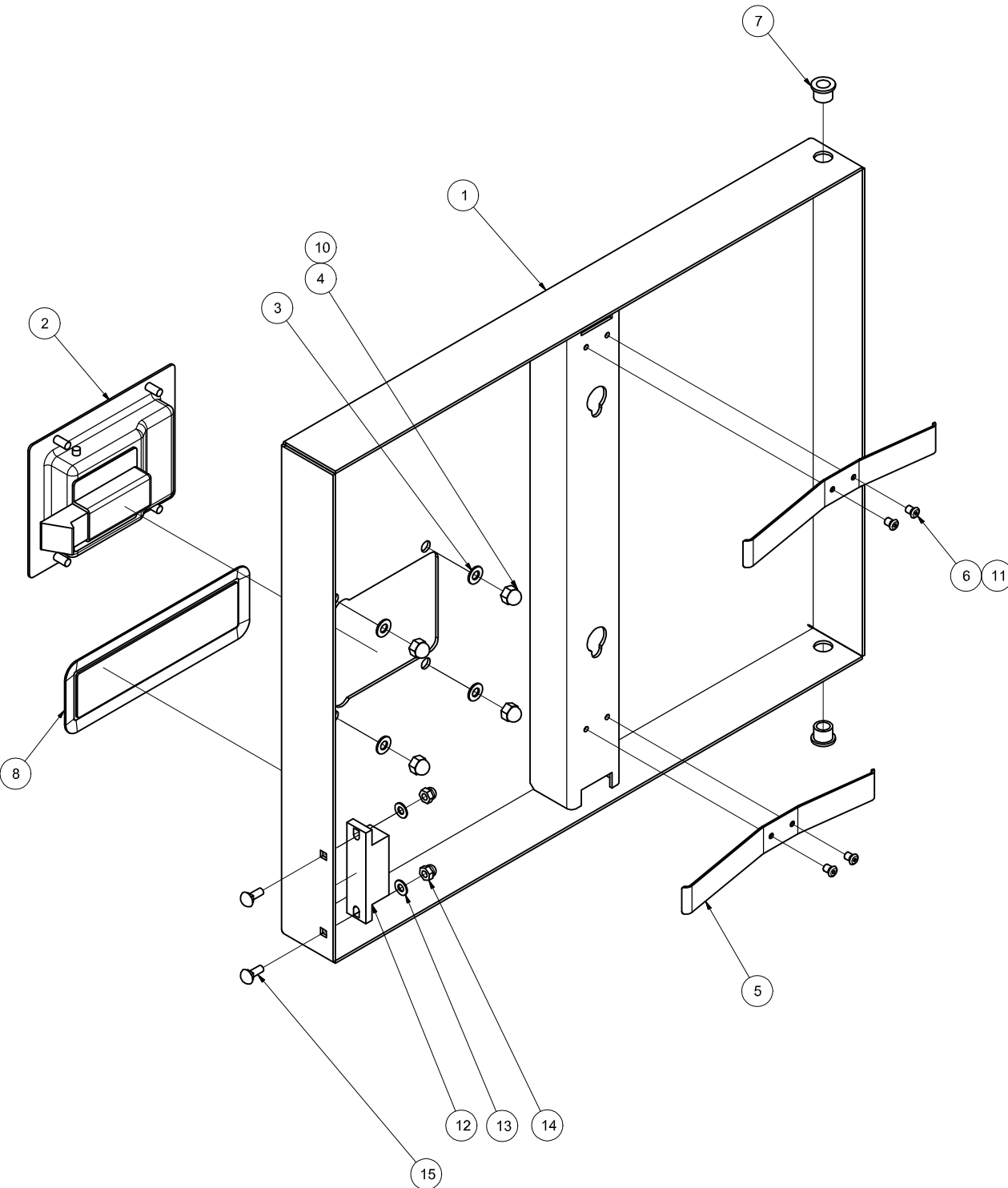
168	4	23116	WASHER, FLAT, 0.281 ID x 0.625 OD
167	4	106123	SCREW, 10-32 x 1/2, TORX/SLOT
166	10	19267	SCREW, #8 x 3/4, PAN HD, PHILLIPS
165	17	104080	SCREW, #8 x 1/2, PAN HD, PHILLIPS
164	2	107316	SCREW, PAN HEAD #10 x 3/4, THREAD CUTTING
163	1	107272	PANEL, RIGHT SIDE, BOTTOM, ASSY
162	1	1072731	PANEL, RIGHT SIDE, TOP, ASSY
161	1	113092	PAN, BASE
160	1	1056702	PANEL, BACK
159	1	111236	COVER, BOILER
158	1	111235	HOOD, GAS VENT
157	1	1089081	PANEL, TOP, WELDMENT
156	1	1060431	PANEL, LEFT SIDE, ASSY
-	-	1106402	DOOR, OUTER ASSY, HR, WITH LOGO
155	-	110640	DOOR, OUTER ASSY, HL, WITH LOGO
-	-	1106404	DOOR, OUTER ASSY, HR
154	-	1106404	DOOR, OUTER ASSY, HL
153	2	104101	DOOR ASSY, INNER
152	1	106737	DRAIN ASSY
151	1	106907	PANEL ASSY, LOWER FRONT
150	-	-	CAVITY ASSEMBLY

