

## Statement of Responsibilities

This document is for use by experienced and trained Qualified Cleveland Range, LLC Authorized Service Representatives who are familiar with both the safety procedures, and equipment they service.

Cleveland Range, LLC assumes no liability for any death, injury, equipment damage, or property damage resulting from use of, improper use of, or failure to use the information contained in this document.

Cleveland Range, LLC has made every effort to provide accurate information in this document, but cannot guarantee that this document does not contain unintentional errors and omissions.

The information in this document may be subject to technical and technological changes, revisions, or updates.

Cleveland Range, LLC assumes no liability or responsibility regarding errata, changes, revisions, or updates.

Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to follow industry standard safety procedures, including, but not limited to, OSHA regulations, and disconnect / lock out / tag out procedures for all utilities including steam, and disconnect / lock out / tag out procedures for gas, electric, and steam powered equipment and / or appliances

All utilities (gas, electric, water and steam) should be turned OFF to the equipment and locked out of operation according to OSHA approved practices during any servicing of Cleveland Range equipment

Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to maintain up-to-date knowledge, skills, materials and equipment.



## **SteamCraft® Gemini™ 6** SHORT SERIES PRESSURELESS STEAMER, TWIN, INDEPENDENT GAS-FIRED GENERATORS

**MODEL:**  24CGA6.2S

### **Cleveland Standard Features**

- 54.5" (1385mm) height to top of upper compartment (lower height makes maintenance easier by lowering the descaling ports)
- Each compartment has cooking capacity for 3 each 12" x 20" x 2½" Steam Table Pans
- Doors hinged left and the controls on the right
- High efficiency independent Power Burner Steam Generators 50,000 BTU's for each compartment
- Each steam-cooking compartment is independently operated and controlled by a separate stainless steel steam generator, gas valve, Power On/Off Control Levers and a Exclusive, Remote Probe-Type Water Level Control
- Easy Access Cleaning Port: Each generator has a delimiting port located on the outside, top of the unit
- Generator Cleaning Light for each compartment warns the operator to delime generator
- Generator Steam Standby Mode: Holds generator at a steaming temperature, allows unit to start cooking quickly
- Each compartment has one, 60-Minute Electro-Mechanical Timer with "SureCook" load compensating feature. Manual Bypass Switch for constant steaming.
- Durable 14 Gauge, 304 Stainless Steel construction for compartment door, cooking cavity and steam generator
- **Exclusive Gemini Drain/Power Control System:**  
Manual 1/2 inch "Ball Valve" type drain that controls main power On/Off and automatically fills generator (located on the control panel)
- Exclusive Brass Steam Jets distribute steam even throughout cooking compartment
- Easy, Front -Access Generator Controls comes with a pullout drawer for simple servicing of unit
- 6" Stainless Steel Adjustable Legs with Flanged Feet
- Approvals: CSA (AGA, CSA) and U.L./NSF#4
- Compartment Steam Shut-Off Switch when compartment door is opened

ITEM NUMBER \_\_\_\_\_

JOB NAME / NUMBER \_\_\_\_\_



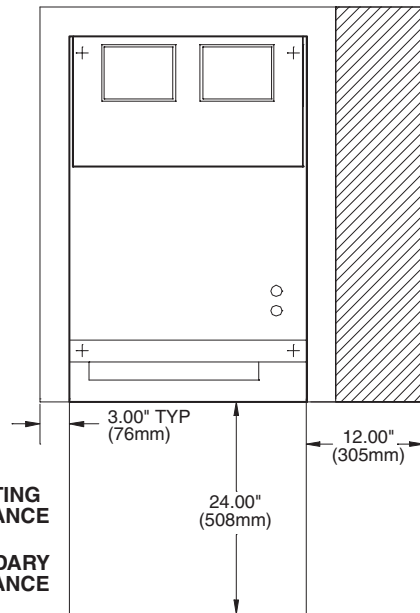
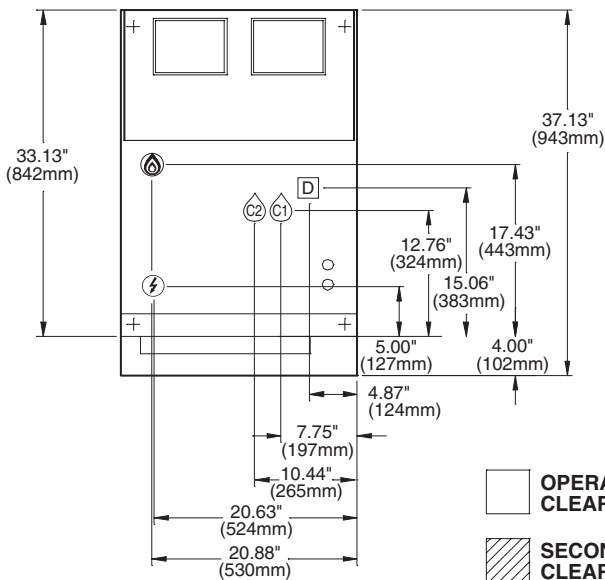
### **Short Form Specifications**

*Cleveland SteamCraft® Gemini™ Model 24CGA6.2S, 54.5" high, Two compartment steamer. Independent steam generators, 50,000 BTU's input per compartment. "SureCook" electro mechanical timer with load compensating feature. Gas valve and water level control system. Exclusive remote probe-type water level controls. Exclusive Brass "Steam Jet" distribution system. Two-piece free-floating compartment door. 14 gauge stainless steel cavity and door. Pullout service drawer for controls and Gemini Drain/Power Control System.*

- Dissolve® Descale Solution, 6 one gallon container w/ quart markings (106174)
- Water Filters

