# **Parts Manual**

## Floor type Gas Convection Steamer



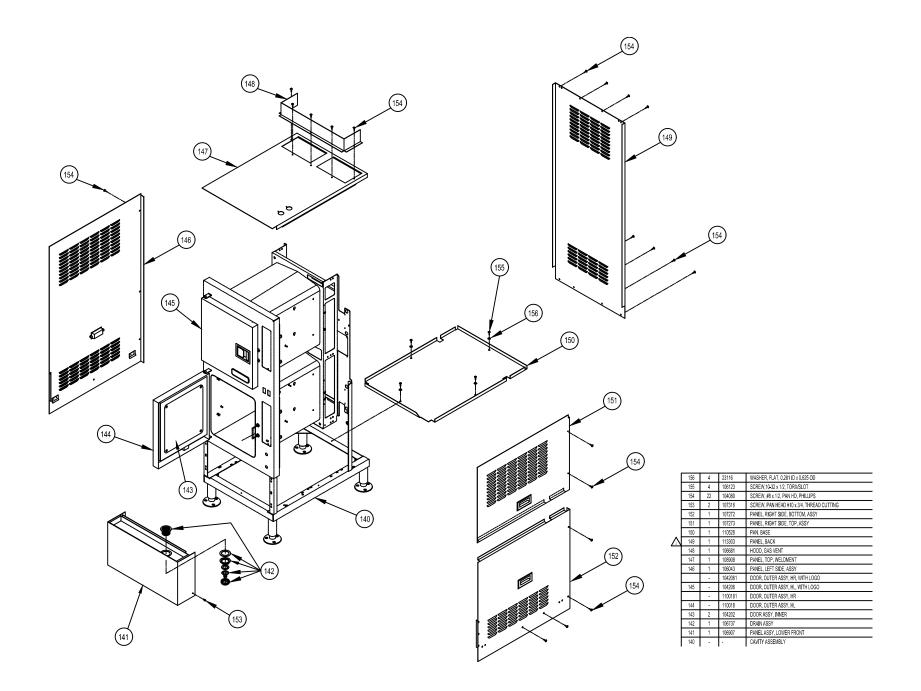
Series: SteamCraft Model 24CGA10.2

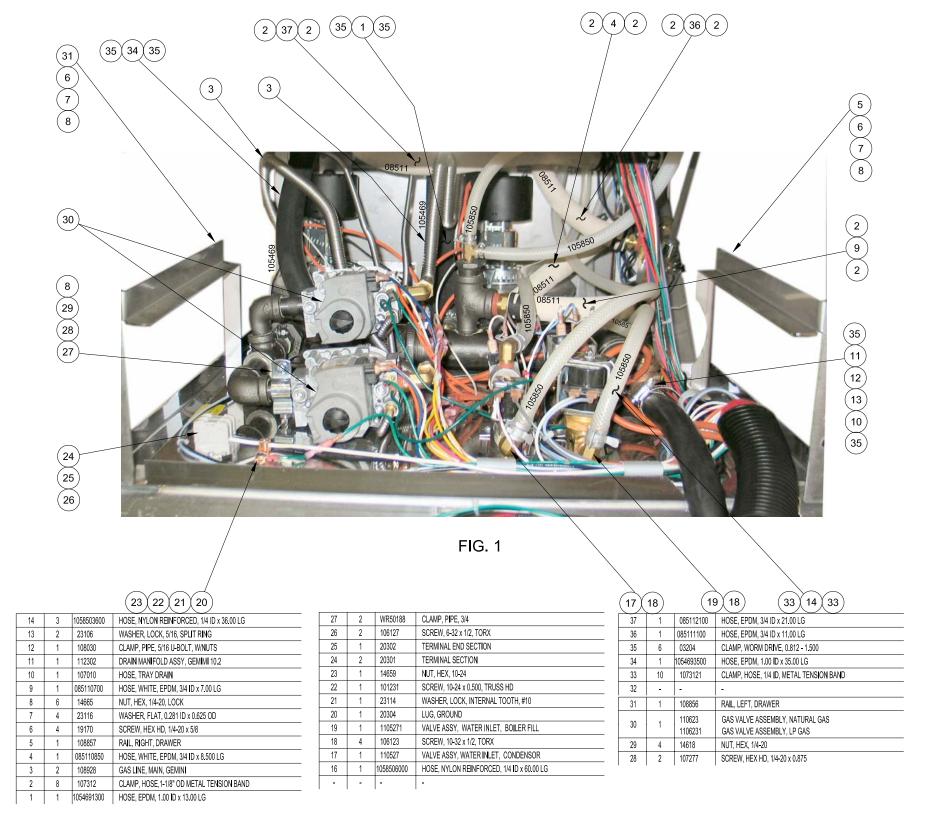
1333 East 179<sup>th</sup> Street Cleveland, Ohio 44110