104101

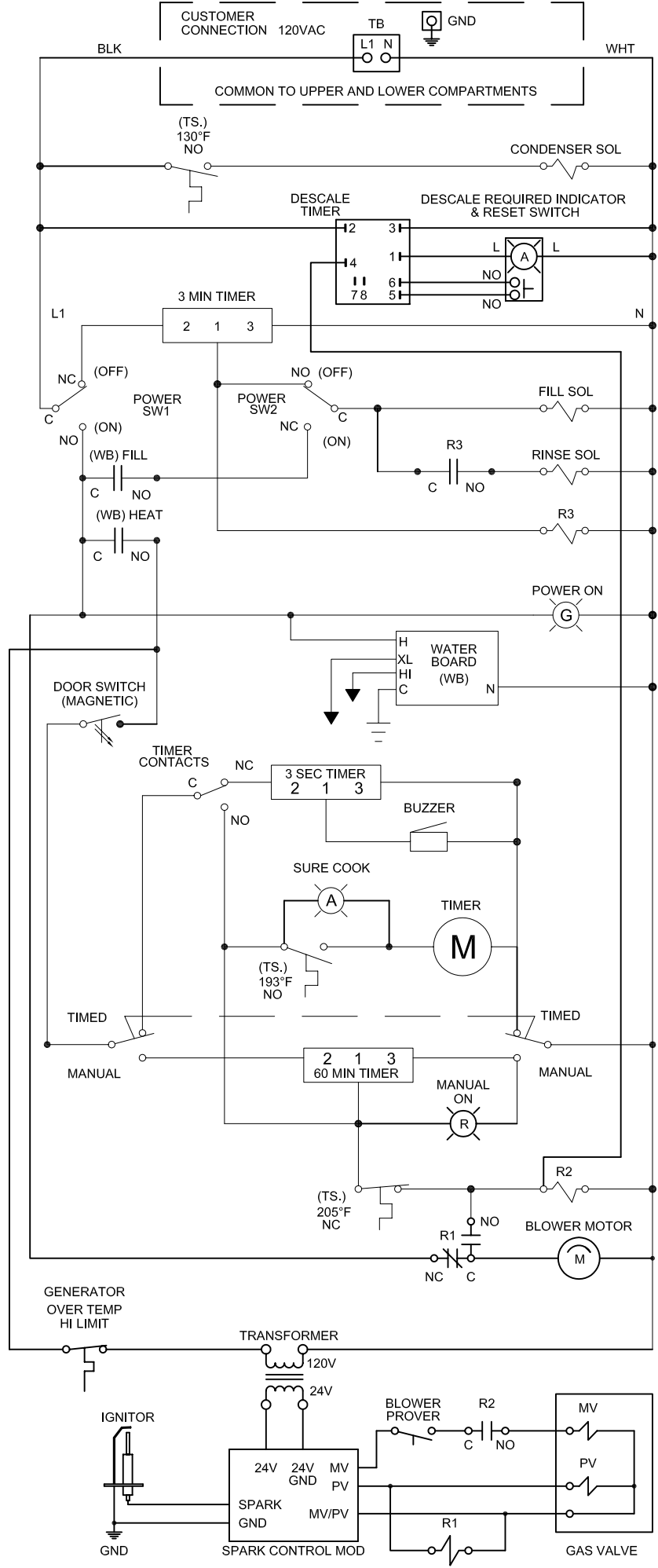


8	4	146771	NUT, ACORN, THRD LOCK, 1/4-20, SST
7	2	19923	STUD, INNER DOOR MOUNTING
6	2	14665	NUT, HEX, 1/4-20 LOCK, SST (NYLON INSERT)
5	1	04171	DOOR, INNER, CONVECTION STEAMER
4	1	07138	GASKET, DOOR, CONV. STMR., SC
3	1	66214	PLATE, INNER DOOR GASKET
2	1	66595	PLATE, GASKET RETAINER
1	4	104719	SCREW, CARRIAGE, 1/4-20X1, SST
ITEM	QTY	PART NO.	DESCRIPTION

