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TECHNICAL MANUAL

**ELECTRICALLY OPERATED
COOKER, STEAM
FEDERAL SPEC S-C-1474B
TYPE SC1474-3106MA1**

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RECORD OF CHANGES

CHANGE NO.	DATE	TITLE OR BRIEF DESCRIPTION	ENTERED BY

NOTE

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TABLE OF CONTENTS

Chapter/Paragraph	Page
1 GENERAL INFORMATION	1-1
2 INSTALLATION INSTRUCTIONS	2-1
3 MARKET FORGE STEAM-IT PRESSURE COOKER MODEL SB-ST-E	3-1
4 TEST KITCHEN BULLETIN 21 B	4-1
5 MAINTENANCE	5-1
6 MASTER PARTS LIST	6-1
7 VENDOR PARTS LIST	7-1
8 DIRECTORY OF AUTHORIZED SERVICE & PARTS DISTRIBUTORS FOR FOOD SERVICE EQUIPMENT	8-1

LIST OF TABLES

Table	Title	Page
4-1	Steam Cooking Information	4-1
5-1	TROUBLE SHOOTING GUIDE FOR CLEANING STAINLESS STEEL	5-9
6-1	TROUBLE SHOOTING GUIDE	6-20

LIST OF ILLUSTRATIONS

Figure	Title	Page
2-1	STEAM-IT ELECTRICAL CONNECTION	2-2
2-2	DETAILS - SERVICE CONNECTION	2-4
2-3	MARINE FLANGED FOOT DETAILS	2-6
3-1	STEAM-IT CONTROLS	3-3
5-1	Door Spring Disengagement	5-2
5-2	Door Removal	5-3
5-3	Gasket Removal	5-3
5-4	Door Seal Tension Adjustment	5-4
5-5	STEAM-IT COOKER ASSEMBLY	5-6
5-6	PAN SUPPORT REMOVAL	5-6
5-7	DOOR REMOVAL	5-6
5-8	DOOR ROTATION	5-7
5-9	WASHING INTERIOR INSTRUCTIONS	5-7
5-10	GASKET REMOVAL-WASH INSTRUCTIONS	5-8
5-11	CONTROL FITTING MAINTENANCE	5-8
5-12	TRAP STEAM OLD-NEW MAINTENANCE	5-9
6-1	COOKER COMPARTMENT	6-2
6-2	DOOR HANDLE ASSEMBLY	6-6
6-3	DOOR ASSEMBLY PARTS LIST	6-8
6-4	FULCRUM AND DRAIN ASSY OLD STYLE	6-9
6-5	FULCRUM & DRAIN ASSY NEW STYLE	6-10
6-6	VALVE SAFETY OLD STYLE SHOWN	6-12
6-7	OLD STYLE-BUILT PRIOR TO JULY 1983	6-13
6-8	NEW STYLE EXHAUST VALVE-BUILT AFTER JULY 1983	6-15
6-9	ELEMENT CONTROL SWITCH-OLD STYLE PRIOR TO SEPT 1980	6-16
6-10	ELEMENT CONTROL SWITCH-NEW STYLE BUILT AFTER SEPT 1980	6-17

SAFETY SUMMARY

MODEL SB-ST-E ELECTRIC STEAM-IT COOKER

The following general safety notices supplement the specific warnings and cautions contained in this technical manual. They are recommended precautions that must be understood and adhered to during the installation, operation and maintenance of this electrically operated appliance.

DO NOT LEAVE HAND ON HANDLE

To prevent scalding, the operator should keep his/her hands off the door handle while excess steam/vapor is escaping.

