

VULCAN

SERVICE & PARTS MANUAL FOR
ELECTRIC COUNTERTOP
CONVECTION STEAMER
MODEL VSX9000



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Service and Parts Manual MODEL VSX9000 ELECTRIC COUNTERTOP CONVECTION STEAMER

PLEASE KEEP THIS MANUAL

GENERAL

Your Vulcan Steamer is a one-compartment pressureless steam cooker that has been factory assembled and tested to provide for easy installation. It has been factory set when on to maintain water temperature during the ready phase at approximately 205°F (just below water boiling point).

Vulcan steamers are produced with quality workmanship and material. Proper installation, usage and maintenance of your steamer will result in many years of satisfactory performance.

The manufacturer suggests that you thoroughly read this entire manual and carefully follow all of the instructions provided.

WATER QUALITY

The fact that a water supply is potable is no guarantee that it is suitable for steam generation. Your water supply must be within these general guidelines:

TOTAL DISSOLVED SOLIDS	Less than 60 PPM
TOTAL ALKALINITY	Less than 20 PPM
SILICA	Less than 13 PPM
CHLORIDE	Less than 30 PPM
pH FACTOR	7-8

Other factors affecting steam generation are iron content, amount of chloridation and dissolved gases. Water supplies vary from state to state and from locations within a state. Therefore, it is necessary that the local water treatment specialist be consulted before the installation of any steam generating equipment.

Untreated water contains scale producing minerals which can precipitate onto the surfaces in the boiler. Due to the temperatures in the boiler, the minerals can bake onto the surfaces and components. This can result in early component failure and reduced product life.

Mineral scale on components causes several problems:

1. The surfaces of the heating devices become coated with scale, reducing the heat transfer efficiency. This can produce hot spots on the heating elements and result in premature failure.
2. The water level probes become coated with scale. Scale will bridge across the probe insulator from the metal extension which senses the water level in the boiler shell. Once this scale becomes wet, the water level control is unable to maintain the proper water level in the boiler. This situation may cause an electric heating element to fail as a result of the element not being adequately covered by water.

Strainers and filters will NOT remove minerals from the water.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES
Cold water flowing continuously into drain during shutdown.	Either or both solenoid valves are not closing when the steamer is OFF. Contact your Vulcan-Hart authorized servicer or Vulcan-Hart Company, Louisville, KY (phone number is listed on the front of this manual).
Water overflowing into cooking compartment.	Problem with operating probe caused by either: <ol style="list-style-type: none"><li data-bbox="703 611 1474 737">1. Short between probe terminal and body of steamer. Contact your Vulcan-Hart authorized servicer or Vulcan-Hart Company, Louisville, KY (phone number is listed on the front of this manual).<li data-bbox="703 768 1474 926">2. Excessive scale build-up on probe. Contact your Vulcan-Hart authorized servicer or Vulcan-Hart Company, Louisville, KY (phone number is listed on the front of this manual). Have water quality analyzed and corrected immediately to avoid damage to steamer.
Heater elements do not come on.	Problem with contactors or thermostat coated with scalant. Contact your Vulcan-Hart authorized servicer or Vulcan-Hart Company, Louisville, KY (phone number is listed on the front of this manual). Have water quality analyzed and corrected immediately to avoid damage to steamer.

SERVICE

WARNING: THE STEAMER AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE STEAMER. THE COOKING COMPARTMENT CONTAINS LIVE STEAM. STAY CLEAR WHEN OPENING DOOR.

ADJUSTMENT FOR HIGH ALTITUDE LOCATIONS

Your steamer has been factory set so that when it is ON and during the READY phase, it will maintain water temperature in the steam generator tank at approximately 205°F (just below water boiling point). However, for high altitude locations, an authorized Vulcan-Hart servicer must adjust the steamer to achieve this temperature. To adjust:

1. Remove side panel and turn control panel power switch to ON.
2. Open compartment door, and after about 15 minutes, steam will be seen entering the cooking compartment.
3. Turn thermostat shaft counterclockwise to lower temperature until steam just ceases to enter cooking compartment and READY light goes on.
4. Replace side panel.
5. Follow TESTING PROCEDURES below.

TESTING PROCEDURES

WARNING: THE STEAMER AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING OR SERVICING THE STEAMER. THE COOKING COMPARTMENT CONTAINS LIVE STEAM. STAY CLEAR WHILE OPENING THE DOOR.

Once the steamer is installed and all mechanical connections have been made, thoroughly test the steamer before operation.

1. Check that proper water, drain, and electrical connections have been made.
2. Turn main power switch ON. After approximately 15 minutes, the READY light should come on, indicating that the water temperature is 205°F.
3. When READY light comes on, set timer to "5-minute" position. With door open, observe that no steam is entering compartment.
4. Close compartment door. The READY light will turn off and steam should be heard entering the compartment.

