Parts Manual

Floor type Gas Convection Steamer



Series: SteamCraft Model 24CGA10.2

1333 East 179th Street Cleveland, Ohio 44110

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FIG.	1
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			23 22 21 20
14	3	1058503600	HOSE, NYLON REINFORCED, 1/4 ID x 36.00 LG
13	2	23106	WASHER, LOCK, 5/16, SPLIT RING
12	1	108030	CLAMP, PIPE, 5/16 U-BOLT, W/NUTS
11	1	112302	DRAIN MANIFOLD ASSY, GEMIMI 10.2
10	1	107010	HOSE, TRAY DRAIN
9	1	085110700	HOSE, WHITE, EPDM, 3/4 ID x 7.00 LG
8	6	14665	NUT, HEX, 1/4-20, LOCK
7	4	23116	WASHER, FLAT, 0.281 ID x 0.625 OD
6	4	19170	SCREW, HEX HD, 1/4-20 x 5/8
5	1	108857	RAIL, RIGHT, DRAWER
4	1	085110850	HOSE, WHITE, EPDM, 3/4 ID x 8.500 LG
3	2	108928	GAS LINE, MAIN, GEMINI
2	8	107312	CLAMP, HOSE,1-1/8" OD METAL TENSION BAND
1	1	1054691300	HOSE, EPDM, 1.00 ID x 13.00 LG

27	2	WR50188	CLAMP, PIPE, 3/4
26	2	106127	SCREW, 6-32 x 1/2, TORX
25	1	20302	TERMINAL END SECTION
24	2	20301	TERMINAL SECTION
23	1	14659	NUT, HEX, 10-24
22	1	101231	SCREW, 10-24 x 0.500, TRUSS HD
21	1	23114	WASHER, LOCK, INTERNAL TOOTH, #10
20	1	20304	LUG, GROUND
19	1	1105271	VALVE ASSY, WATER INLET, BOILER FILL
18	4	106123	SCREW, 10-32 x 1/2, TORX
17	1	110527	VALVE ASSY, WATER INLET, CONDENSOR
16	1	1058506000	HOSE, NYLON REINFORCED, 1/4 ID x 60.00 LG
-	-	-	-
		•	

(17)	18	(19	0 18 33 14 33
37	1	085112100	HOSE, EPDM, 3/4 ID x 21.00 LG
36	1	085111100	HOSE, EPDM, 3/4 ID x 11.00 LG
35	6	03204	CLAMP, WORM DRIVE, 0.812 - 1.500
34	1	1054693500	HOSE, EPDM, 1.00 ID x 35.00 LG
33	10	1073121	CLAMP, HOSE, 1/4 ID, METAL TENSION BAND
32	-	-	-
31	1	108856	RAIL, LEFT, DRAWER
30	1	110623 1106231	GAS VALVE ASSEMBLY, NATURAL GAS GAS VALVE ASSEMBLY, LP GAS
29	4	14618	NUT, HEX, 1/4-20
28	2	107277	SCREW, HEX HD, 1/4-20 x 0.875











BACK VIEW



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

	LET. DESCRIPTION DATE BY A PRODUCTION RELEASE PER EO# C-7203 02.05-07 LPH B PICTORIAL UPDATE FOR ITEM 6, P/N 06241 PER ECR-07-140 4.13-07 IG C PICTORIAL UPDATE FOR ITEM 1, P/N 110613, PER ECR-08-312 07-27-09 T.IW
	8 AR 00934 SEALANT, PIPE DOPE 7 1 05235 ELBOW, STREET 1/4 X 90° BR, LONG PATTERN 6 2 06241 FTG, HOSE BARB, 3/4H:x1/2MPT, BR. 5 5 2 05223 ELBOW, STREET, 45 DEG, 1/2° NPT, BRASS 4 1 111289 FTTTING, ELBOW, STREET, 45 DEG, 1/2° NPT, BRASS 4 3 1 02623 BUSHING, HEX, 1/2X 1/4, BRASS 2 1 20247 TEE, STREET 1/2° 1 1 110613 BALL VALVE ASSEMBLY, DOUBLE SWITCH 1 11 110613 BALL VALVE ASSEMBLY, DOUBLE SWITCH TEE STREET 1/2° 1 1 10613 BALL VALVE ASSEMBLY, DOUBLE SWITCH 11EM OTHER ASSEMENT PROFESSION UNDER SWITCH TEE STREET 1/2° 1 1 10613 BALL VALVE ASSEMBLY, DOUBLE SWITCH 11EM OTHER ASSEMENT PROFESSION UNDER SWITCH PROFESSION UNDER SWITCH TEE STREET 1/2° 1 1 10613 BALL VALVE ASSEMBLY, UPOER STATE 100EBANNES PRINTED BRANNO PRINTED BRANNO PRINTED BRANNO PRINTED BRANNO DATE 2/2/2007