WARNING

BE SURE TO GROUND THE COOKER CHASSES FROM GROUND TERMINAL BOX TO AN OUTSIDE GROUND. REFER TO WIRING DIAGRAM C95-3914 REV A ENCLOSED. ALL RECOMMENDED SAFETY PRECAUTIONS SHOULD BE OBSERVED WHEN CONNECTING THIS UNIT TO THE EXISTING POWER SUPPLY. (Page 2-2)

WARNING

BE CERTAIN THE DRAIN VALVE IS CLOSED AND DO NOT OPEN IT WHILE THE UNIT IS OPERATING, PREMATURE OPENING MAY RESULT IN SCALDING OF THE OPERATOR. (Page 2-3)

WARNING

DO NOT OPEN DRAIN VALVE WHILE UNIT IS OPERATING. PREMATURE OPENING MAY RESULT IN SCALDING OF OPERATOR. (Page 3-2)

WARNING

DO NOT LEAVE HAND ON HANDLE WHILE EXCESS VAPOR IS ESCAPING. SCALDING OF HAND MAY RESULT. (Page 3-3)

WARNING

THE ELECTRIC POWER SUPPLY MUST BE DISCONNECTED PRIOR TO PERFORMING REPAIR/SERVICE WORK ON THE MODEL SB-ST-E ELECTRIC STEAM-IT PRESSURE COOKER (Page 5-1)

WARNING

Because power must be on to adjust pressure switches, be sure to protect against electrical shock. (Page 6-18)

CAUTION

The model SB-ST-E Steam-It pressure cooker cylinder is constructed of a corrosion resistant alclad aluminum alloy. The protective properties of this material afforded to the interior portion of the cylinder which is exposed to water may be destroyed by allowing a film to form. Such a film can be caused by salts or other contaminants in the water. If the water supply is known to be hard or corrosive, a source of treated water should be used. Corrosion may also occur if water is not drained daily. Do not use distilled water. (Page 3-1)

CAUTION

A high degree of mineral salts in water can cause pitting of cooking compartment unless above directions (see NOTE) are followed; the cooking compartment thoroughly cleaned and drained each night; and the door left open. Also, do not scour cylinder with abrasive cleanser. (Page 3-2)

CAUTION

UNDER NO CIRCUMSTANCES SHALL HARDWARE (OR PARTS) BE REPLACED WITH A DIFFERENT LENGTH, SIZE OR TYPE OTHER THAN SPECIFIED IN THE PARTS LIST. THE HARDWARE USED IN THE STEAM-IT COOKER HAS BEEN SELECTED OR DESIGNED SPECIFICALLY FOR THEIR APPLICATIONS AND THE USE OF HARDWARE OTHER THAN THOSE SPECIFIED MAY DAMAGE THE EQUIPMENT AND WILL VOID ANY WARRANTY. (Page 5-1)

CAUTION

DO NOT USE STRONG DETERGENT OR ABRASIVE CLEANERS. PITTING OF ALUMINUM INTERIOR WILL RESULT. (Page 5-2, page 5-5)

CAUTION

IF THE WATER SUPPLY IS KNOWN TO BE HARD OR CORROSIVE, A SOURCE OF TREATED WATER SHOULD BE USED. CORROSION MAY ALSO OCCUR IF WATER IS NOT DRAINED DAILY. DO NOT USE DISTILLED WATER. (Page 5-5)

CAUTION

IF PROBLEM DEVELOPS DURING THE COOKING CYCLE OF THIS ELECTRIC STEAM PRESSURE (15PSI OPERATION) CONSULT THE TROUBLE SHOOTING GUIDE ON PAGE 6-14 THROUGH PAGE IN THIS MANUAL. (Page 6-19)

NOTE

To assure a proper pressure seal, the door gasket must be free of soil, scale and breaks.

NOTE

Should the cooking cycle be started with insufficient water in the compartment, the safety action of the low water cut off will shut the unit down. When adequate water (total six quarts) is added to the chamber, the cooking cycle may begin again.

CHAPTER 1

GENERAL INFORMATION

MODEL: SB-ST-E

SIZE:

18 3/4" wide by 31 1/2" front-to-back

476mm wide by 800mm front-to-back

DESCRIPTION: Shall be a Market Forge Counter Model SB-ST-E marine electrically operated Steam-It, 15 PSI 1.1kg/cm² pressure cooker on adjustable flanged feet.

Steam-it shall have a 3/16" 5mm aluminum welded seamless cooking compartment. Exterior finish shall be stainless steel. Door shall be self-sealing inside type which cannot be opened under pressure. Door shall be 12 gauge stainless steel, removable for cleaning without tools. Door gasket shall be one piece molded, replaceable without tools or cement.