110640



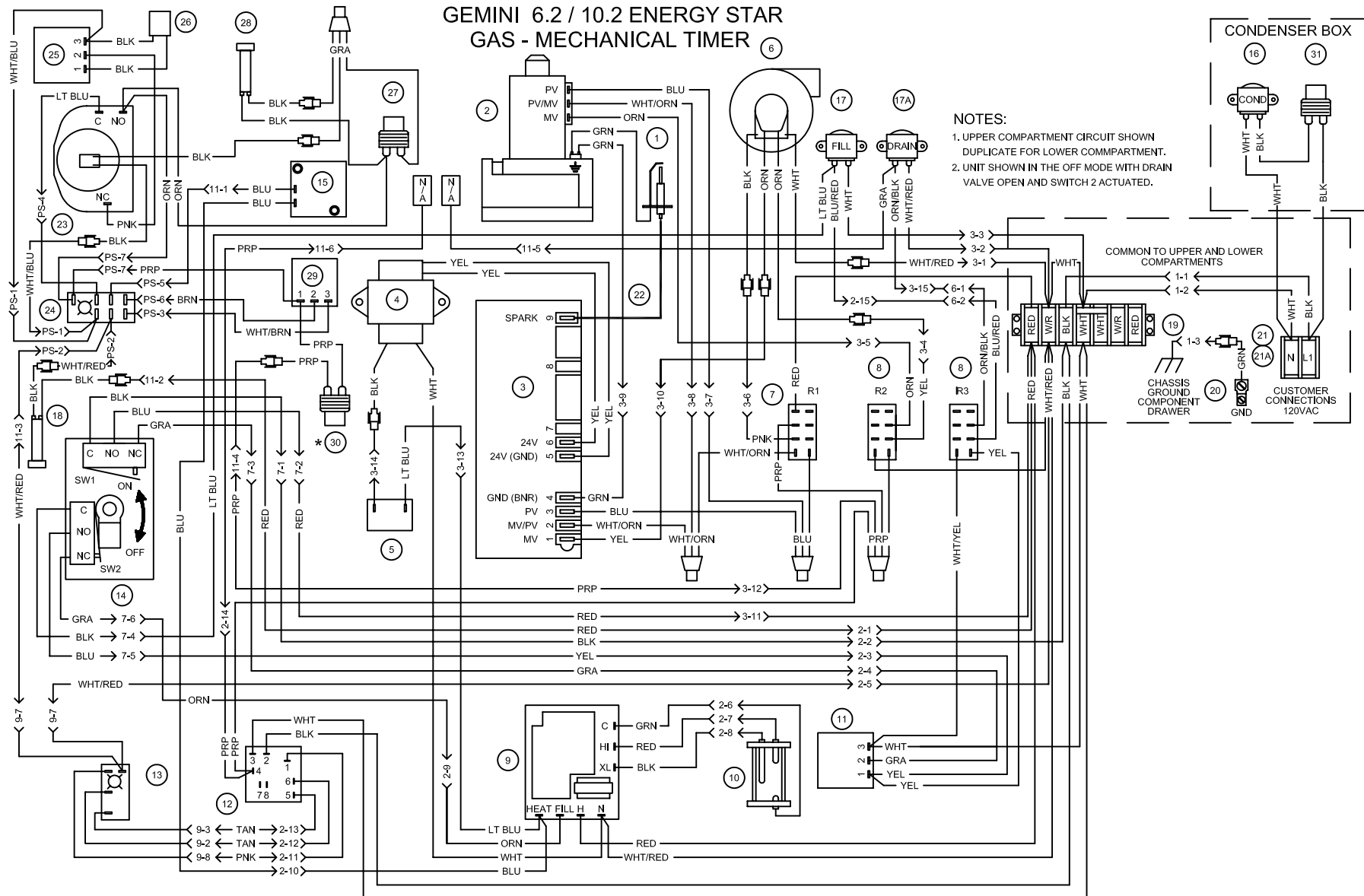
15	-	111592	SCREW, 8-32 X 1/2 CARRIAGE HEAD, SST
14	-	109164	NUT, HEX, ACORN, 8-32, SST, W/ THREAD LOC
13	-	101336	WASHER, FLAT, #8, SST
12	-	108879	MAGNET, DOOR STEAM CUTOFF
11	A/R	00933	SEALANT, RTV, CLEAR
10	A/R	104146	LOCKTITE #222 LOW STRENGTH
9			
8	1	105901	NAMEPLATE CLEVELAND LOGO
7	2	103641	BUSHING, DOOR HINGE
6	4	18357	RIVET, FLUSH BREAK, 0.125 DIA, 0.126/0.187 GRIP, SST
5	2	102228	SPRING, DOOR, 3/5 PAN
4	4	14679	NUT, #10-24 ACORN, SST
3	4	101655	WASHER, FLAT, #10, SST
2	1	103643	LATCH, DOOR-PADDLE TYPE
1	1	110485	OUTER DOOR, STEAMCHEF 3 WELDMENT - HINGED LEFT
ITEM	QTY	PART NO.	DESCRIPTION