5. Check drain line to ensure that water from the cold water condenser is flowing through the drain line.
6. Open compartment door and observe that steam supply to the chamber is cut off (READY light should again come on).
7. Close compartment door and let cooking cycle finish. When timer returns to "0-minute" position, a buzzer will sound signalling the end of the cooking cycle. The buzzer must be turned off manually by setting timer to its OFF position.
8. To shut the cooker down, turn main power switch OFF and leave the compartment door slightly open.

WATER FLOWS INTO DRAIN DURING SHUTDOWN

When steamer is shut down and cold water is running continuously into the open drain, either or both solenoid valves did not close when steamer was turned off.

1. Disassemble solenoid valve(s) and examine for scalant or foreign particles lodged in diaphragm or core tube.
2. Clean valve(s) thoroughly and reassemble, or replace valve(s).

WATER OVERFLOWS INTO COOKING COMPARTMENT

When steamer is first turned on for the day, and the following conditions occur:

- READY light does not come on after about 15 minutes,
- Water begins to overflow into cooking compartment,
- Water fill solenoid valve is open,

then any or all of these symptoms may indicate a problem with the operating probe due to either:

1. A short between the operating probe terminal and body of the steamer. Call your Vulcan-Hart authorized servicer.
2. Excessive scale build-up on the operating probe. This acts as an "insulation" and prevents the probe from sensing the water level. It is therefore unable to close the water fill (solenoid) valve to shut off the water.

As a temporary solution, with power OFF, unscrew probes, check visually, and clean or chip off sealant. Replace probes.

This problem is an indication of severe harmful water conditions. Correct immediately to avoid damage to the steamer. (See WATER QUALITY in this manual.)

HEATER ELEMENTS DO NOT COME ON

When the steamer is turned ON and heater elements do not activate, and therefore, the READY light does not come on, then the contactors may be burned out. If a considerable amount of "chattering" of contactors has been experienced previously, then the thermostat bulb must be coated with scalant and unable to accurately sense water temperature in the boiler, and therefore, unable to control the contactors.

1. Replace contactors.
2. Unscrew thermostat bulb, clean off scalants, and screw thermostat bulb back in.

This problem is an indication of inadequate water quality and is not covered under warranty. Have water quality analyzed and corrected immediately to avoid complete malfunction of the steamer.

COOKING CYCLE DOES NOT OPERATE

Observe that the READY light is on. When the door is opened, the door switch will place the set cooking time on hold and shut down the heater elements. If cooking, steam generating and set time fail to resume when the door is closed, then check for a problem with the switch.

1. Close the door. Both the main power switch and READY light should be ON.
2. Set timer. READY light will go off and cooking should begin.

REPLACEMENT PARTS LIST

REPLACEMENT PARTS ORDERING

Parts may be ordered only from your authorized parts and service depot.

The following information must accompany a replacement parts order or it cannot be filled.