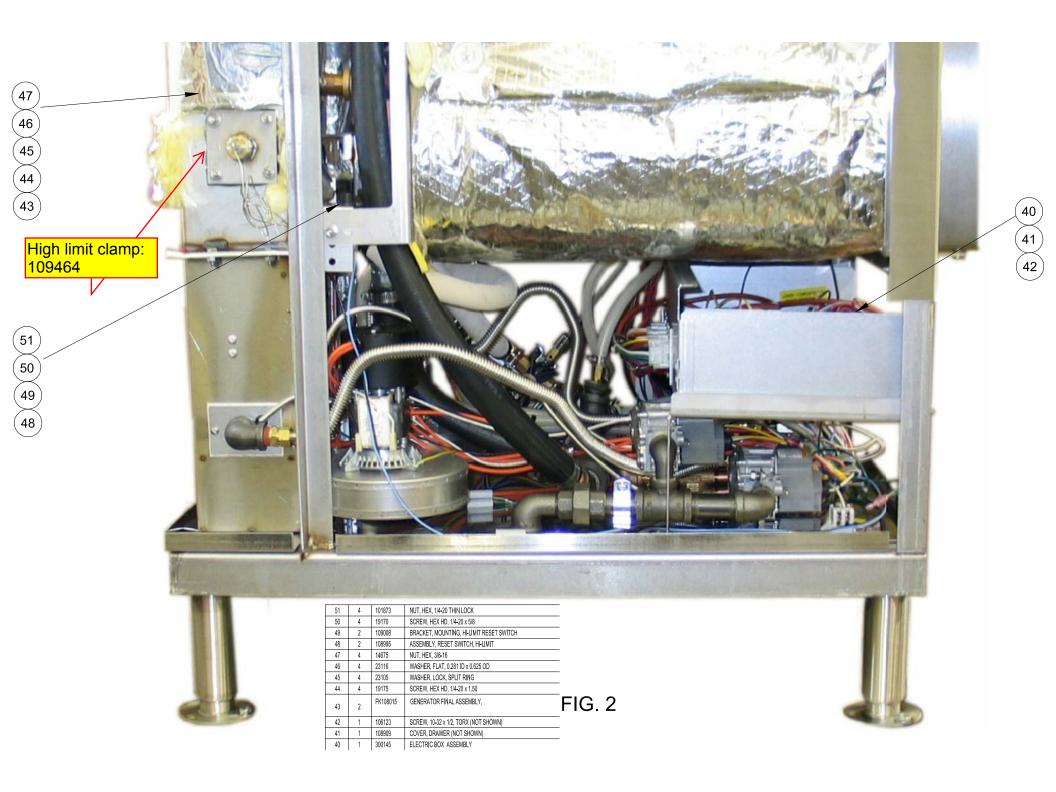
Phone: (216) 481-4900 1-800-338-2204

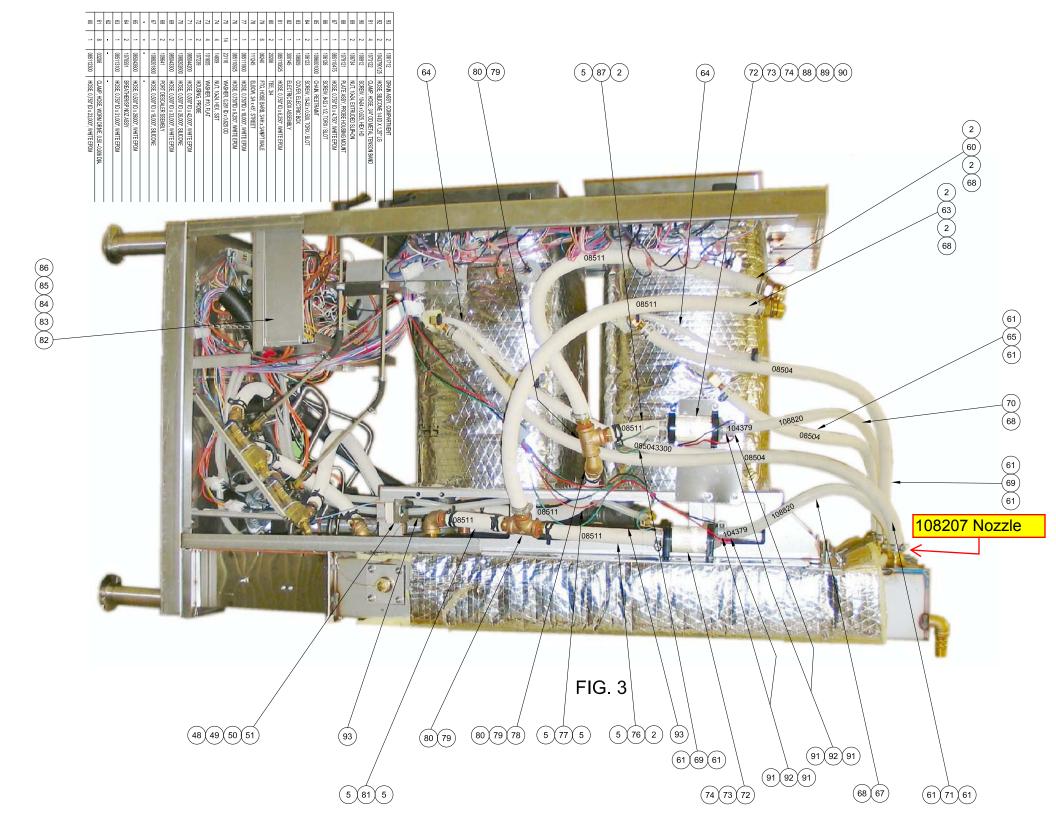
Fax: (216) 481-3782 www.clevelandrange.com