### **Options & Accessories**

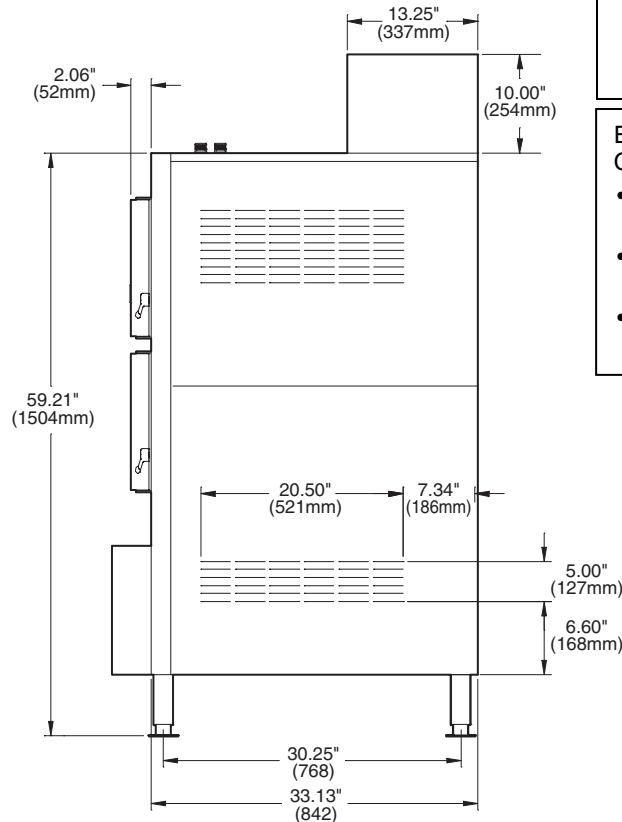
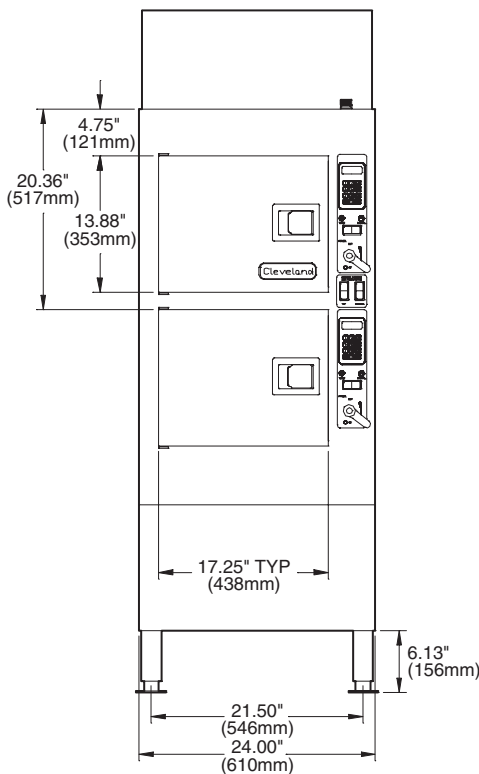
- Electronic Timer with Compensating Feature (ETC)
- On/Off Steam Switch Controls, no timer (MC)
- Propane Gas (PG)



**OPERATING CLEARANCE**  
**SECONDARY CLEARANCE**

### WATER QUALITY REQUIREMENTS

The quality of water varies greatly from region to region. Steam equipment generators must be drained daily and chemically descaled periodically to ensure proper operation. To minimize service problems caused by the accumulation of minerals and chemicals in water review the following quality guidelines with a local water treatment specialist. Inlet water that is beyond these specified guidelines should be treated to achieve these acceptable limits. Total Dissolved Solids less than 60 ppm, Alkalinity less than 20 ppm, Silica less than 13 ppm, pH factor greater than 7.5, Chlorine less than 30 ppm.



Each Compartment has Capacity for:

- Three 2½" x 12" x 20" Steam Table Pans
- Six 1" x 12" x 20" Steam Table Pans
- Two 4" x 12" x 20" Steam Table Pans

Ⓐ GAS			⚡ ELECTRIC	Ⓒ COLD WATER	CLEARANCE	Ⓓ DRAINAGE
1¼" IPS line size, ¾" connection			120V-1Phase, 60 Hz.	35 psi minimum	Right - 3", Left - 3", Rear - 3"	1½" dia.
NATURAL	PROPANE	BTU	2 Blowers & Controls	60 psi maximum	(12" on control side if adjoining wall or equipment is over 30" high for service access)	Do not connect other units to this drain
Piping ¾" N.P.T.	Piping ¾" N.P.T.	50,000 each	150 watts each	C2 ¾" dia. NPT for Generator	<b>Contact factory for variances to clearances.</b>	Drain must be vented
Supply pressure	Supply pressure	Generator,		C1 ¾" dia. NPT for Condenser		Do not use PVC pipe
4.50" W.C. Min.	11.00" W.C. Min.	100,000 total				
14.00" W.C. Max.	14.00" W.C. Max.					
Manufacturer must be notified if unit will be used above 2,000 feet						

#### NOTES:

Cleveland Range reserves right of design improvement or modification, as warranted. Many regional, state and local codes exist and it is the responsibility of the owner and installer to comply with the codes. Cleveland Range equipment is built to comply with applicable standards for manufacturers. Included among those approval agencies are UL/NSF#4 and CSA (AGA, CGA).



**SteamCraft® Gemini™ 10**  
 TWO COMPARTMENT FLOOR MODEL DESIGN  
 PRESSURELESS CONVECTION STEAMER  
 TWIN, INDEPENDENT GAS-FIRED GENERATORS

**Cleveland Standard Features**

- Cooking Capacity for up to ten 12" x 20" x 2 1/2" deep Cafeteria Pans, five each compartment.
- Totally independent cooking compartments, each has its own generator, gas valve and water level controls - no shared components
- Exclusive High Efficiency Gas Power Burner (forced air) Generator: Produces more steam for faster cooking while lowering operating costs (72M BTU's per compartment)
- Easy Access Cleaning Port: Each generator has a delimiting port located on the outside, top of the unit
- Generator Cleaning Light for each compartment warns the operator to delime generator
- Instant Steam Standby Mode: Holds generator at a steaming temperature, allows unit to start cooking instantly
- Each compartment has one, 60-Minute Electro-Mechanical Timer with load compensating feature. Manual Bypass Switch for constant steaming.
- Durable 14 Gauge, 304 Stainless Steel construction for compartment door, cooking cavity and steam generator
- Exclusive Two-Piece Compartment door: Slammable, self-adjusting door provides and airtight seal, reversable door gasket for extended life
- Exclusive Gemini Drain/Power Control System: Simple, reliable 1/2" ball valve style drain automatically turns power ON/OFF
- Exclusive Brass Steam Jets distribute even-high velocity steam throughout cooking compartment for faster cooking times
- Easy, Front -Access Generator Controls comes with a pullout drawer for simple servicing of unit
- 6" Stainless Steel Adjustable Legs with Flanged Feet
- Approvals: CSA (AGA, CSA) and U.L./NSF#4
- Compartment Steam Shut-Off Switch (SCS)

**Options & Accessories**

- Electronic Timer with Compensating Feature (ETC)
- On/Off Steam Switch Controls, no timer (MC)