SINGLE COMPARTMENT SHOWN
 DUPLICATE FOR SECOND COMPARTMENT

L300733 A

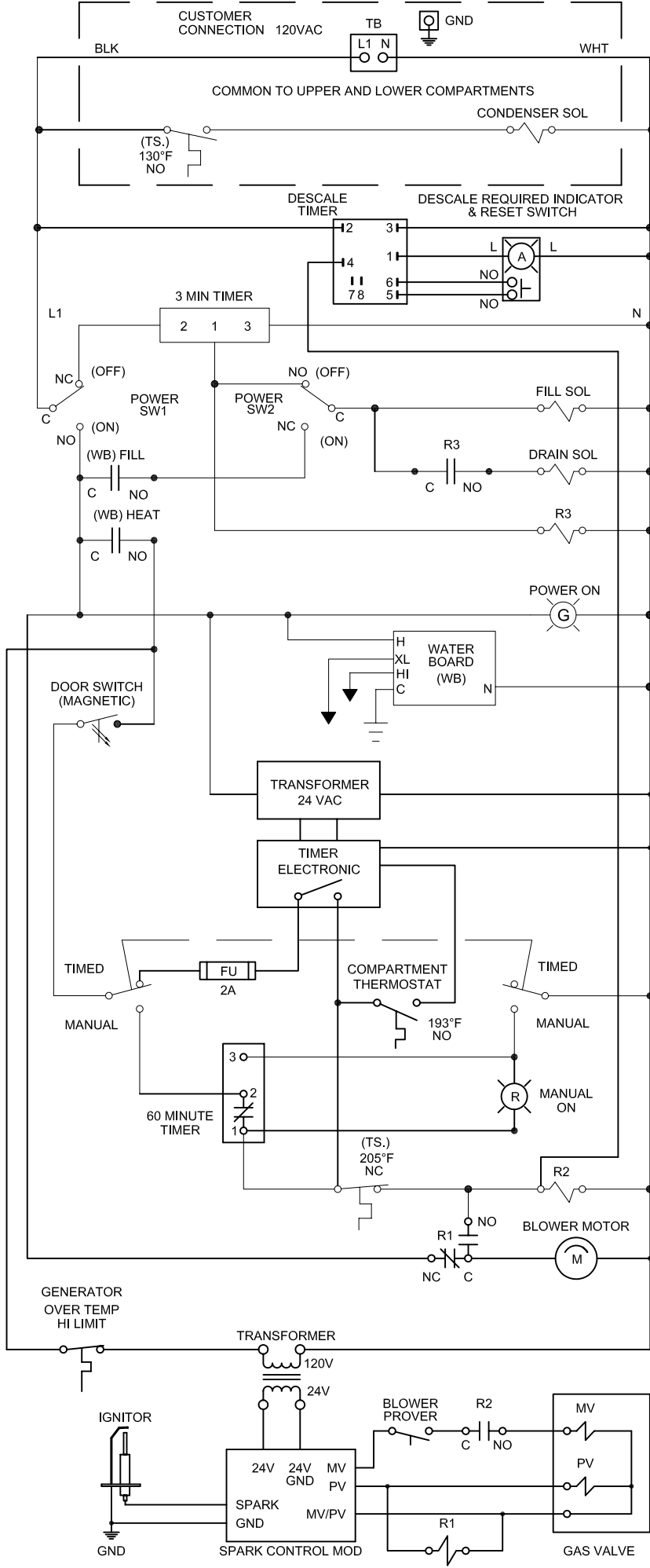
GEMINI 6.2 / 10.2 ENERGY STAR GAS - MECHANICAL TIMER



NOTES:
 1. UPPER COMPARTMENT CIRCUIT SHOWN
 DUPLICATE FOR LOWER COMPARTMENT.
 2. UNIT SHOWN IN THE OFF MODE WITH DRAIN
 VALVE OPEN AND SWITCH 2 ACTUATED.