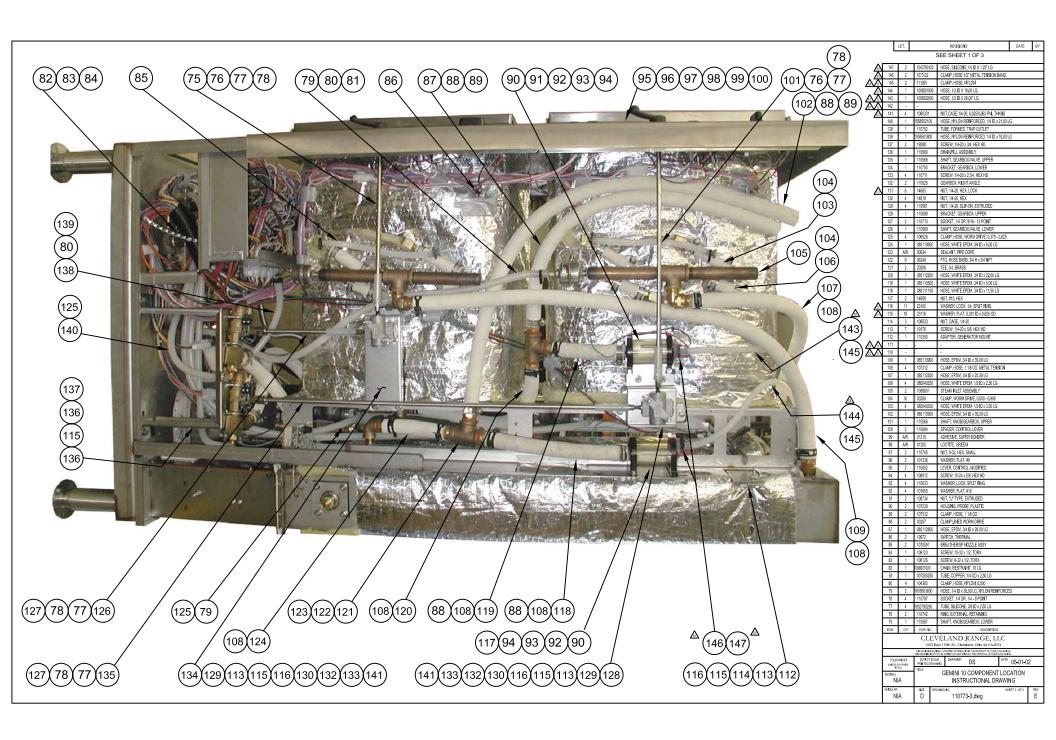


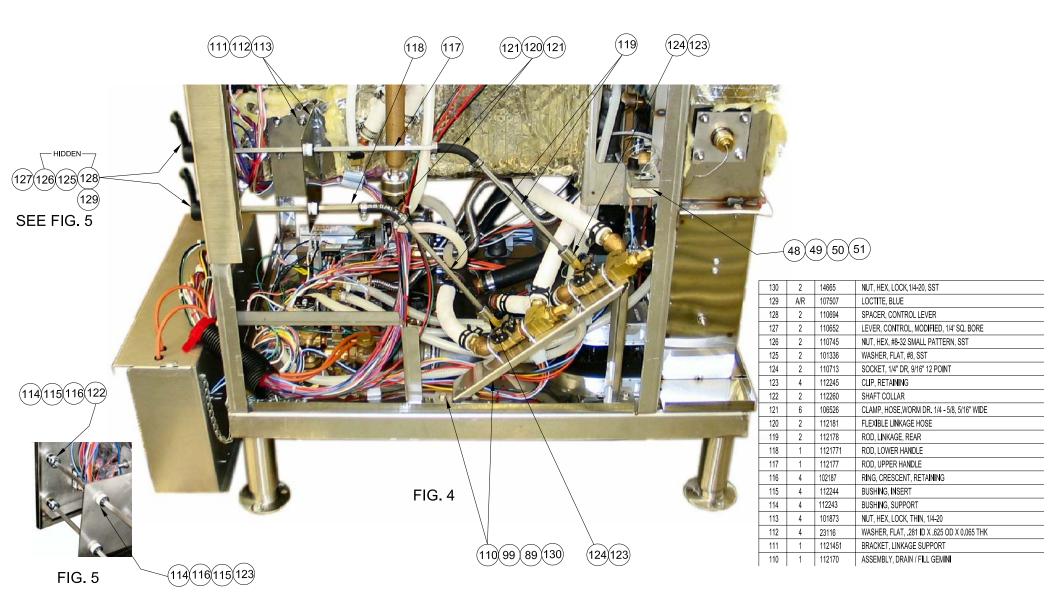


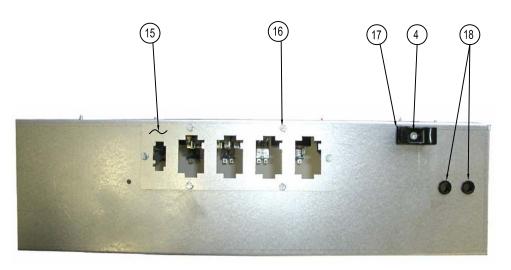




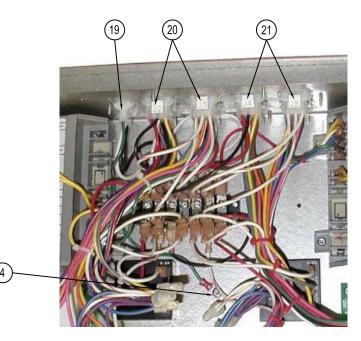








BACK VIEW 300145



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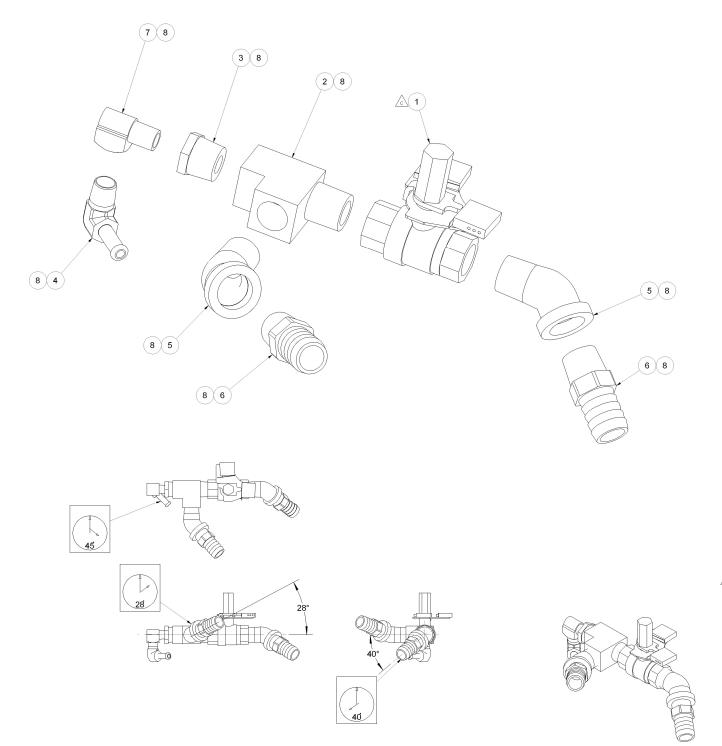
# TOP VIEW (WITH HARNESSES)

21	1	300102	WIRE HARNESS, RIGHT (J4 & J5)
20	1	300101	WIRE HARNESS, LEFT (J2 & J3)
19	1	300100	WIRE HARNESS, MAIN POWER (J1)
18	2	02616	BUSHING, INSULATOR, 3/8
17	1	110656	MOUNT, CABLE TIE
16	6	106754	SCREW, 6-32 X 3/8, HEX/SLOT-WASHER HD, SELF TAP
15	1	110624	PANEL, CONNECTOR, WIRE HARNESS
14	2	105966	RELAY, DPDT-W/MTG TABS, 120V, 50/60HZ, AC
13	2	108285	RELAY, DPDT W/MTG, TABS, 24V, 50/60HZ, AC
12	2	107241	BOARD, WATER LEVEL CONTROL ATMOSPHERIC GENR.
11	16	106127	SCREW, 6-32 x 1/2, TORX, PAN HD, ZINC PLTD
10	-	-	-
9	2	20478	TIMER, SOLID STATE INTERV, 3 MINUTE
8	2	106124	SCREW, 10-32 x 1.000 LG, TORX, PAN HD, ZINC PLTD
7	1	108981	BLOCK, TERMINAL, ASSY, 7 POLE
6	10	106126	SCREW, 8-32 x 1/2, TORX/SLT, PAN HD, ZINC PLTD
5	2	105693	IGNITION CONTROL MODULE, INTERMITTENT PILOT
4	5	106123	SCREW, 10-32 x 1/2, TORX, PAN HD
3	8	20351	TERMINAL, SLIPON, FULL INSUL, 0.250
2	2	20528	TRANSFORMER, 120-24V, 40VA
1	1	111271	DRAWER, COMPONENT

**TOP VIEW** 

(13)

(12)