Unit cooking cycle shall be automatically controlled, requiring only the setting of 0-60 minute timer and the insertion of 5 qts. 4.7 liters of water into the cylinder. At the end of the cooking cycle, steam shall be exhausted from cooking compartment and a continuous audible signal shall sound. Unit shall include a safety valve, a steam pressure gauge, exhaust valve silencer, low water cut-off, rinse and fill hose and drain connection, and shall be completely serviceable from the front.

COOKING CAPACITY: Cooking compartment shall have a capacity of:

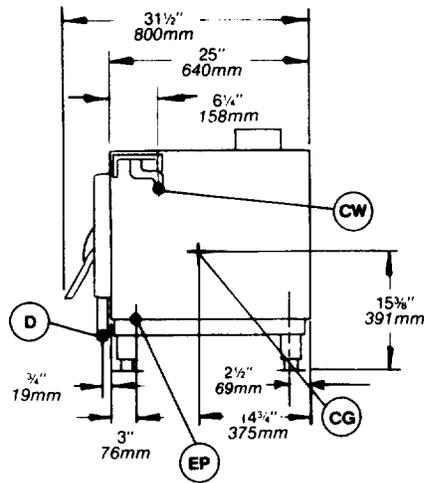
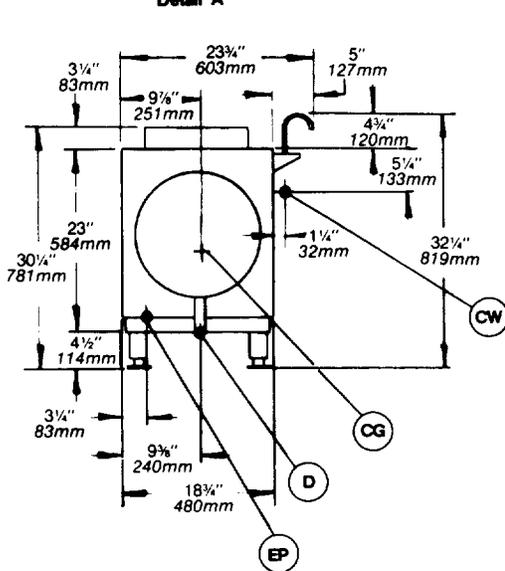
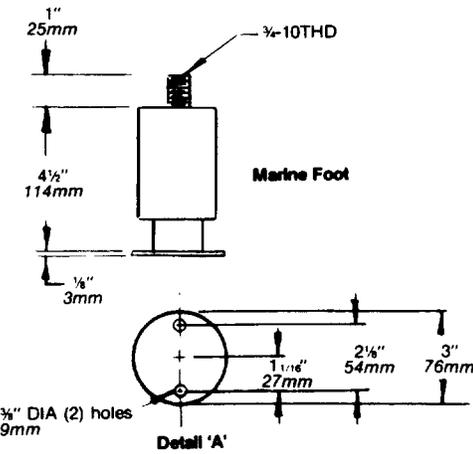
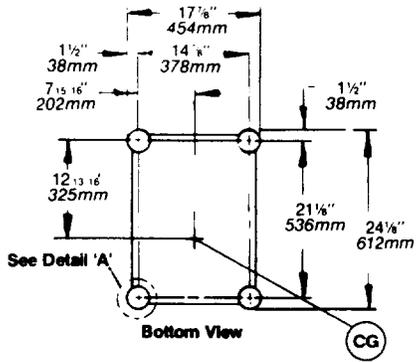
Six 12" x 20" x 2 1/2" pans

Three 1/1 *Gastronorm* pans 65mm deep

OPERATION SHALL BE BY: Electrically operated Steam-It which shall be rated at 12KW and shall be equipped for operation at:

440 VAC, 3 phase (standard)

The manufacturer reserves the right to modify materials and specifications without notice.