COMPONENT PARTS LIST

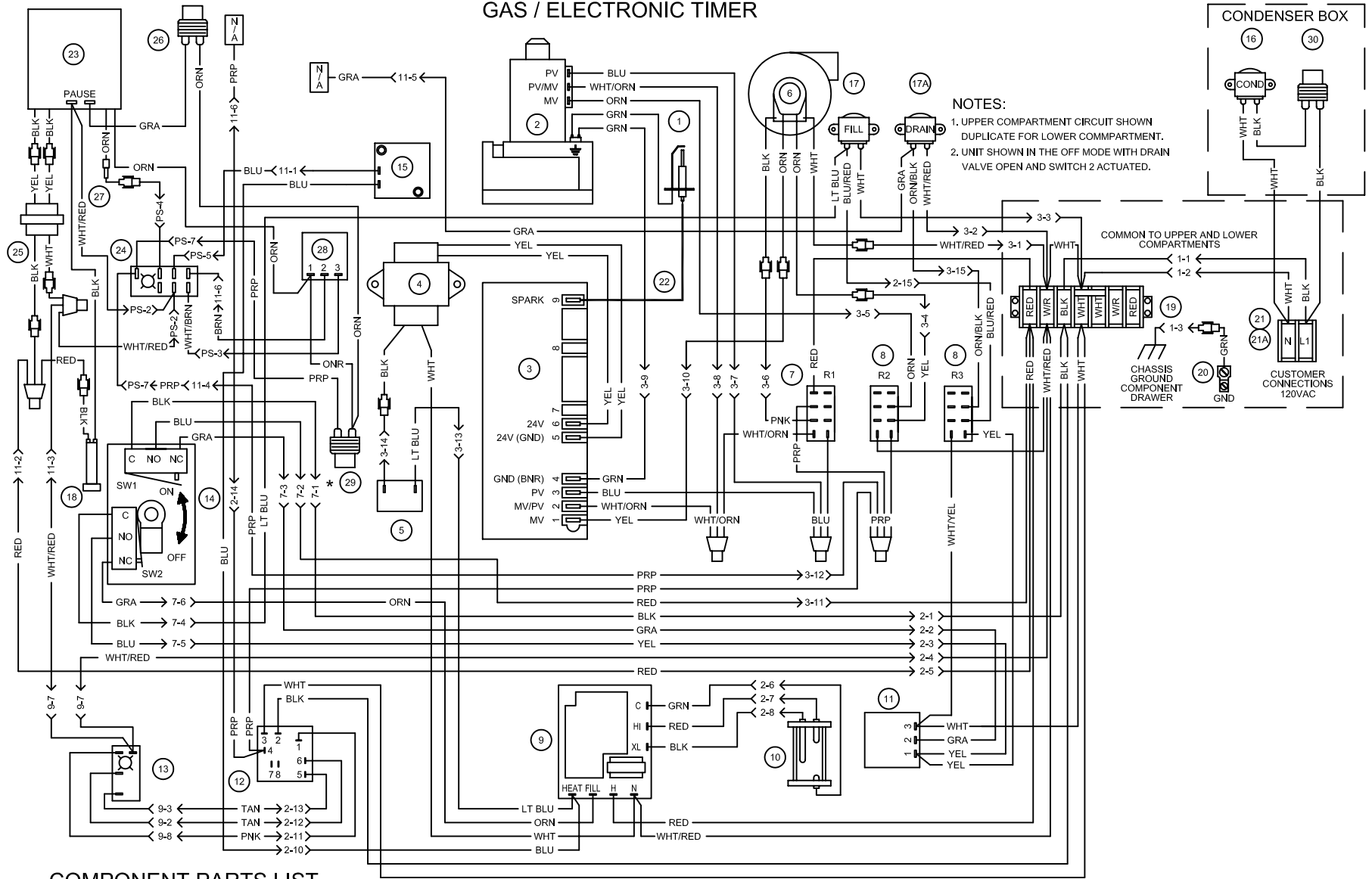
ITEM	P/N	DESCRIPTION
1	1057842	IGNITOR, NATURAL GAS
	1057841	IGNITOR, PROPANE GAS
2	109877	GAS VALVE, NATURAL
	1098771	GAS VALVE, PROPANE
3	105693	IGNITION CONTROL MODULE
4	20528	SPARK IGNITION TRANSFORMER
5	108995	HI LIMIT CAPILLARY SWITCH
6	110786	BLOWER W/ SENSOR (GEMINI 6)
7	108285	24VAC RELAY
8	105966	120VAC RELAY
9	107241	WATER LEVEL CONTROL BOARD
10	107239	LEVEL CONTROL PROBE
11	20478	3 MINUTE INTERVAL TIMER
12	106911	DESCALE TIMER
13	19994	DESCALE INDICATOR / RESET SWITCH
14	110613	MANUAL DRAIN VALVE WITH SWITCHES
	FK300279	SWITCH ASSEMBLY (REPLACEMENT KIT)
15	108880	STEAM CUTOFF SWITCH - SCS
16	22218	CONDENSER VALVE
17	222231	FILL VALVE
17A	222231	DRAIN WATER VALVE
18	12159	INDICATOR (RED)
19	108981	TERMINAL BLOCK ASSEMBLY
20	20304	GROUND LUG
21	20301	TERMINAL BLOCK SECTION (QTY. 2)
21A	20302	TERMINAL BLOCK END
22	108979	IGNITOR CABLE ASSEMBLY
23	110198	ELECTRO-MECHANICAL TIMER
24	300278	TIMED / MANUAL SWITCH W / INDICATOR
25	20477	3 SECOND TIMER
26	41350	BUZZER
27	19972	COMP. THERMOSTAT 193° F
28	109602	INDICATOR (AMBER)
29	300150	60 MINUTE TIMER
30	109617	THERMOSTAT 205° F
*	300156	THERMOSTAT 198° F (HI - ALTITUDE)
31	106288	THERMOSTAT 130° F