**MODEL:**  24-CGA-10.2

ITEM NUMBER \_\_\_\_\_

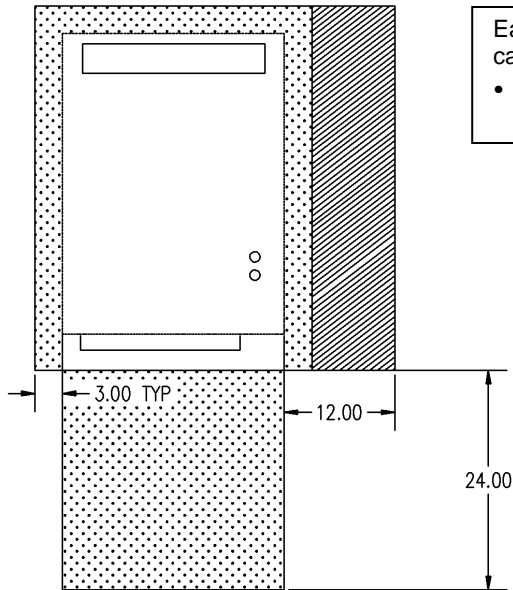
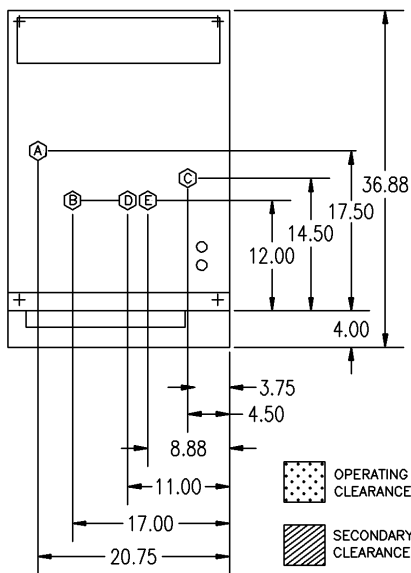
JOB NAME / NUMBER \_\_\_\_\_



**Short Form Specifications**

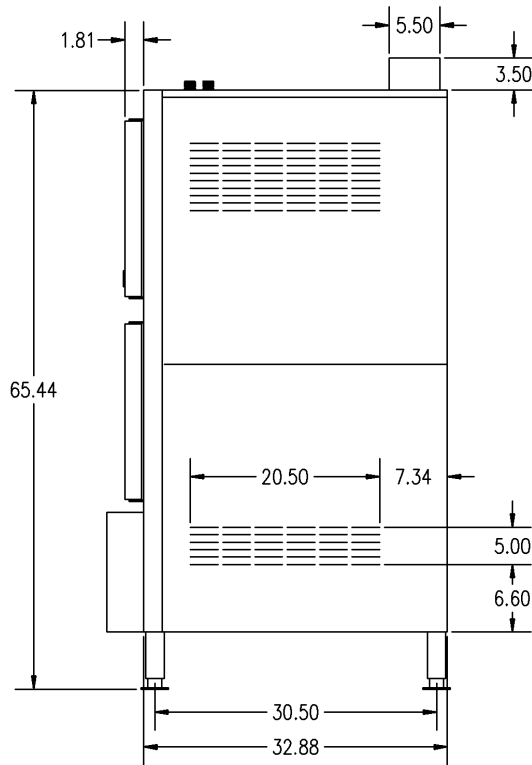
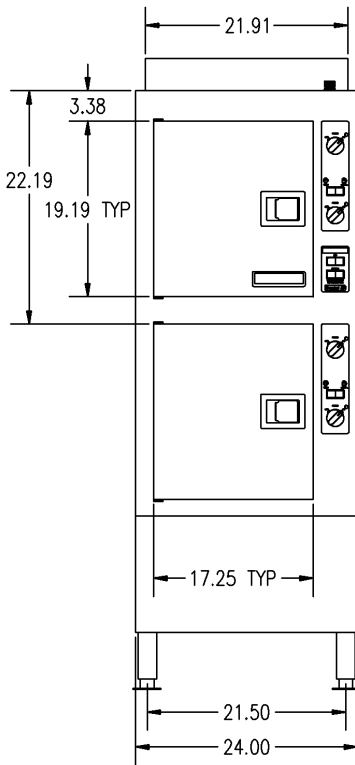
*Shall be Two Compartments, Cleveland Convection Steamer series SteamCraft® Gemini™ 10, Model 24-CGA-10.2, Twin Gas Atmospheric Steam Generator, 72M BTU's input per compartment. Independent steam generator, gas valve and water level control system. Automatic Generator Blowdown. Steam Generator with Automatic Water Fill on start up. Exclusive remote probe-type water level controls. Exclusive Brass "Steam Jet" distribution system. Two-piece free-floating compartment door. Type 430 Stainless Steel exterior and cooking compartments. Pullout service drawer for controls and Gemini Drain/Power Control System. Exclusive Cold Water Condenser design. Choice of Compartment Controls. Manual*

- Propane Gas (PG)
- Dissolve® Descale Solution, 6 one gallon container w/quarter markings (106174)
- Water Filters



Each Compartment has capacity for:

- Five, 12" x 20" x 2½" deep Cafeteria Pans.



**WATER QUALITY REQUIREMENTS**

The quality of water varies greatly from region to region. Steam equipment generators must be drained daily and chemically descaled periodically to ensure proper operation. To minimize service problems caused by the accumulation of minerals and chemicals in water review the following quality guidelines with a local water treatment specialist. Inlet water that is beyond these specified guidelines should be treated to achieve these acceptable limits. Total Dissolved Solids less than 60 ppm, Alkalinity less than 20 ppm, Silica less than 13 ppm, pH factor greater than 7.5, Chlorine less than 30 ppm.

A GAS			B ELECTRIC	C COLD WATER	CLEARANCE	D DRAINAGE
1¼" IPS line size, ¾" (13mm) connection			120V-1Phase, 60 Hz.	35 psi minimum	Right - 3", Left - 3", Rear -3" (12" on control side if adjoining wall or equipment is over 30" high for service access)	1½" dia. Do not connect other units to this drain
NATURAL	PROPANE	BTU	2 Blowers & Controls	60 psi maximum		
Piping ¾" N.P.T.	Piping ¾" N.P.T.	72,000 each	150 watts each	One (E) 1/4" dia. NPT for Generator	Contact factory for variances to clearances.	Drain must be vented Do not use PVC pipe
Supply pressure 4.50" W.C. Min.	Supply pressure 11.00" W.C. Min.	Generator, 144,000 total		One (D) 1/4" dia NPT for Condenser		
14.00" W.C. Max.	14.00" W.C. Max.					
Manufacturer must be notified if unit will be used above 2,000 feet						