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Counter Model Details and Dimensions

SERVICE CONNECTIONS

Electrically Operated	
EP	Power Supply-Use wire suitable for at least 90°C. Amp sized per instructions on power supply data plate. VAC 12KW-3 pH 460(440-480) 16
CW	Cold Water-3/8" 9.5mm O.D. tubing connection to fill hose. Cold water line shall have a maximum of 50 PSI 3.5kg/cm ² and a minimum of 25 PSI 1.7kg/cm ² water pressure.
D	Drain-1/2" 13mm O.D. tubing. Air break required for drain connection supplied by others.
CG	Center of Gravity-with flanged feet

CHAPTER 2

INSTALLATION INSTRUCTIONS

UNPACKING AND ASSEMBLY The Steam-It cooker is shipped in a carton with protective padding and mounted on a wooden pallet. Carefully remove the carton, padding and the bolts securing the unit to the wooden pallet. Inspect assemblies as follows:

1. Inspect unit overall for dents or deformations in stainless steel cabinet enclosures.
2. Make sure visible attaching hardware for all assemblies are not missing or damaged.
3. Inspect timer, indicator light, RESET switch and Pressure gauge to see they are not damaged.
4. Install pan supports so that the horizontal keyhole is at the rear of the cooking chamber and so that the flange and embossments face the middle of the chamber.
5. Install the set (4 each) of Marine flanged feet (3" diameter flanged plates) so the steam cooker can be mounted on a counter top (see [figure 3](#)) for flanged feet details.
6. Install the part number 95-3849 rinse and fill hose unit on the shipboard steam cooker. Refer to the enclosed drawing C95-3897 Rev A for installation details.

NOTE

The cooker is carefully inspected and packaged before leaving the factory. If there are missing components or unit is damaged, notify the carrier immediately.

Should repairs be required, a network of authorized service agencies (refer to [section 7](#)) is available to assist with prompt service. If necessary, please contact:

Product Service Department
Market Forge
35 Garvey Street
Everett, Massachusetts 02149
Telephone (617) 387-4100
Fax (617) 38704456

The Model and serial numbers must be referenced when corresponding with Market Forge. The data plate containing the serial number pertaining to the equipment is located on the front top of the cabinet.

ELECTRICAL CONNECTION: The electrical connection may be made at the terminal box located at the lower left side of the Steam-It by removing the small covering panel. (See [figure 1](#) below).

Power input is 12 KW at 208, 236 or 440 volts, 60 cycle, A.C. Equipment is adaptable for single or three phase. Unit must be grounded. Wires should be brought up through conduit at bottom of cooker. See wiring diagram C95-3914 Rev A (440V/3/60HZ) for instructions on making connection. Unit must be fused separately.

Figure 2-1
Remove this plate to make electrical connection.

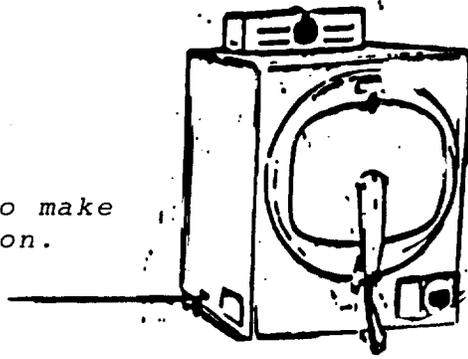


Figure 2-1 STEAM-IT ELECTRICAL CONNECTION

NOTE

Refer to [figure 2](#) for the complete list and locations of the required service connection and electrical details. If problems arise during the installation, check out, consult the Trouble Shooting Guide in the back of this manual.

WARNING

BE SURE TO GROUND THE COOKER CHASSES FROM GROUND TERMINAL BOX TO AN OUTSIDE GROUND. REFER TO WIRING DIAGRAM C95-3914 REV A ENCLOSED. ALL RECOMMENDED SAFETY PRECAUTIONS SHOULD BE OBSERVED WHEN CONNECTING THIS UNIT TO THE EXISTING POWER SUPPLY.

INSTALLATION CHECKOUT After the Steam-It cooker is completely assembled and properly located with electrical supply connected, the cooker must be given a thorough checkout before being put into cooking operation.

Before making this checkout the operator must be thoroughly familiar with the operating procedures in Section E and with the function of each control described in Table 3-1. Reference [Figure 3-1](#) for identification of controls required in the following procedures. If the unit fails to perform as described below, consult the trouble shooting guide for corrective action.