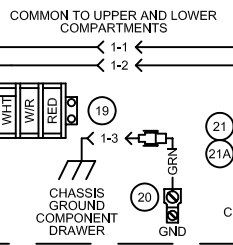
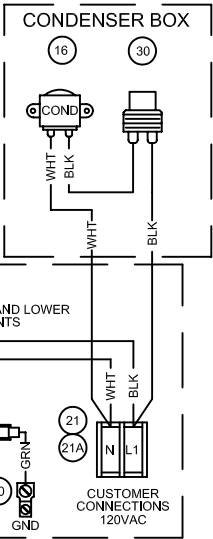
SINGLE COMPARTMENT SHOWN
DUPLICATE FOR SECOND COMPARTMENT

L300734 B

GEMINI 6.2 / 10.2 ENERGY STAR GAS / ELECTRONIC TIMER



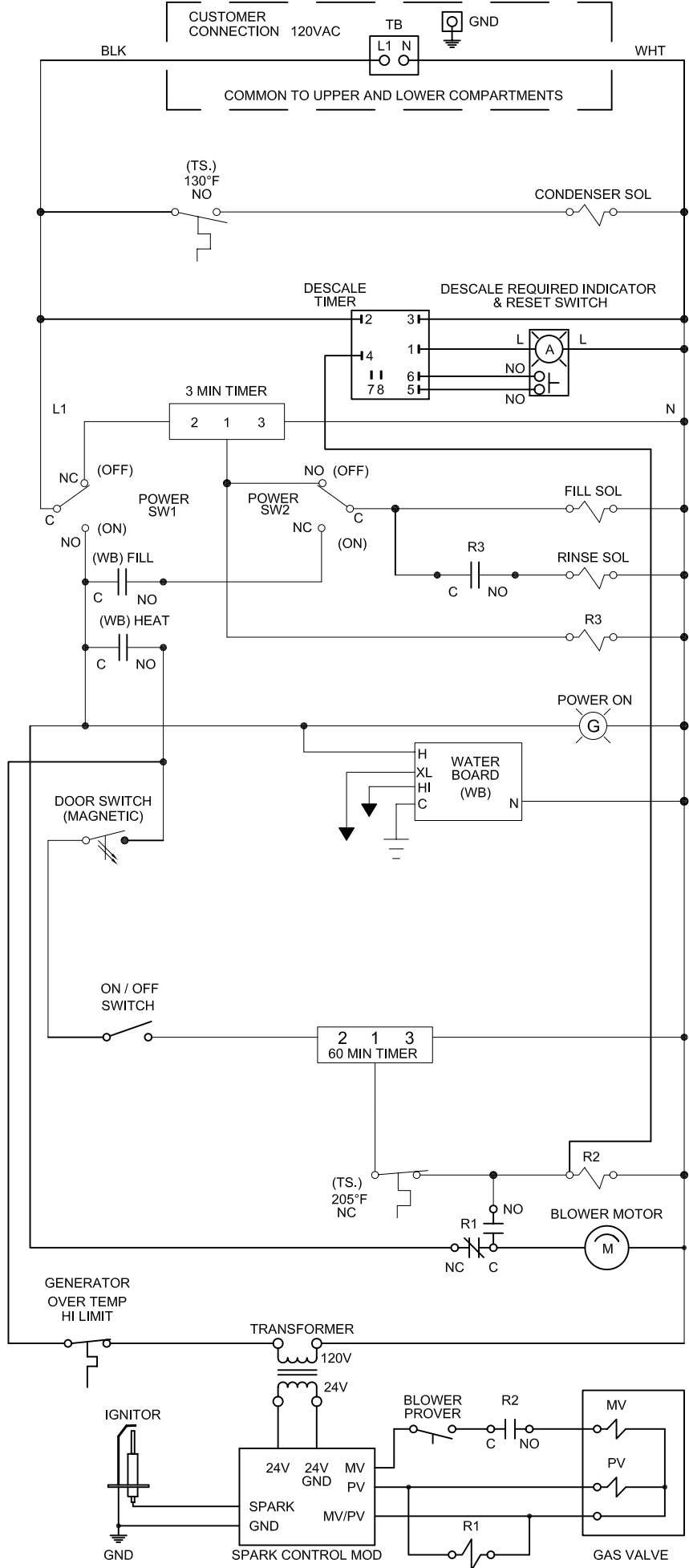
NOTES:
 1. UPPER COMPARTMENT CIRCUIT SHOWN
 DUPLICATE FOR LOWER COMPARTMENT.
 2. UNIT SHOWN IN THE OFF MODE WITH DRAIN
 VALVE OPEN AND SWITCH 2 ACTUATED.