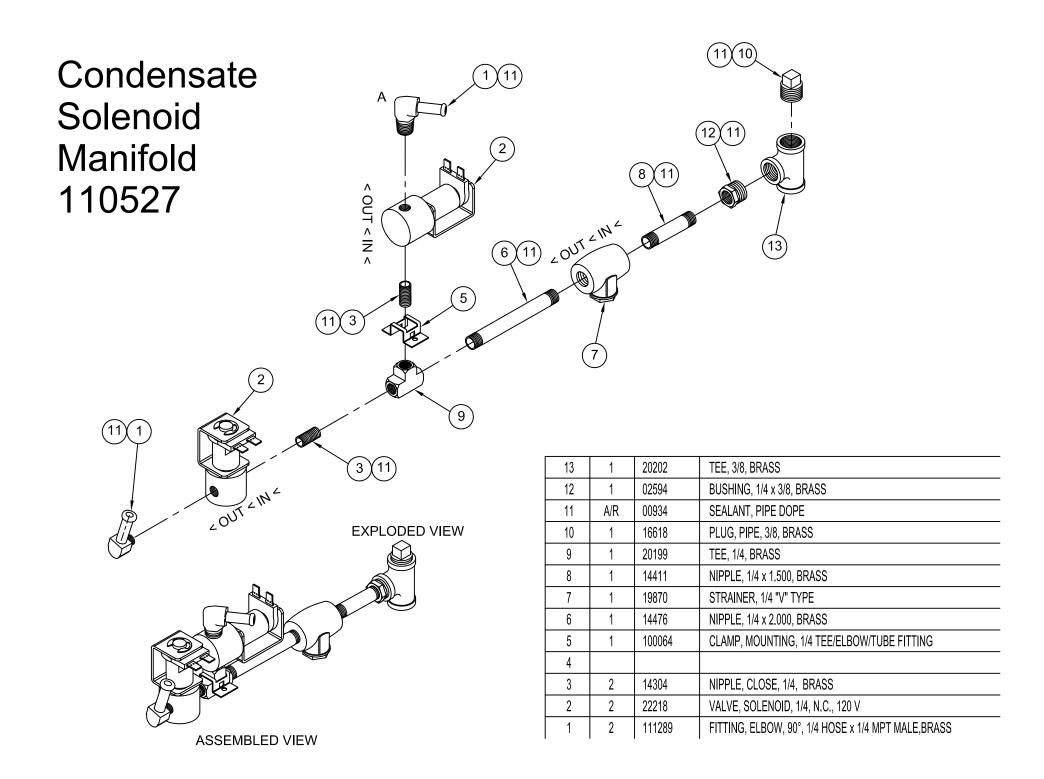


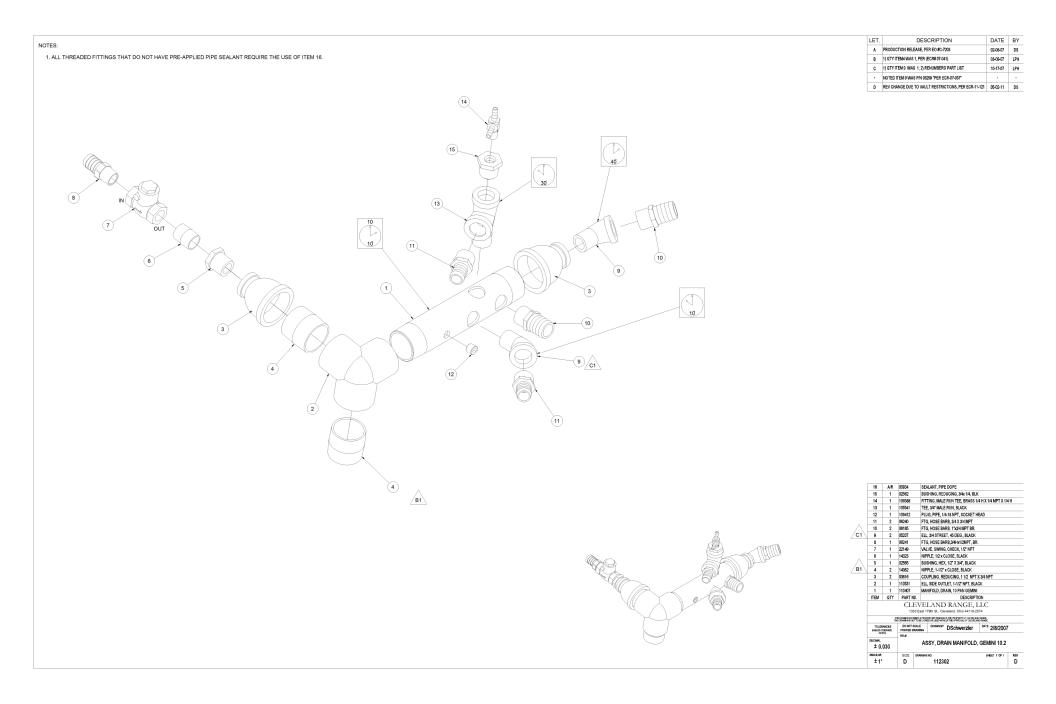
LET.	DESCRIPTION	DATE	BY
Α	PRODUCTION RELEASE PER EO# C-7203	02-05-07	LPH
В	PICTORIAL UPDATE FOR ITEM 6, P/N 06241 PER ECR-07-140	4-13-07	IG
С	PICTORIAL UPDATE FOR ITEM 1, P/N 110613, PER ECR-08-312	07-27-09	T.IW

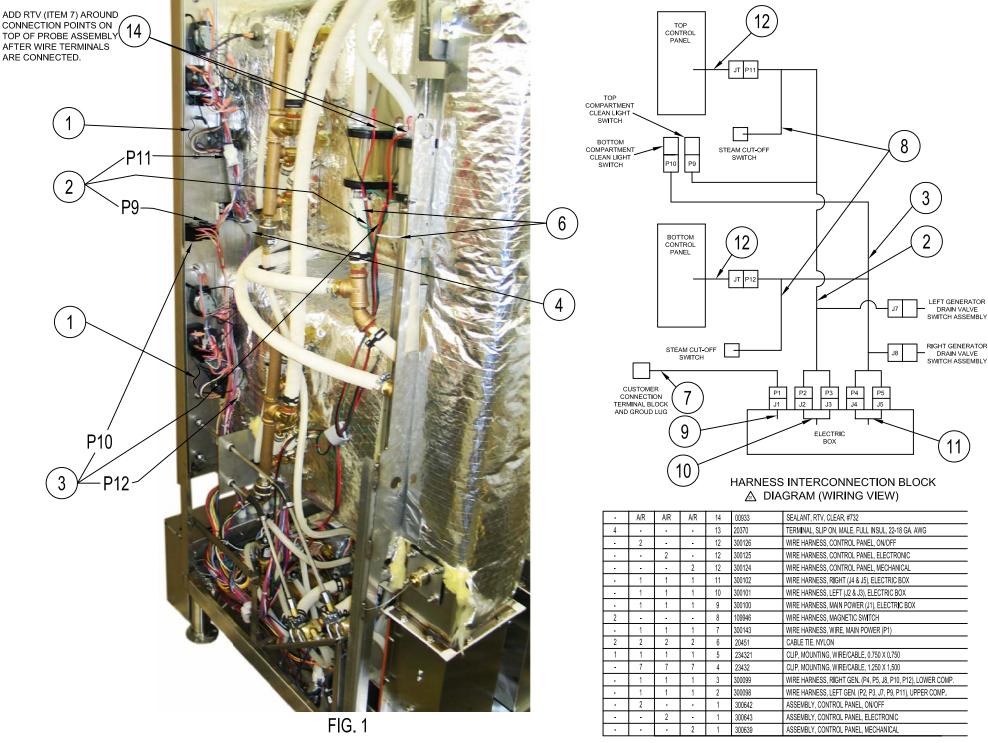
	8	A/R	00934	SEALANT, PIPE DOPE
	7	1	05235	ELBOW, STREET 1/4 X 90° BR, LONG PATTERN
B	6	2	06241	FTG, HOSE BARB,3/4Hx1/2MPT, BR.
	5	2	05223	ELBOW, STREET, 45 DEG., 1/2" NPT, BRASS
	4	1	111289	FITTING, ELBOW, 90 1/4" HOSE X 1/4" NPT MALE
	3	1	02623	BUSHING, HEX, 1/2 X 1/4, BRASS
	2	1	20247	TEE, STREET 1/2"
	1	1	110613	BALL VALVE ASSEMBLY, DOUBLE SWITCH
	ITEM	QTY	PART NO.	DESCRIPTION