INITIAL CONTROL SETTINGS Before beginning cooker checkout procedures, perform the following steps:

1. Check to see that the timer is off.
2. Visually check interior of cooking compartment and remove any materials, papers, etc. Check to see that pan supports are properly installed (refer to [paragraph 2.1 step 5](#)) and secured.
3. Check pressure gauge to see that it registers zero pounds.

COOKER CHECKOUT. The cooker checkout procedures are as follows:

1. Secure the drain valve (refer to operating instructions S202B [figure No. 1](#)) then pour six (6) quarts of water into the steam-it cooking compartment through the door opening.

WARNING

BE CERTAIN THE DRAIN VALVE IS CLOSED AND DO NOT OPEN IT WHILE THE UNIT IS OPERATING, PREMATURE OPENING MAY RESULT IN SCALDING OF THE OPERATOR.

2. Close the door and lock in position by placing the tongue of the door lock under the roller on the drain casting and pressing downward until door lock comes to a firm stop. This lock makes the initial seal. (When steam pressure builds up in the compartment it will force the door to a tighter closed position.)
3. Turn the Steam-It on by setting the timer to the desired cooking time. Observe pressure increase indicated by pressure gauge.
4. At the close of the preset cooking period, the timer pointer will stop at the "O" position on the dial. This will shut down the Steam-It and automatically open the exhaust valve. The Buzzer will continue to sound until the dial pointer is manually turned to the "OFF" position.
5. Observe that the indicator light goes out when timer is at the "0-minute" position.

Check the pressure gauge to see that the pressure reads zero.

The door will not open while there is steam pressure working against it from within the cooking compartment. The door must be kept locked until the cooking cycle has completely finished, then the door opened to allow vapor to clear.

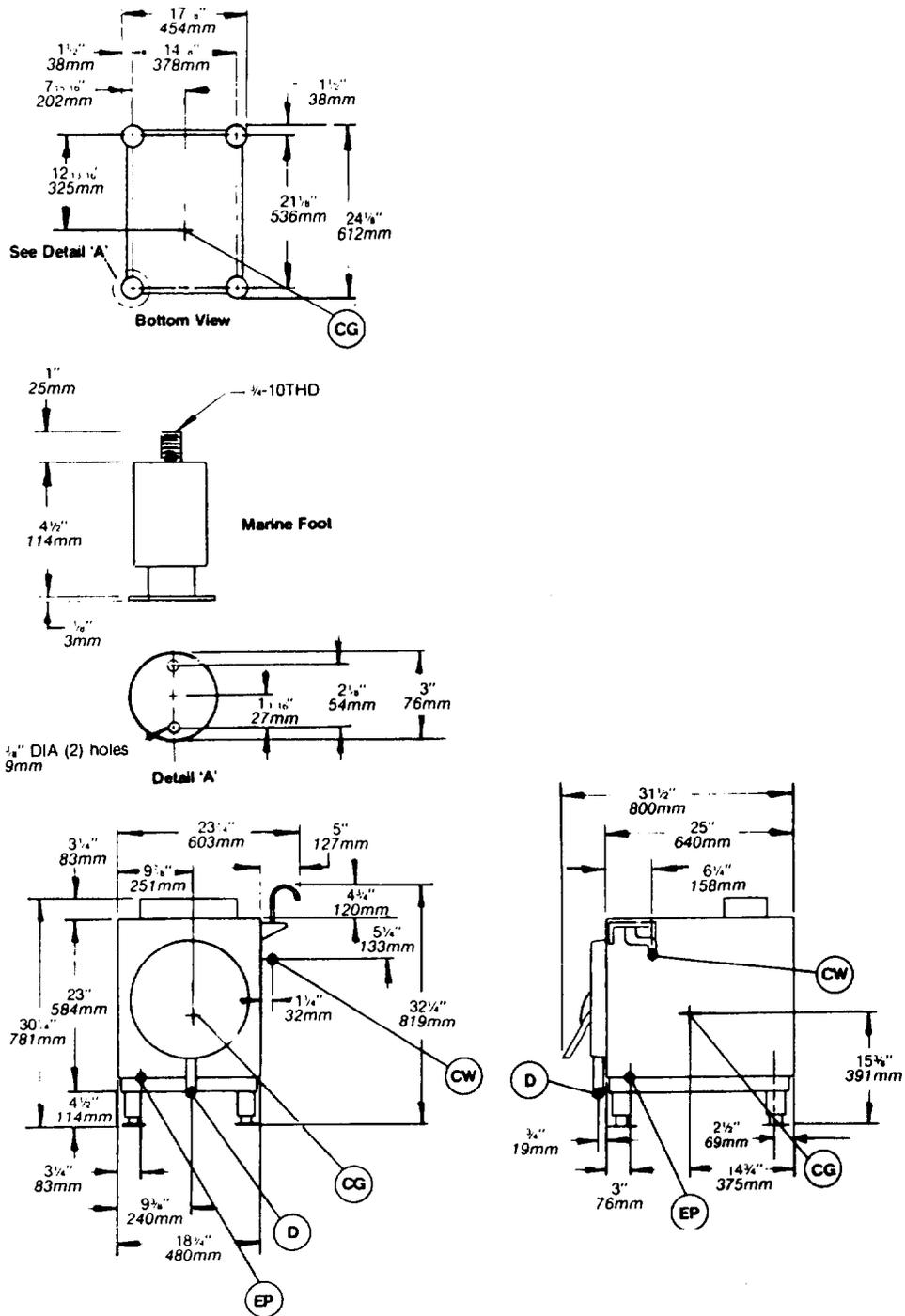
Shut off gas supply by closing the gas shutoff valve.