P300734 A

COMPONENT PARTS LIST

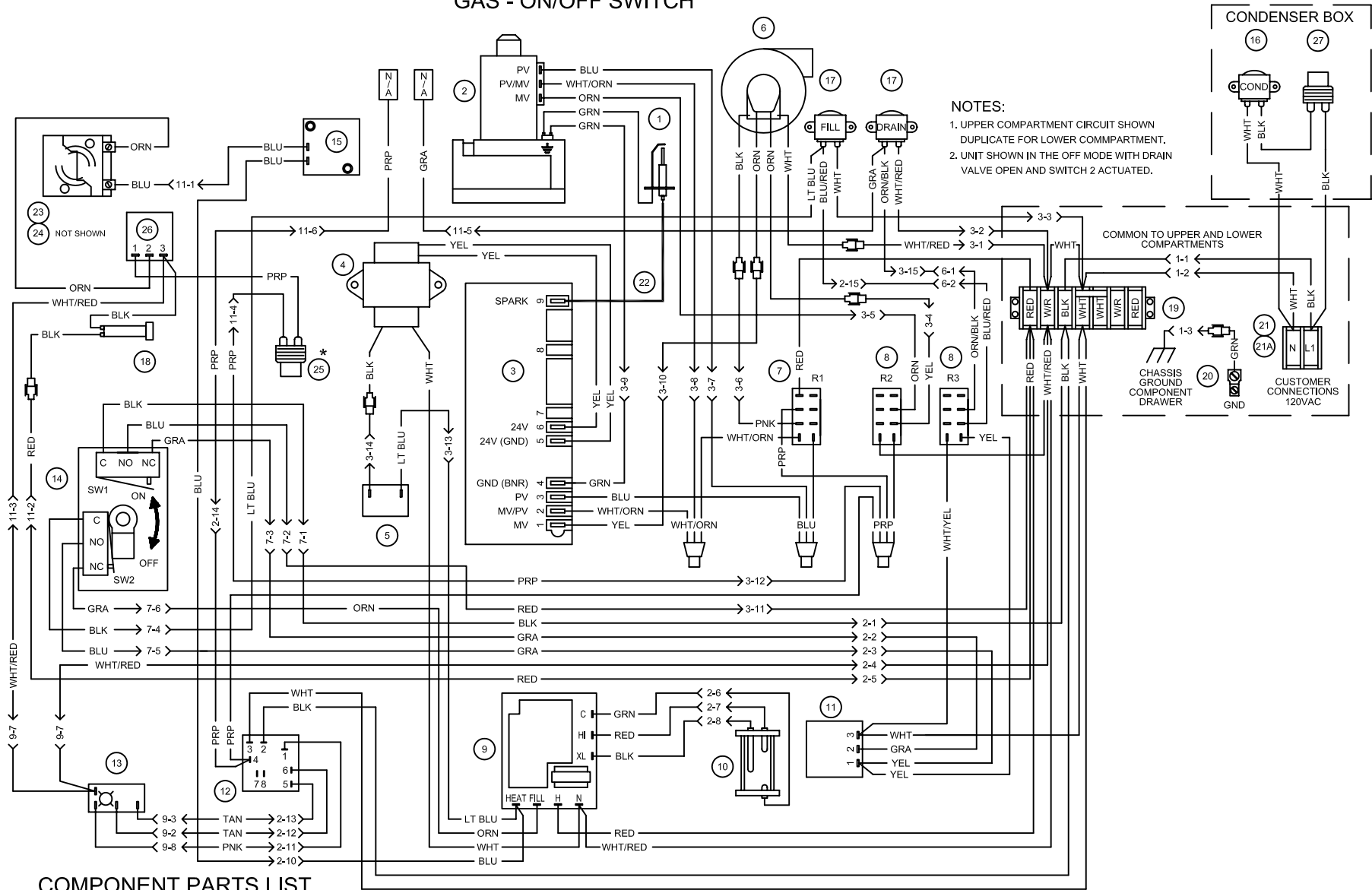
ITEM	P/N	DESCRIPTION
1	1057842	IGNITOR, NATURAL GAS
	1057841	IGNITOR, PROPANE GAS
2	109877	GAS VALVE, NATURAL
	1098771	GAS VALVE, PROPANE
3	105693	IGNITION CONTROL MODULE
4	20528	SPARK IGNITION TRANSFORMER
5	108995	HI LIMIT CAPILLARY SWITCH
6	110786	BLOWER W/ SENSOR (GEMINI 6)
7	108285	24VAC RELAY
8	105966	120VAC RELAY
9	107241	WATER LEVEL CONTROL BOARD
10	107239	LEVEL CONTROL PROBE
11	20478	3 MINUTE INTERVAL TIMER
12	106911	DESCALE TIMER
13	19994	DESCALE INDICATOR / RESET SWITCH
14	110613	MANUAL DRAIN VALVE WITH SWITCHES
	FK300279	SWITCH ASSEMBLY (REPLACEMENT KIT)
15	108880	STEAM CUTOFF SWITCH - SCS
16	22218	CONDENSER VALVE
17	222231	FILL VALVE
17A	222231	DRAIN WATER VALVE
18	12159	INDICATOR (RED)
19	108981	TERMINAL BLOCK ASSEMBLY
20	20304	GROUND LUG
21	20301	TERMINAL BLOCK SECTION (QTY. 2)
21A	20302	TERMINAL BLOCK END
22	108979	IGNITOR CABLE ASSEMBLY
23	104389	ELECTRONIC TIMER
24	300278	TIMED / MANUAL SWITCH W / INDICATOR
25	104390	TRANSFORMER
26	19972	COMP. THERMOSTAT 193° F
27	106909	2AMP, 250V FUSE
28	300150	60 MINUTE TIMER
29	109617	THERMOSTAT 205° F
*	300156	THERMOSTAT 198° F (HI - ALTITUDE)
30	106288	THERMOSTAT 130° F