## CLEVELAND RANGE, LLC 1333 East 179th St., Cleveland, Ohio 44110-2574

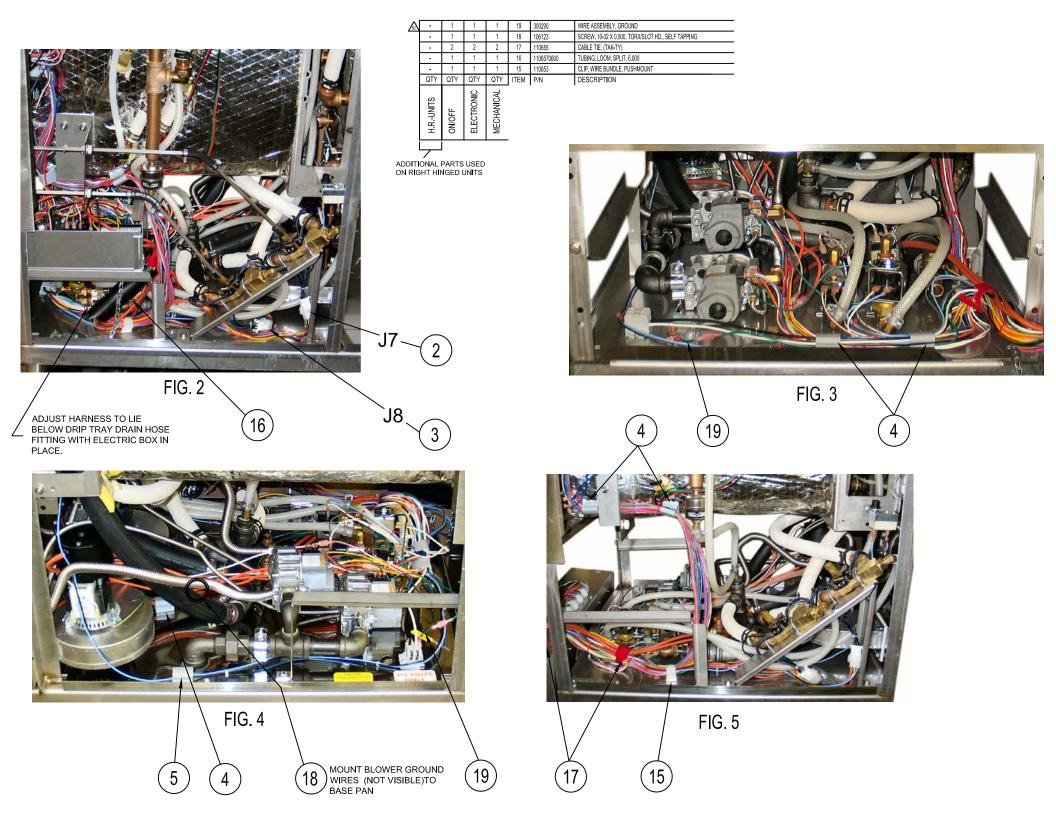
THIS DESIN DESCRIBES A PROPRIETAY ITEM AND IS THE PROPERTY OF CLEICH AND PANSE. TOLERANCES DO NOT SCALE. DRAWN BY LPH  DATE 2/2/2007							
(UNLESS OTHERWISE	PRINTED DRAWING		LFN	4	2/2/2007		
NOTED)	TITLE		•	•			
± 0.030	SEMBLY, UPF MENT, GEMINI	ER					
ANGULAR	SIZE	DRAWING	NO.	SHEE	T 1 0F 1	REV	
± 1°	С		112303			С	







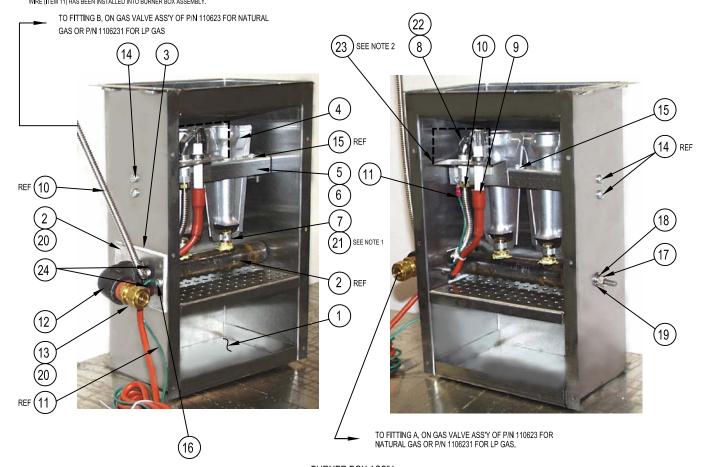
HINGED LEFT UNIT WITH MECHANICAL CONTROL PANEL ASSEMBLIES SHOWN



NOTES:

1) ORIFICE OPTION- TO BE SELECTED BASED ON ALTITUDE REQUIREMENTS.
2) PILOT BRACKET SHOWN CUT-AWAY FOR CLARITY.

▲ 3) CRIMP TERMINAL (TEM 25) TO GROUND WIRE (ITEM 11) AFTER GROUND WIRE (ITEM 11) HAS BEEN INSTALLED INTO BURNER BOX ASSEMBLY.



BURNER BOX ASS'Y SHOWING MANIFOLD ASS'Y & BURNER ALIGNMENT

Δ

	ORIFICE CHART NATURAL GAS (REF)						
ALTITUDE	P/N:	QTY	DESCRIPTION	HOLE SIZE			
0 - 2999'	110929	2	ORIFICE, #29 DMS, VER GEN	#29(0.136±0.001)			
3000 - 6999'	110930	2	ORIFICE, #30 DMS, VER GEN	#30(0.129±0.001)			
7000 - 9999'	110931	2	ORIFICE, #31 DMS, VER GEN	#31(0.120±0.001)			
10,000 - 11,000'	110932	2	ORIFICE, #32 DMS, VER GEN	#32(0.116±0.001)			

ORIFICE CHART LP GAS (REF)					
ALTITUDE	P/N:	QTY	DESCRIPTION	HOLE SIZE	
0 - 1999'	1109491	2	ORIFICE, 1.8 MM, VER GEN	1.8 MM (0.071±0.001)	
2000 - 3999'	110950	2	ORIFICE, #50 DMS, VER GEN	#50 (0.070±0.001)	
4000 - 6999'	110951	2	ORIFICE, #51 DMS, VER GEN	#51 (0.067±0.001)	
7000 - 9999'	110952	2	ORIFICE, #52 DMS, VER GEN	#52 (0.064±0.001)	
10000 - 11000'	110953	2	ORIFICE, #53 DMS, VER GEN	#53 (0.060±0.001)	

**Boiler to Burner Box Gasket** 108898

Burner box gasket 107947

Fan Gasket 110520

<b>∆</b> SEE ₩	OTE 3	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, PLOT
		1		22	1057841	PILOT ASSY, LP
SEE NOTE 1	⋒			21		ORIFICE, LP GAS
		AIR	AR	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	1061455000	WIRE ASSY GREEN, 1 RING, 1 BARE 50,000
		1	1	10	108929	GAS LINE, PILOT GEMINI
	A	1	1	9	108979	CABLE, IGNITOR ASS'Y
			1	8	1057842	PILOT ASS'Y, NAT GAS, GEMINI
SEE NOTE 1				7		ORIFICE, NATURAL GAS
	_	1	1	6	107919	BRACKET, BURNER MOUNTING GEMINI
		1	1	5	107920	CLAMP, BURNER GEMINI
		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	BURNER ASSY, WELDMENT, GEMINI
		QTY	QTY	ITEM	PART NO.	DESCRIPTION
				İ	•	·
_		1106221	l	l		
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1		$\vdash$	$\vdash$	j		
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#### 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.