**NOTES:**  
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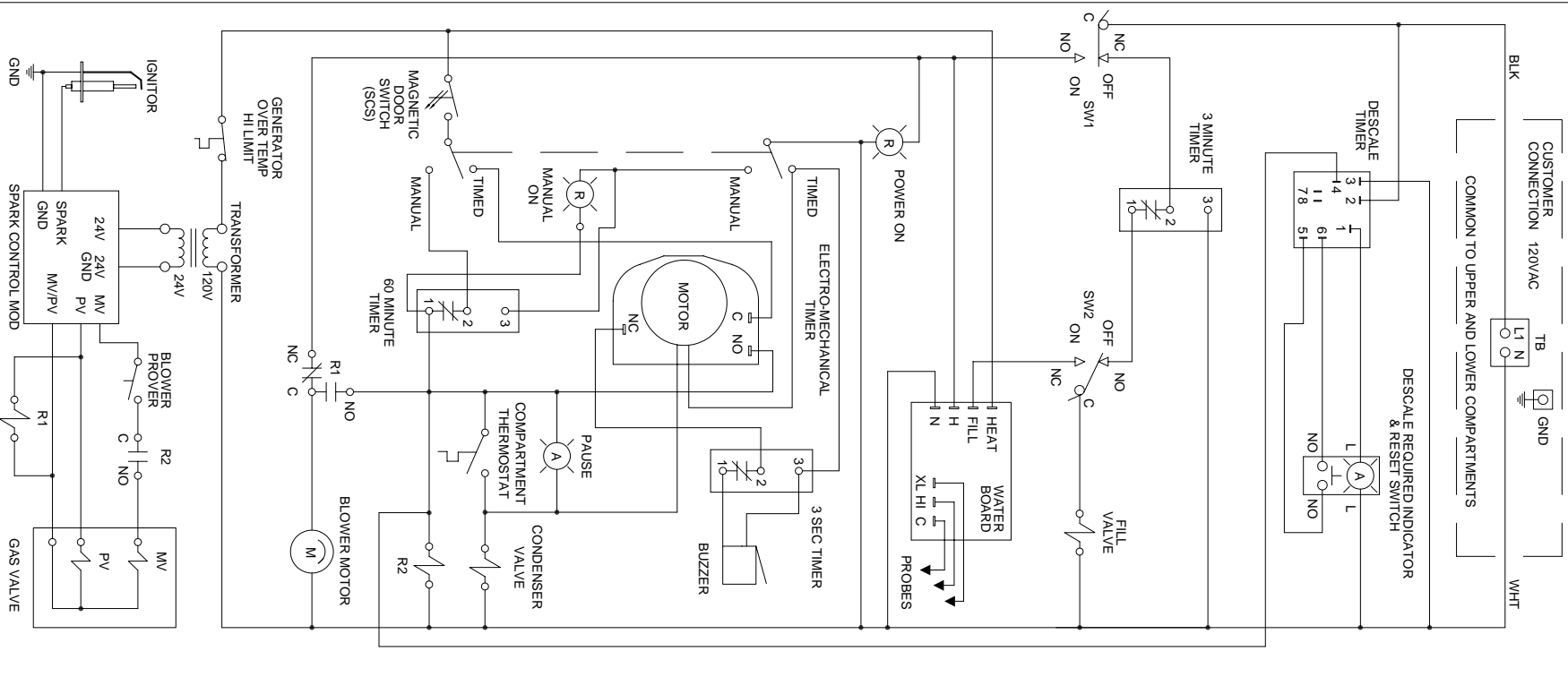
CLEVELAND RANGE GEMINI 24CGA 6.2  
AND 24CGA10.2  
SEQUENCE OF OPERATIONS  
Mechanical Timer

Starting with the timed manual switch in the timed position, and no time on the timer.

1. To turn the unit on, turn the ON/OFF lever clockwise to the ON position
  - This mechanically closes the drain.
  - The red “Power On” indicator is energized.
  - 115 VAC is sent through the timer to the three-second timer, which activates the buzzer for three seconds.
  - 115 VAC is sent through the normally closed R1 contacts to the fan motor, turning it ON
  - 115 VAC is sent to H and N of the water level board
2. With the water level board energized and no water in the generator
  - 115 VAC is sent from the FILL terminal to the fill solenoid.
  - The fill solenoid opens and the generator fills.
3. The water fills to the low probe shorting it to ground
  - 115 VAC is sent from the HEAT terminal to the timed manual switch.
  - 115 VAC is sent through the high limit to the primary of the 24VAC transformer.
  - The water continues to fill until the water level reaches the high probe then 115 VAC is removed from the FILL terminal and the fill solenoid is turned off
4. 24VAC is sent to the ignition module.
  - Spark is sent to the igniter.
  - 24VAC is sent to the pilot coil of the gas valve and the coil of the R1 relay.
    - The normally closed R1 contacts open, turning off the fan
    - The pilot lights, which acts as a standby heater. When the pilot is ignited and the module detects 1.0 micro amps DC, the MV terminal on the module is energized it remains in this standby heat mode until a cooking compartment is turned “ON” (see step 5).
5. When the timed/manual switch is in the timed position and time is on the timer or the timed manual switch is set to the manual position:
  - 115 VAC is sent to the clean light timer.
    - When the clean light timer times down 115 VAC is sent to the clean light switch.
    - When the clean light switch is depressed the timer is reset.
  - 115 VAC is sent from the compartment timer through the door switch to the normally closed contacts of the compartment thermostat and R2 relay coil.
    - The “Sure Cook” light is energized.
  - 115 VAC is also sent from the door switch through the now closed contacts of the R1 relay to the fan motor.
  - The fan motor turns ON, and comes up to speed.

- The fan prover switch makes allowing 24 VAC to the normally open R2 contacts.
  - The normally open R2 contacts close and 24 VAC is sent to the main coil of the gas valve.
  - The main burner is ignited and the water heated to steam.
    - Steam enters the cabinet and the compartment thermostat closes at 193 degrees.
    - The “Sure Cook” light is de-energized.
    - If in the timed mode, 115 VAC is sent to the timer motor and the timer begins counting down.
    - The condensate solenoid is energized sending cold water down condensate spray nozzle pulling the steam around the product and down the drain.
6. When the timer times out or the unit is switched to the timed mode (with no time on the timer) from the manual mode, 115 VAC is sent to the 3 second timer and then to the buzzer for 3 seconds.
7. Whenever the water level drops below the high probe for 5 seconds 115 VAC is sent to the FILL terminal again.
8. When the on/off lever is turned off :
- The drain is mechanically opened, and the generator begins to drain.
  - The red “Power On” indicator light is de-energized.
  - 115 VAC is sent to the 3-minute timer and the fill solenoid is energized for 3 minutes flushing the drain.