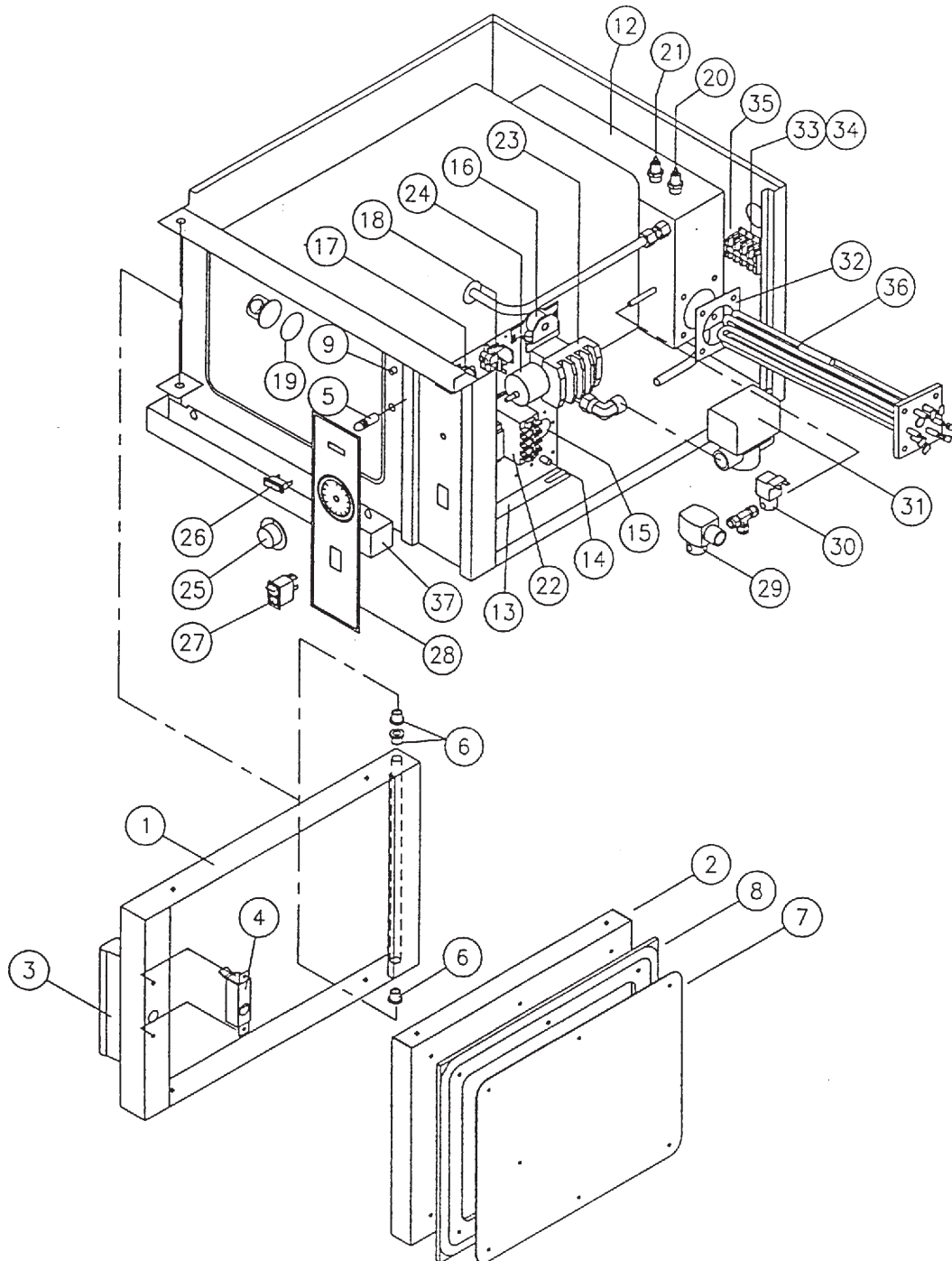
- A. Model and style or serial number.
- B. Voltage, amperage and motor phase.
- C. Appliance finish, permafinish, stainless steel, etc. (if applicable to part to be replaced).

Use rating plate located inside cabinet door panel to help you obtain the information listed above. This plate will provide all the necessary information required by the service agency.

If you need assistance in locating your nearest authorized parts and service depot, contact Vulcan-Hart Product Service Department at the telephone number shown on the front cover of this manual.

ALL SERVICE PERSONNEL
WHEN SERVICING THIS EQUIPMENT, USE ONLY
CONTROLS ORIGINALLY SUPPLIED ON THIS EQUIPMENT BY
VULCAN-HART COMPANY.
DO NOT SUBSTITUTE.
SUBSTITUTION OF CONTROLS AS STATED ABOVE
WILL AUTOMATICALLY VOID THIS WARRANTY
AND THE CERTIFICATION ASSOCIATED WITH THIS EQUIPMENT.