Enodis



#### 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 deliming 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)

ITEM NUMBER	
JOB NAME / NUMBER _	

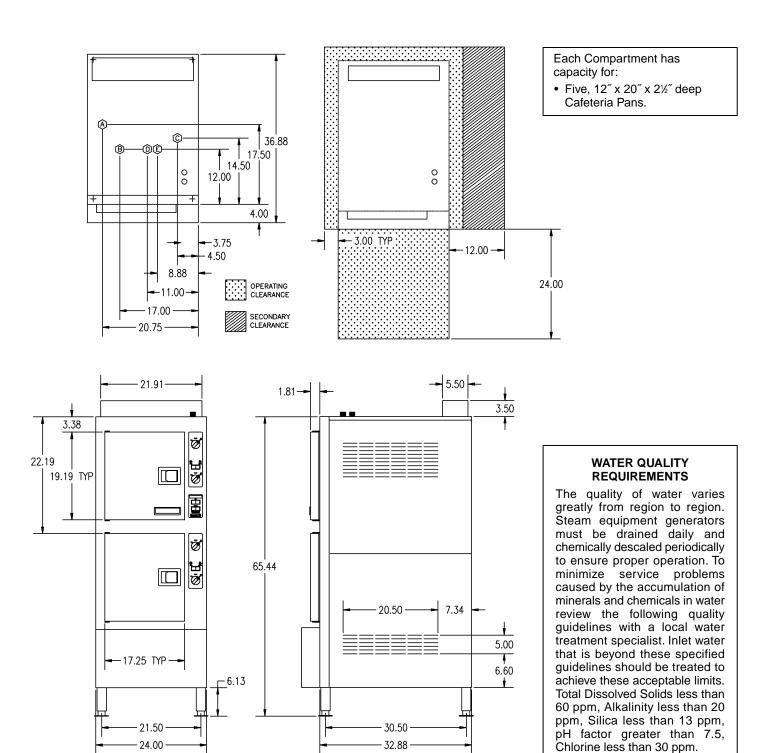


#### Short Form Specifications

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/quart markings (106174)
- □ Water Filters

SECT. **IV** PAGE **13** 



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

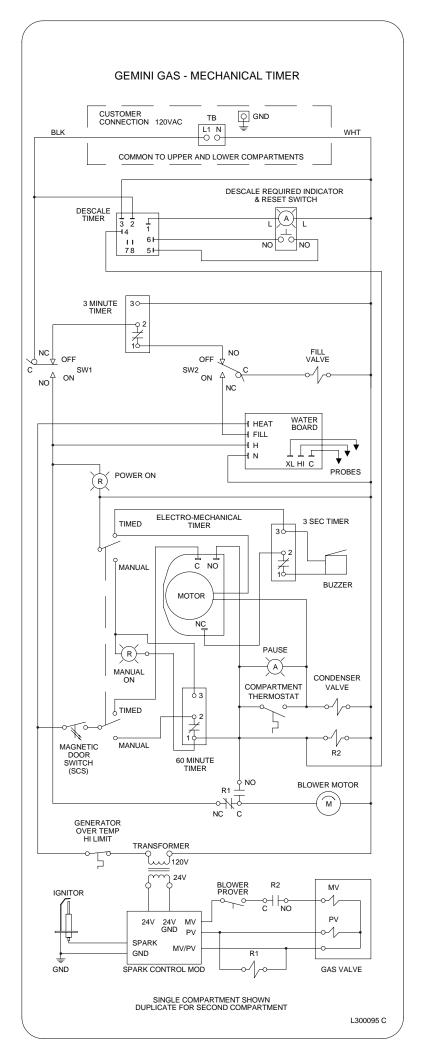
#### CLEVELAND RANGE GEMINI 24CGA 6.2 AND 24CGA10.2

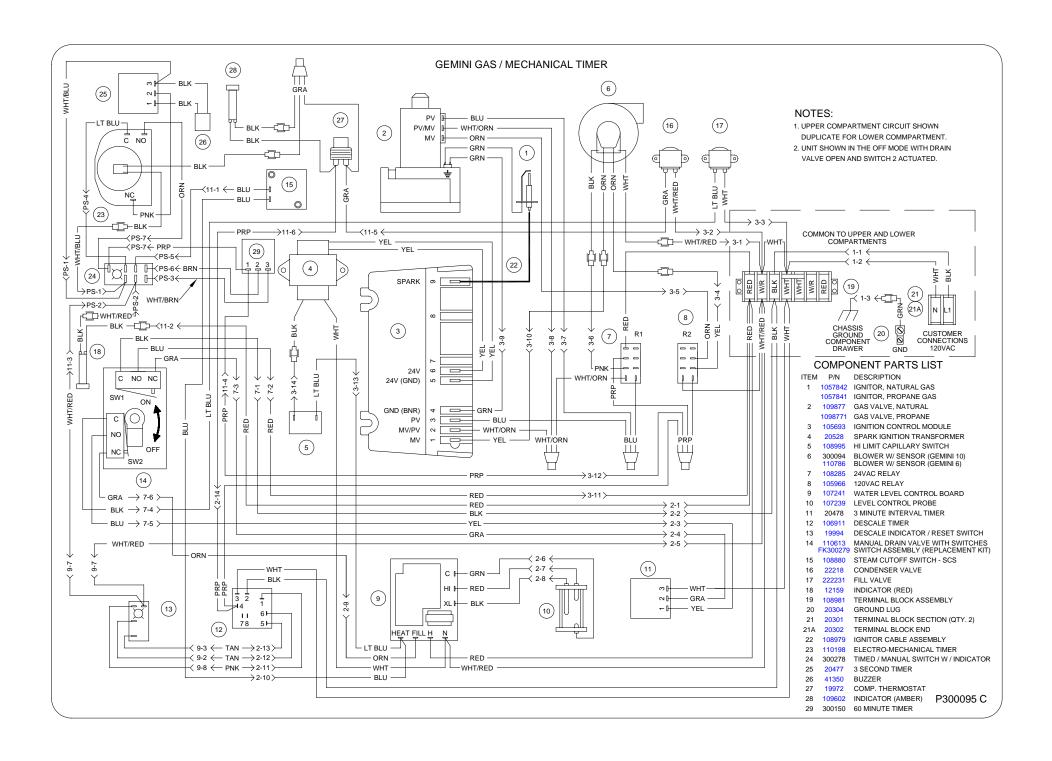
# SEQUENCE OF OPERATIONS Mechanical Timer