# GEMINI GAS - MECHANICAL TIMER

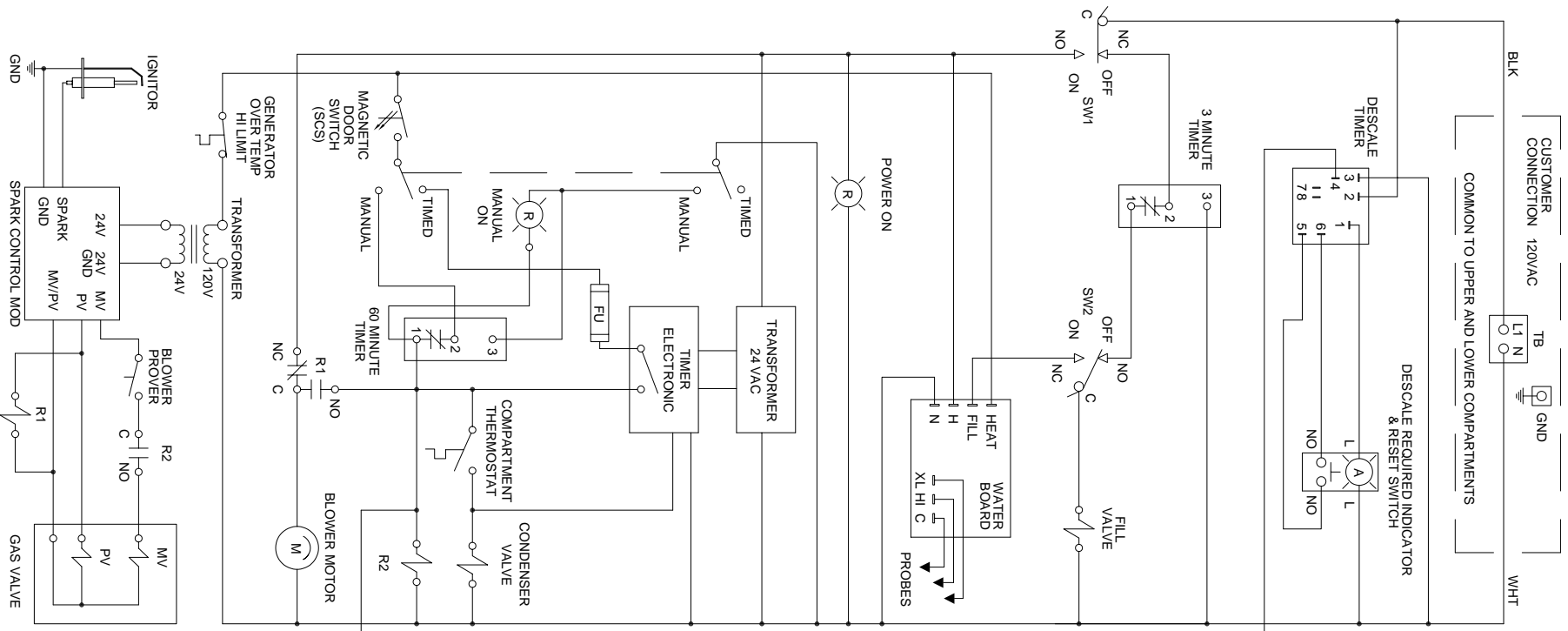


SINGLE COMPARTMENT SHOWN  
DUPLICATE FOR SECOND COMPARTMENT





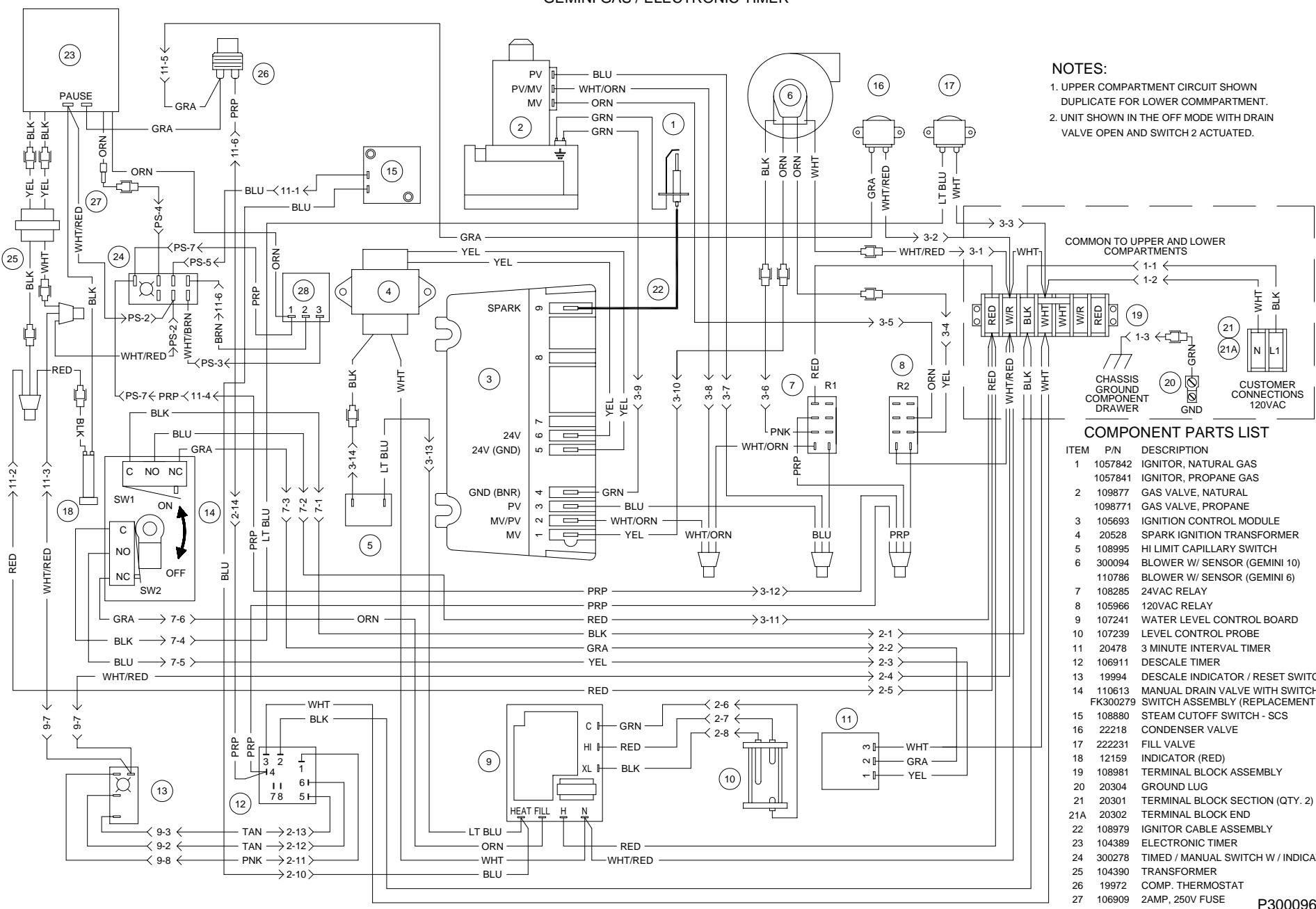
# GEMINI GAS - ELECTRONIC TIMER



SINGLE COMPARTMENT SHOWN  
 DUPLICATE FOR SECOND COMPARTMENT