		2 m ² 7	8 (1)	
(3)(11)	13	1	20202	TEE, 3/8, BRASS
	12	1	02594	BUSHING, 1/4 x 3/8, BRASS
DUT 2"	11	A/R	00934	SEALANT, PIPE DOPE
EXPLODED VIEW	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
K m	2	2	22218	VALVE, SOLENOID, 1/4, N.C., 120 V
ASSEMBLED VIEW	1	2	111289	FITTING, ELBOW, 90°, 1/4 HOSE x 1/4 MPT MALE, BRASS







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ASSEMBLY, CONTROL PANEL, MECHANICAL

MECHANICAL CONTROL PANEL ASSEMBLIES SHOWN



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A	-	1	1	1	19	300290	WIRE ASSEMBLY, GROUND
	-	1	1	1	18	106123	SCREW, 10-32 X 0.500, TORX/SLOT HD., SELF TAPPING
	•	2	2	2	17	110655	CABLE TIE, (TAK-TY)
	-	1	1	1	16	1106570600	TUBING, LOOM, SPLIT, 6.000
	•	1	1	1	15	110653	CLIP, WIRE BUNDLE, PUSHMOUNT
	QTY	QTY	QTY	QTY	ITEM	P/N	DESCRIPTION
			0	Т	-	•	•



ADDITIONAL PARTS USED ON RIGHT HINGED UNITS



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FIG. 5

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

A SEE N	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 ASS'Y, LP
SEE NOTE 1	A	•	·	21	•	ORIFICE, LP GAS
		AR	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	06271	ELBOW 90° 3/4 X 1/2 BLACK REDUCING
		1	1	11	1061455000	WIRE ASS'Y GREEN, 1 RING, 1 BARE 50.000
		1	1	10	108929	GAS LINE, PILOT GEMINI
		1	1	9	108979	CABLE, IGNITOR ASS'Y
		•	1	8	1057842	PILOT ASS'Y, NAT GAS, GEMINI
SEE NOTE 1	Δ	•	•	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	MANFOLD, ASS'Y, WELDMENT, GAS BOILER
		1	1	1	108840	BURNER ASS'Y, WELDMENT, GEMINI
		QTY	QTY	ITEM	PART NO.	DESCRIPTION
		5				
		2	3			
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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)			

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.

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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.

Cleveland

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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 ___

MODEL: 24-CGA-10.2



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 freefloating 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 0402

Cleveland Range Inc.

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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.

> (NOT TO SCALE) SECT. IV PAGE 14

C

Do not connect other

Drain must be vented

Do not use PVC pipe

units to this drain

D DRAINAGE

1½" dia.

Cleveland Range reserves right of design improvement or modification, as warranted.

Manufacturer must be notified if unit will

11.00" W.C. Min.

14.00" W.C. Max.

4.50" W.C. Min.

14.00" W.C. Max.

NOTES:

be used above 2,000 feet

144,000 total

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).

NPT for Generator

One (D) 1/4" dia

NPT for Condenser

Contact factory for variances to

clearances.

0402 Litho in U.S.A.

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 Steam leaks around the door.





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 DISSLOVE: (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.