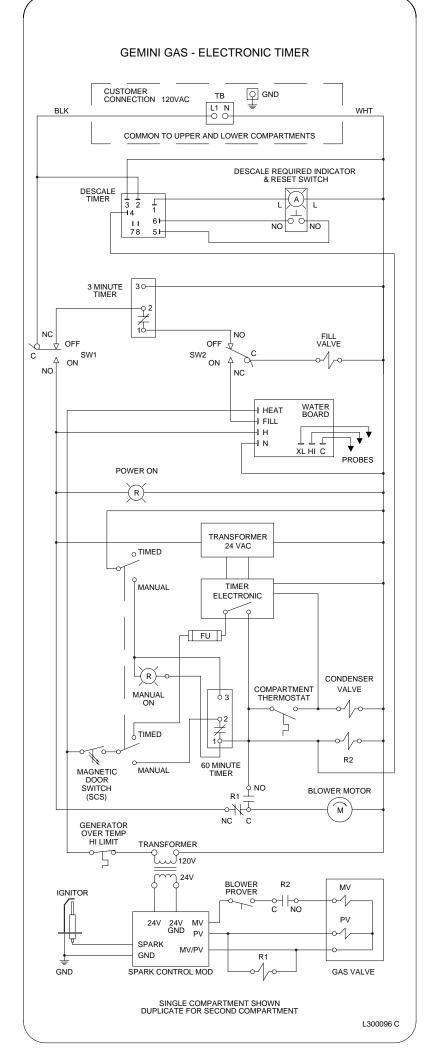
Starting with the timed manual switch in the timed position, and no time on the timer.

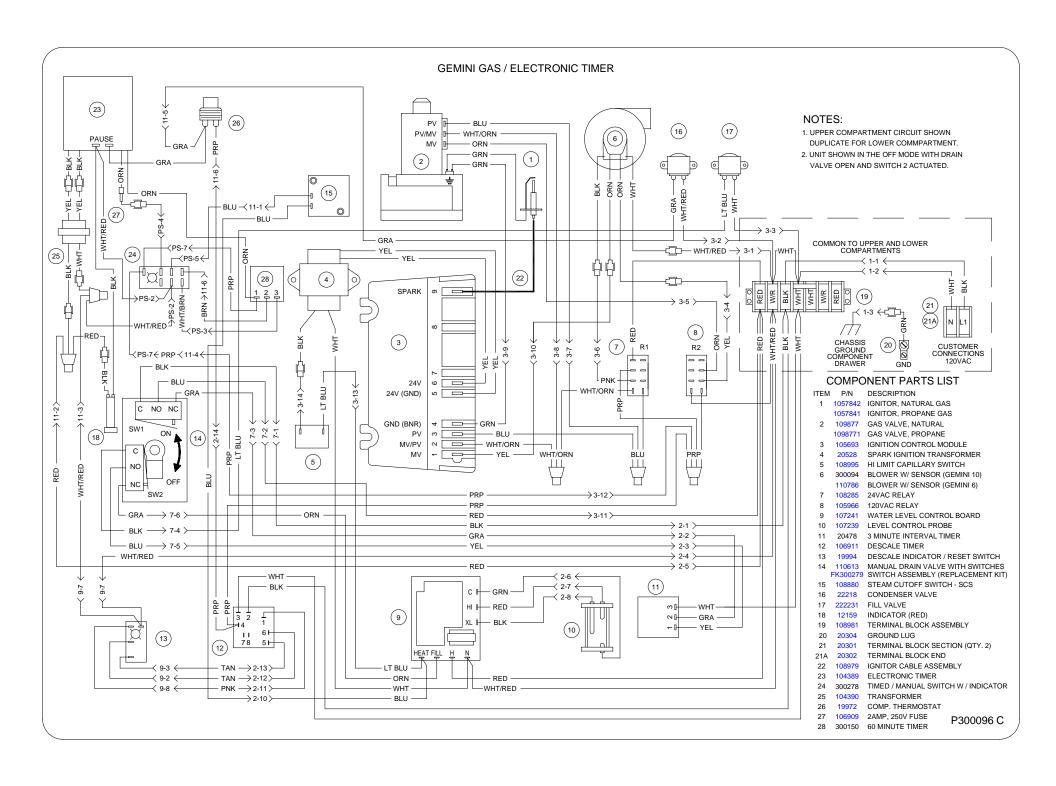
- 1. To turn the unit on, turn the ON/OFF lever clockwise to the ON position
  - This mechanically closes the drain.
  - The red "Power On" indicator is energized.
  - 115 VAC is sent through the timer to the three-second timer, which activates the buzzer for three seconds.
  - 115 VAC is sent through 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.

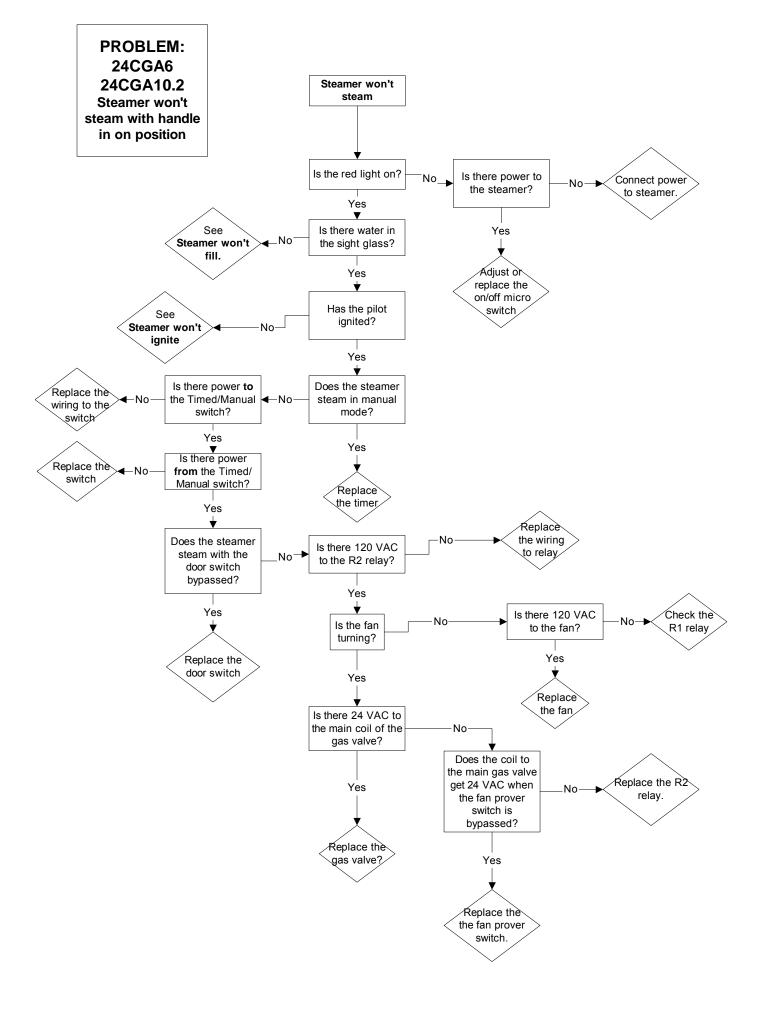
- The fan prover switch makes allowing 24 VAC to the normally open R2 contacts.
- The normally open R2 contacts close and 24 VAC is sent to the main coil of the gas valve.
- The main burner is ignited and the water heated to steam.
  - Steam enters the cabinet and the compartment thermostat closes at 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.