L3000986 C

# GEMINI GAS / ELECTRONIC TIMER

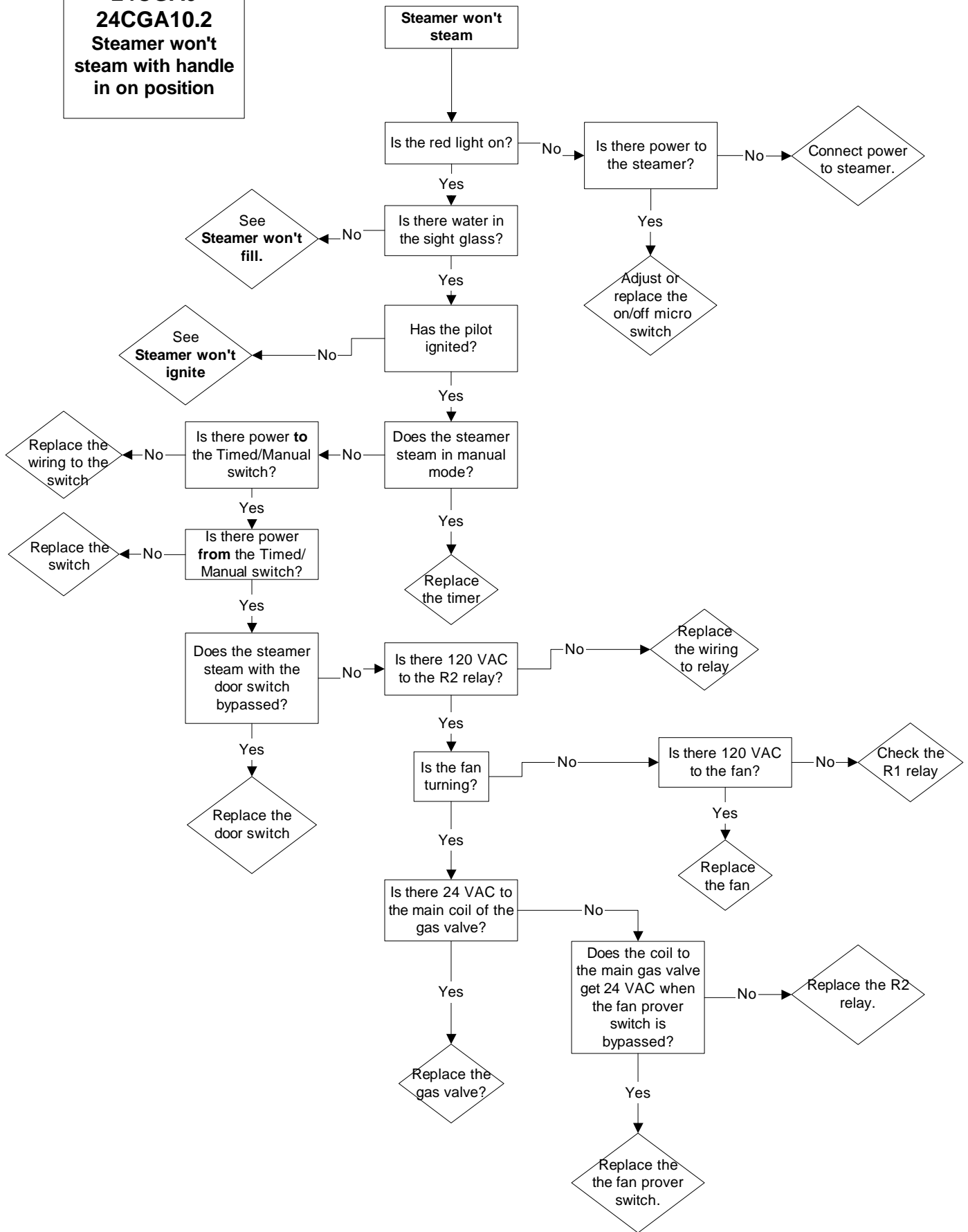


**NOTES:**  
 1. UPPER COMPARTMENT CIRCUIT SHOWN  
 DUPLICATE FOR LOWER COMPARTMENT.  
 2. UNIT SHOWN IN THE OFF MODE WITH DRAIN  
 VALVE OPEN AND SWITCH 2 ACTUATED.