SHUTDOWN PROCEDURE No special shutdown procedures are required with the exception that the door is left open, timer must be in the OFF position and the gas supply valve closed, (consult local codes for daily shut-off requirement.)

NOTE

Before using the Steam-It for cooking, it is recommended that checkout operations be performed 2 or 3 times in order to determine that it is working properly and to insure cleanliness of the cooking compartment.

FIGURE 2-2



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Figure 2-2 DETAILS - SERVICE CONNECTION

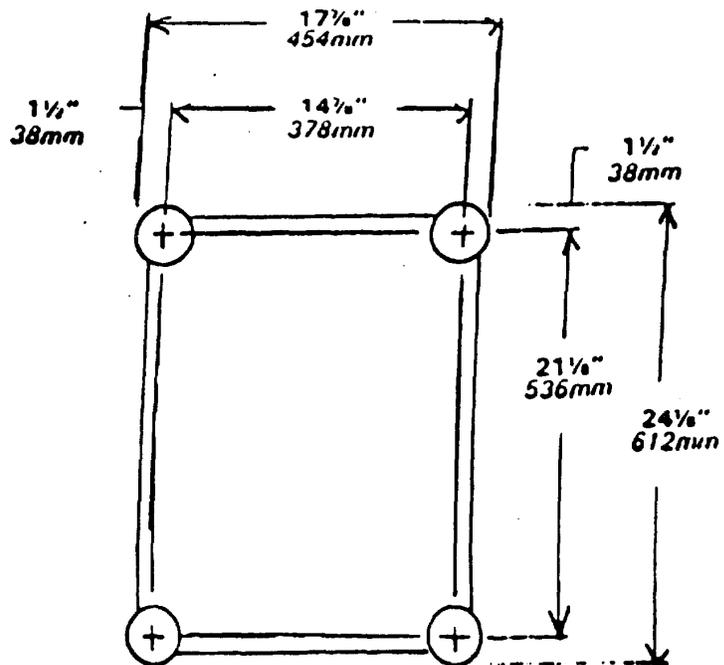
SERVICE CONNECTIONS

<i>Electrically Operated</i>	
EP	Power Supply-Use wire suitable for at least 90°C. Amp sized per instructions on power supply data plate. VAC 12KW-3pH 208 (197-219) 34 230 (220-240) 29 460 (440-480) 16
CW	Cold Water- 3/8" 9.5mm O.D. tubing connection to fill hose. Cold water line shall have a maximum of 50 PSI 3.5kg/cm ² and a minimum of 25 PSI 1.7kg/cm ² water pressure.
D	Drain-1/2" 13mm O.D. tubing. Air break required for drain connection supplied by others.
CG	Center of Gravity-with flanged feet