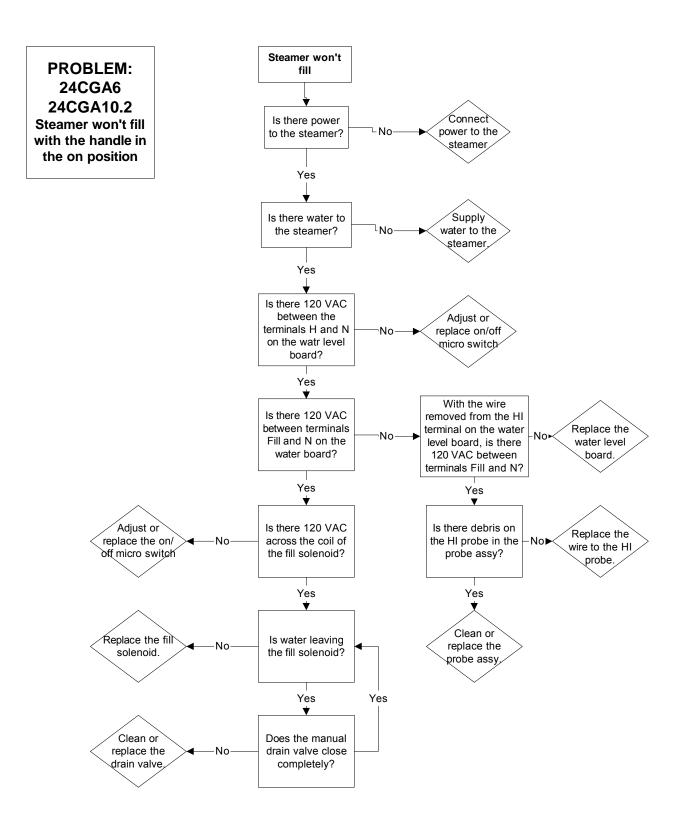


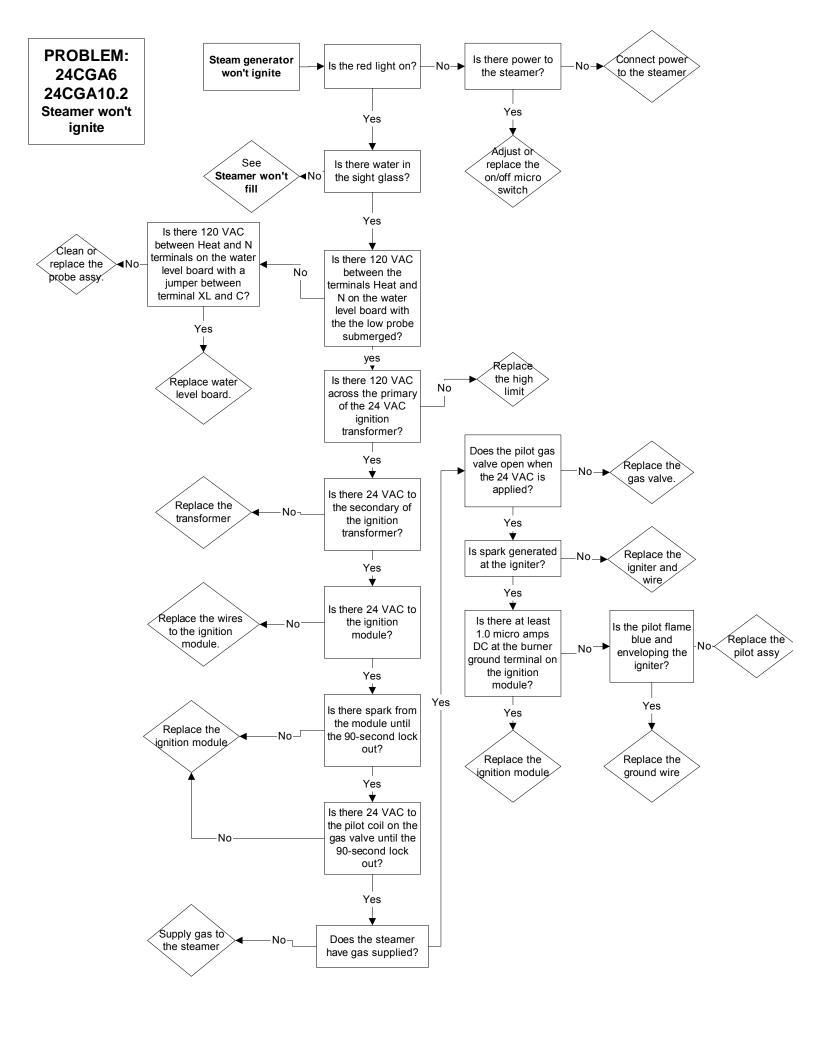




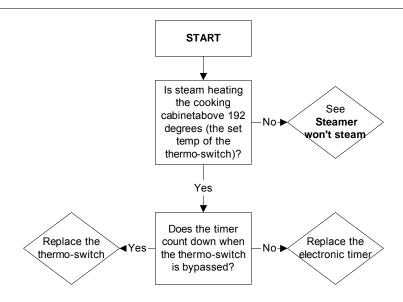




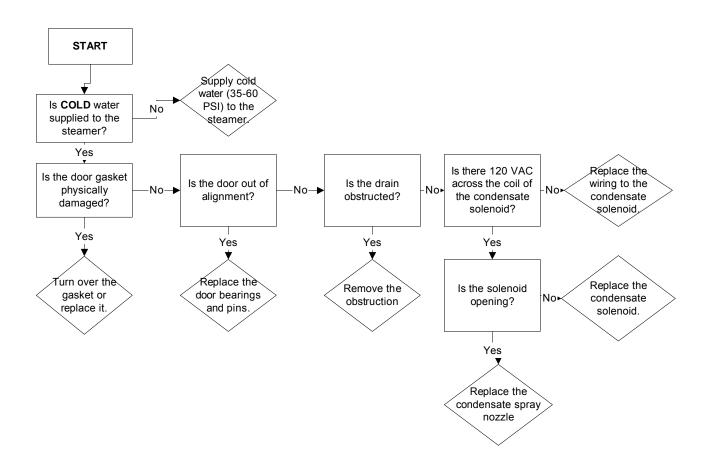




# PROBLEM: 24CGA6, 24CGA10.2 Electronic timer displays "PAUS" and won't count down



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





### 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.)					

# 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 DISSLOVE: (See chart above)

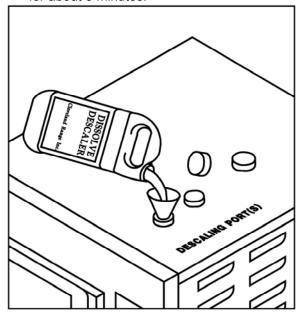
Do this while the unit is refilling. The generators can take-up to 8 minutes to refill.

 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:
- 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.
- 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.