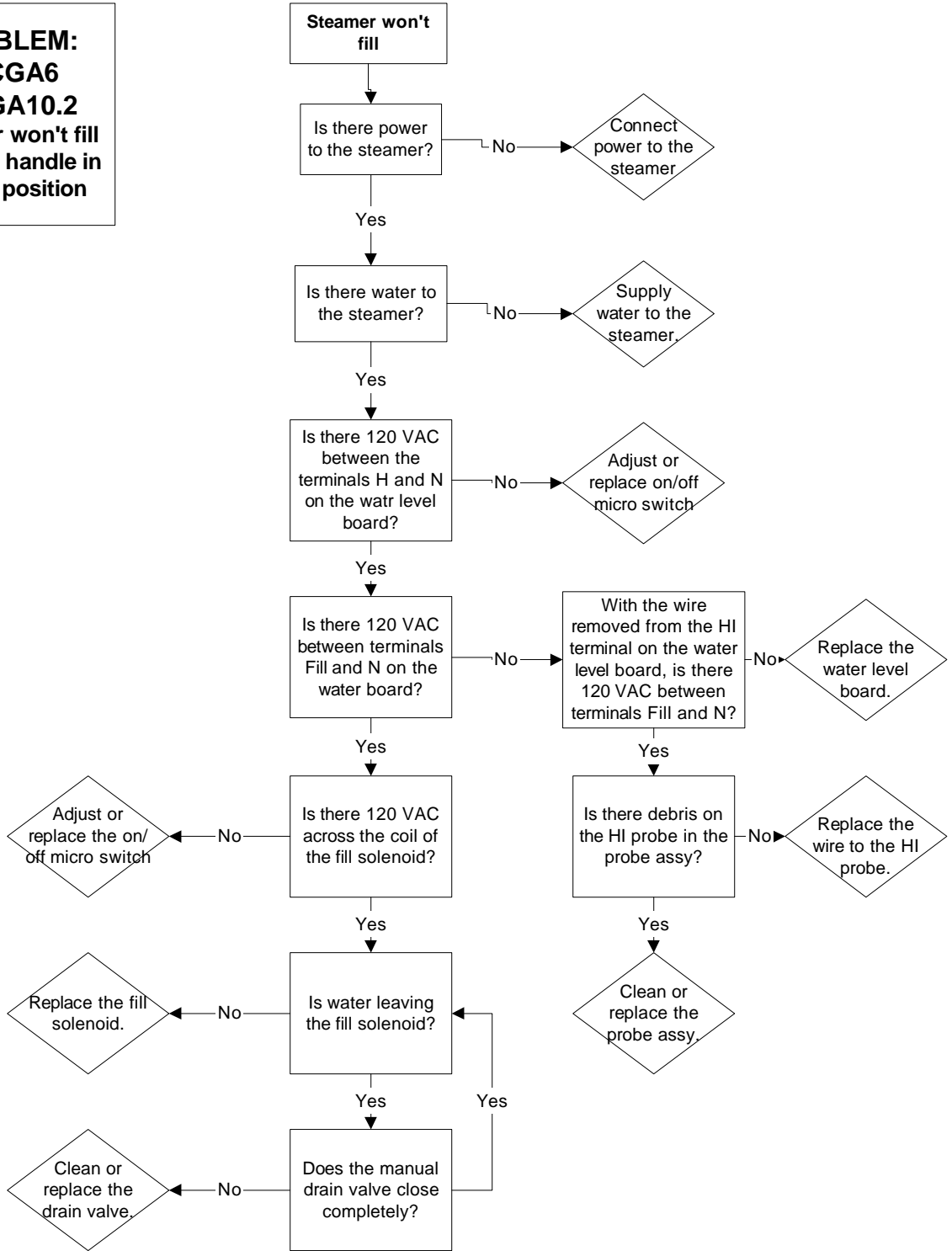
## COMPONENT PARTS LIST

ITEM	P/N	DESCRIPTION
1	1057842	IGNITOR, NATURAL GAS
	1057841	IGNITOR, PROPANE GAS
2	1098777	GAS VALVE, NATURAL
	1098771	GAS VALVE, PROPANE
3	105693	IGNITION CONTROL MODULE
4	20528	SPARK IGNITION TRANSFORMER
5	108995	HI LIMIT CAPILLARY SWITCH
6	300094	BLOWER W/ SENSOR (GEMINI 10)
	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
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
27	106909	2AMP, 250V FUSE
28	300150	60 MINUTE TIMER

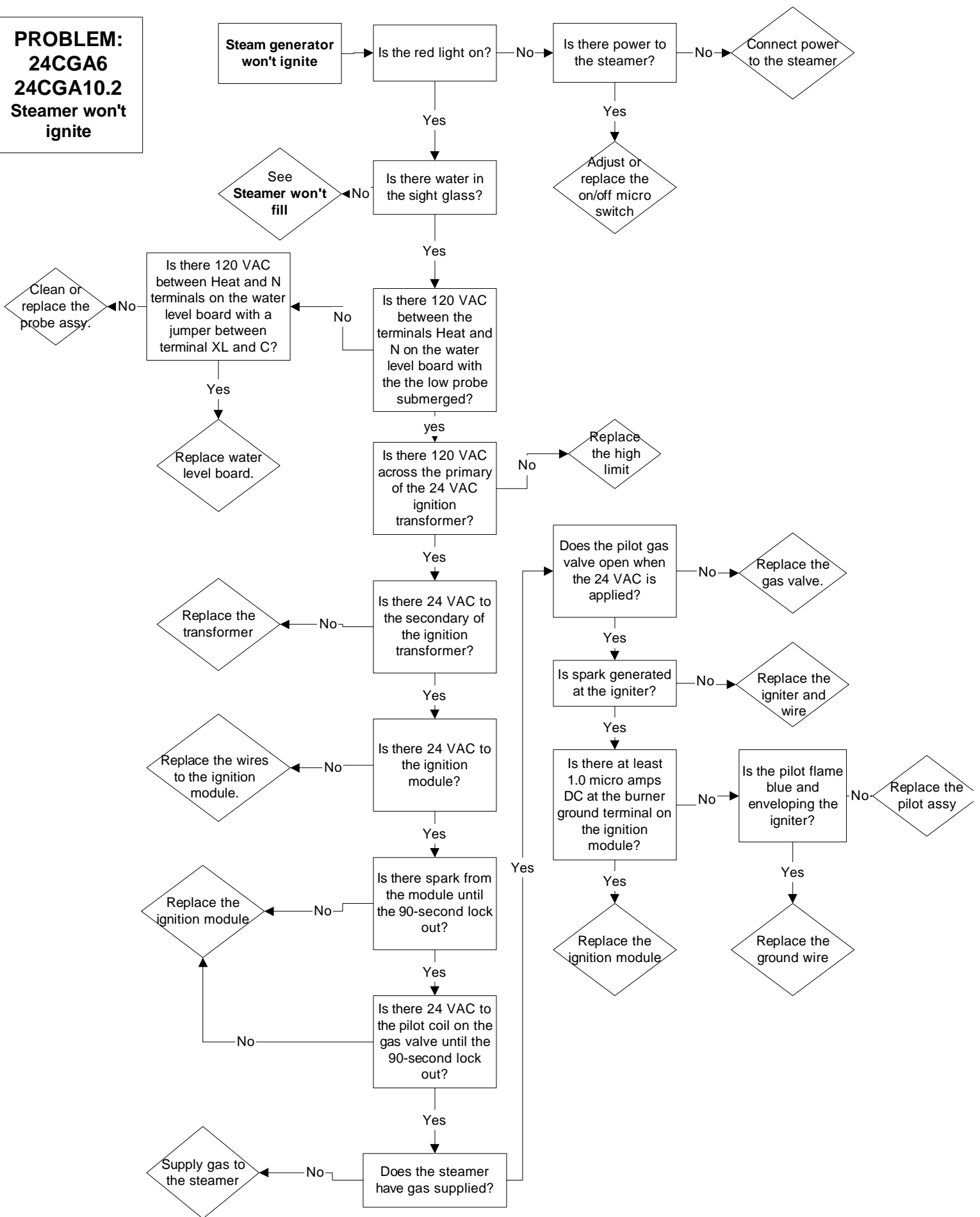
**PROBLEM:**  
**24CGA6**  
**24CGA10.2**  
**Steamer won't**  
**steam with handle**  
**in on position**