VSX9000 STEAMER



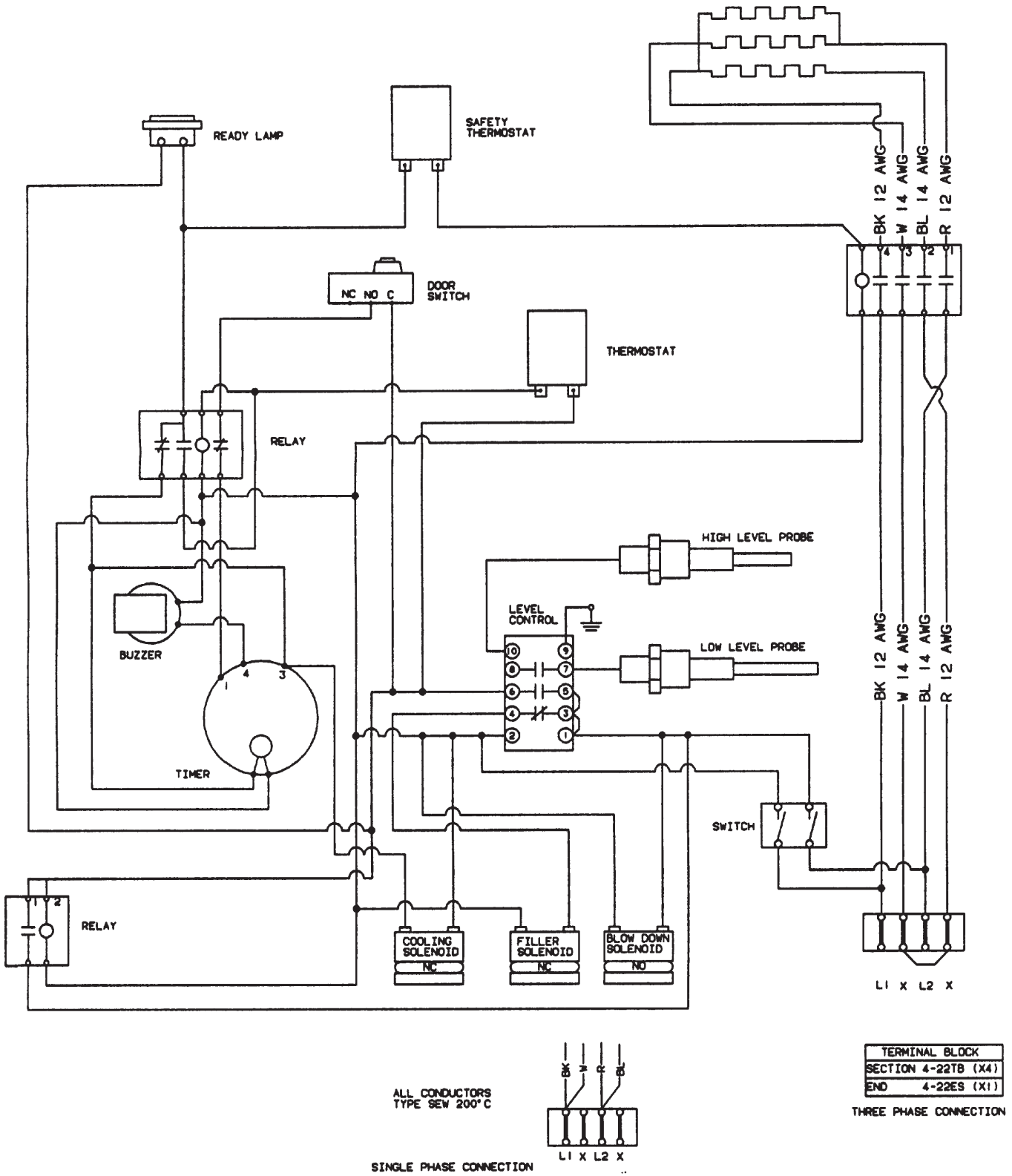
REPLACEMENT PARTS

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	844191	Door Assembly	1
2	844192	Door Panel	1
3	844193	Door Handle	1
4	844194	Latch Assembly	1
5	840496	Striker	1
6	840479	Door Bushing	1
7	844195	Gasket Plate	1
8	844196	Door Gasket	1
9	842049	Door Switch	1
	844197	Door Actuator (NS)	1
	840499	Rack Slide (NS)	2
12	844198	Tank Assembly	1
13	844199	Component Mounting Plate	1
14	881973	Thermostat	1
15	844200	High Limit Thermostat	1
16	843814	Buzzer	1
17	843812	Relay	1
18	843813	Relay	1
19	844201	"O" Ring	1
20	844156	Probe 2½"	1
21	844157	Probe 3½"	1
22	843818	Level Control	1
23	836997	Contactora	1
24	843806	Timer	4
25	843781-3	Dial	1
26	843807	Pilot Light	1
27	844202	Power Switch	1
28	844260	Control Panel	1
29	843803	Solenoid Valve	1
30	843802	Solenoid Valve	1
31	843804	Blow Down Solenoid	1
32	836926	Element Gasket	1
33	840511	Terminal Block	4
34	843969	End Section	1
35	881978	Transformer	1
36	836927	Element Assembly 208V 7.5KW (Select as Required)	1
	836928	Element Assembly 240V 7.5KW (Select as Required)	1
	836929	Element Assembly 480V 7.5KW (Select as Required)	1
37	844261	Trough	1
	843940	"Y" Strainer (NS)	1
	844262	Compression Elbow (NS)	1
	843941	Connector (NS)	1
	844204	Leveler (NS)	4

(NS) Not Shown

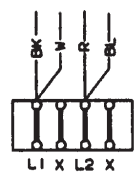
WIRING DIAGRAM

THREE ELEMENTS 2500W 208V, 220V OR 240V



ALL CONDUCTORS
TYPE 9EW 200° C

SINGLE PHASE CONNECTION



TERMINAL BLOCK
SECTION 4-22TB (X4)
END 4-22ES (X1)

THREE PHASE CONNECTION