SINGLE COMPARTMENT SHOWN
 DUPLICATE FOR SECOND COMPARTMENT

L300735 A

GEMINI 6.2 / 10.2 ENERGY STAR GAS - ON/OFF SWITCH



NOTES:
 1. UPPER COMPARTMENT CIRCUIT SHOWN
 DUPLICATE FOR LOWER COMPARTMENT.
 2. UNIT SHOWN IN THE OFF MODE WITH DRAIN
 VALVE OPEN AND SWITCH 2 ACTUATED.

COMPONENT PARTS LIST

ITEM	P/N	DESCRIPTION
1	1057842	IGNITOR, NATURAL GAS
	1057841	IGNITOR, PROPANE GAS
2	109877	GAS VALVE, NATURAL
	1098771	GAS VALVE, PROPANE
3	105693	IGNITION CONTROL MODULE
4	20528	SPARK IGNITION TRANSFORMER
5	108995	HI LIMIT CAPILLARY SWITCH
6	110786	BLOWER W/ SENSOR (GEMINI 6)
7	108285	24VAC RELAY
8	105966	120VAC RELAY
9	107241	WATER LEVEL CONTROL BOARD
10	107239	LEVEL CONTROL PROBE
11	20478	3 MINUTE INTERVAL TIMER
12	106911	DESCALE TIMER
13	19994	DESCALE INDICATOR / RESET SWITCH
14	110613	MANUAL GAS VALVE WITH SWITCHES
	FK300279	SWITCH ASSEMBLY (REPLACEMENT KIT)
15	108880	STEAM CUTOFF SWITCH - SCS
16	22218	CONDENSER VALVE
17	222231	FILL VALVE
17A	222231	DRIAN WATER VALVE
18	12159	INDICATOR (RED)
19	108981	TERMINAL BLOCK ASSEMBLY
20	20304	GROUND LUG
21	20301	TERMINAL BLOCK SECTION (QTY. 2)
21A	20302	TERMINAL BLOCK END
22	108979	IGNITOR CABLE ASSEMBLY
23	102533	CONTACT BLOCKS
24	102534	SELECTOR SWITCH
25	109617	THERMOSTAT 205° F
*	300156	THERMOSTAT 198° F (HI - ALTITUDE)
26	300150	60 MINUTE TIMER
27	106288	THERMOSTAT 130° F