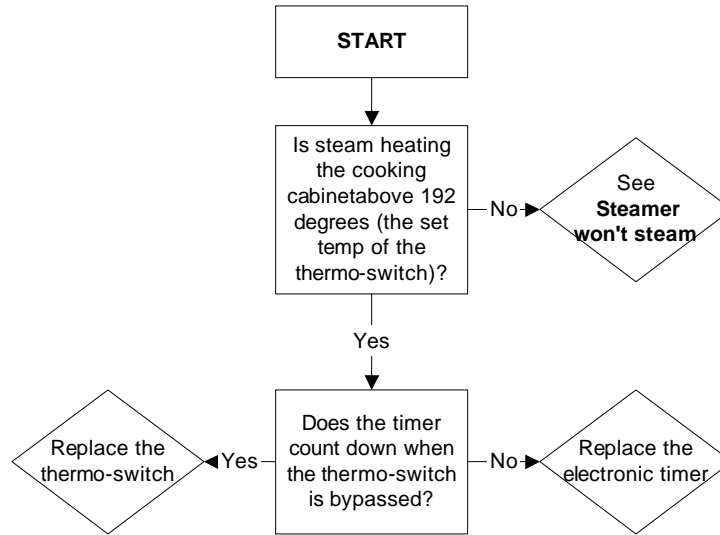
**PROBLEM:  
24CGA6  
24CGA10.2  
Steamer won't fill  
with the handle  
in the on position**



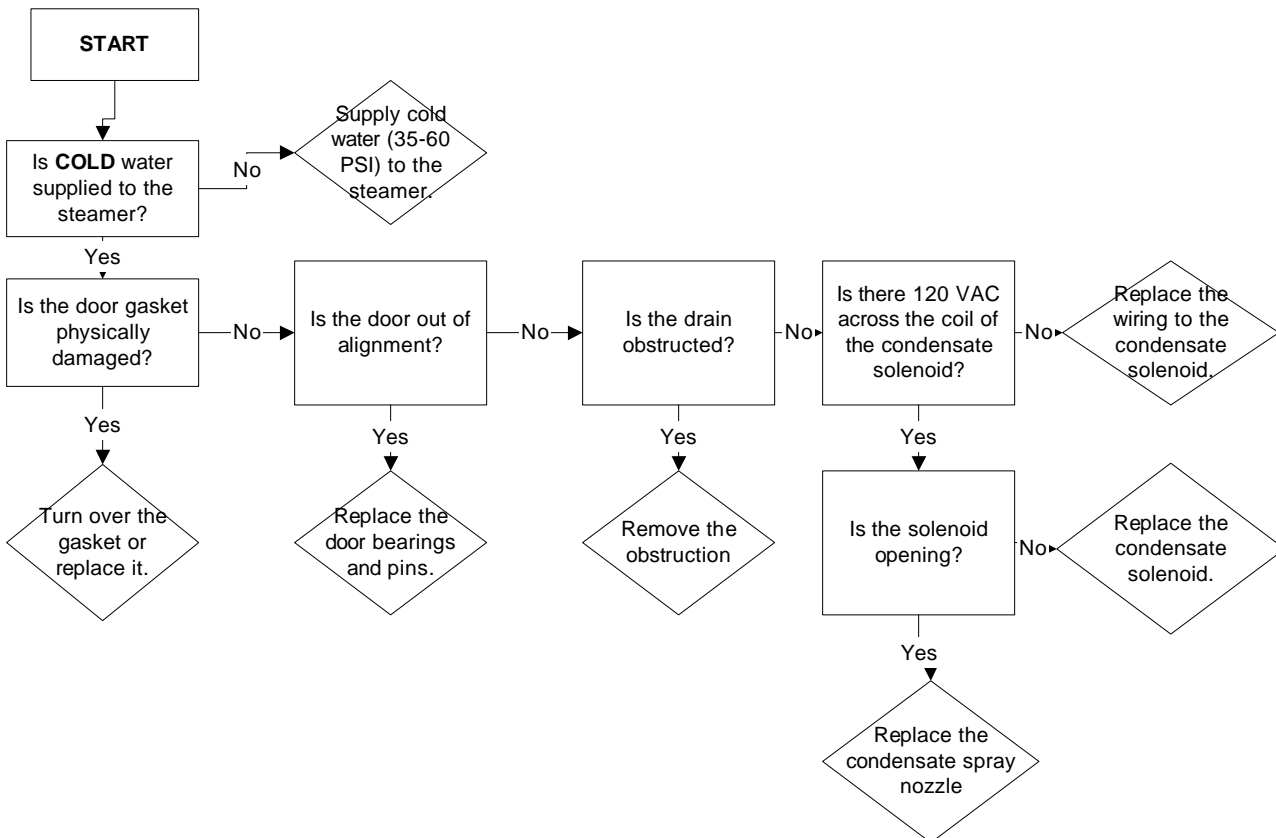
**PROBLEM:**  
**24CGA6**  
**24CGA10.2**  
**Steamer won't ignite**



**PROBLEM:  
24CGA6, 24CGA10.2  
Electronic timer displays "PAUS" and won't count down**



**PROBLEM:  
24CGA6, 24CGA10.2  
Steam leaks around the door.**





# Cleveland

## Descaling Procedure-SteamCraft Ultra and Gemini Series

### How Much DISSOLVE to Use

Model	Dissolve
Ultra 3	1/2 Gallon
Ultra 5	1 Gallon
Ultra 10 (Elec.)	1 Gallon (ea.)
Ultra 10 (Gas)	1½ Gallon
Gemini 6 & 10	1 Gallon (ea.)

#### 1. Turn the unit OFF and open the doors:

This will drain and rinse the generator for about 3 minutes.

#### 2. Turn the unit power back On:

The generator will begin to refill with water.

#### 3. Select Timed with the Timed/Manual switch:

DO NOT start the timer, since you do not want to heat the water during descaling. Leave the doors open.

#### 4. Remove descaling port cap and add with the specified amount of DISSOLVE: (See chart above)

Do this while the unit is refilling. The generators can take-up to 8 minutes to refill.

#### 5. After refill has stopped, add extra tap water into the descaling port until liquid is seen entering the cooking cabinet. Note: Ultra 10 gas will have liquid coming out of the drain,

Adding extra water when descaling will raise the descaling solution higher than the normal fill level, allowing the DISSOLVE to work on sensors and surfaces above the water line

Note: Some SteamCraft Ultra models (the electric powered Ultra 10 and Gemini 6 and 10, for example) have two generators and two descaling ports. Both units should be descaled at the same time, using this procedure

#### 6. Let the descaler soak in generator for approximately one hour:

#### 7. After one hour, turn the unit power Off: This will drain and rinse the generator for about 3 minutes.



#### 8. After the 3-minute drain cycle completes, turn the unit back ON. After the filling has stopped, add water until liquid enters the cooking compartment (or drain for the ultra 10 gas), and then turn the unit OFF. This will drain and flush any residue from the water level control assembly. Replace descaling cap.

#### 9. After the 3 minute drain cycle completes, Turn the unit ON and set the Timer for 20 minutes: Make sure the Time/Manual switch is in the timed setting and the doors are closed.

#### 10. When the timer times out (after 20 minutes) turn the power Off:

This will drain and rinse the generator for about 3 minutes.

This ends the descaling procedure. You can now turn the unit back on and resume normal startup and cooking operations.