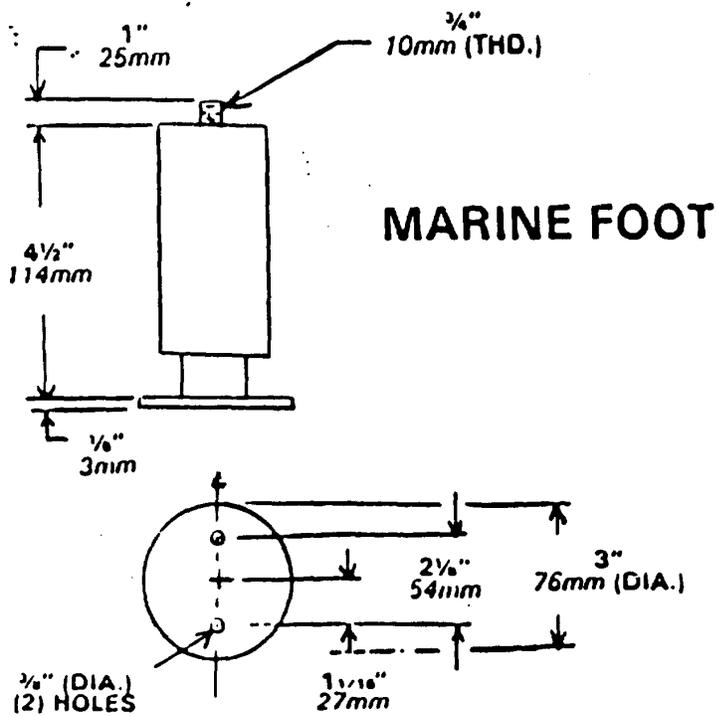
COOKER MARINE FLANGED FEET

**SB-STE
MARINE STEAM-IT
ELECTRIC COUNTER MODEL**

FIGURE 2-3



BOTTOM VIEW



MARINE FOOT

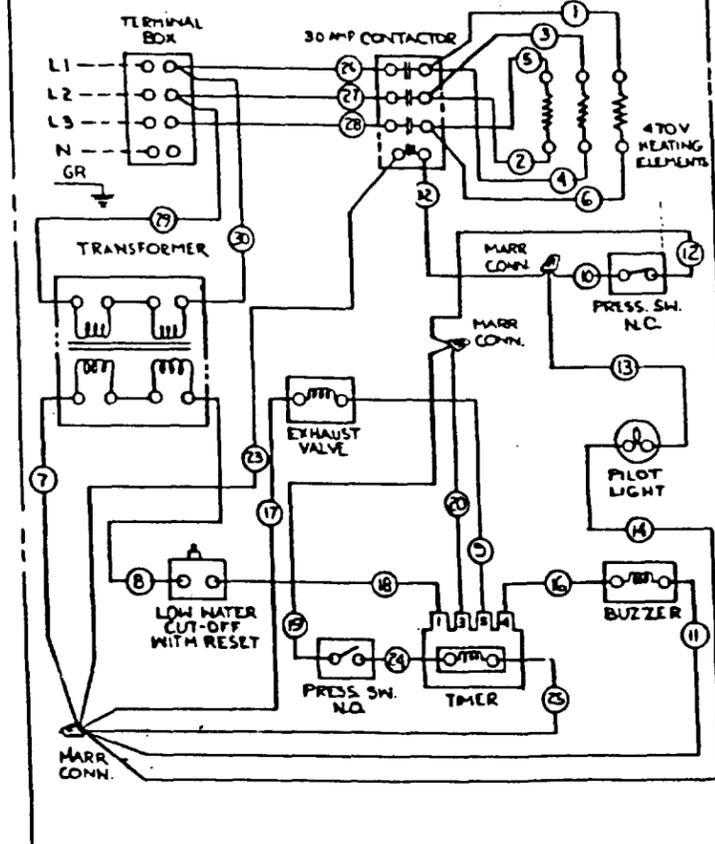
Figure 2-3 MARINE FLANGED FOOT DETAILS

WIRING DIAGRAM

FIG-50
OF 50 PAGES

NOTE:
MODEL SB-ST-E STEAM-IT
PRESSURE COOKER EQUIPPED
WITH 240V/3/60HZ CONTROLS
AND P/N 10-5234 STEP-
DOWN TRANSFORMER

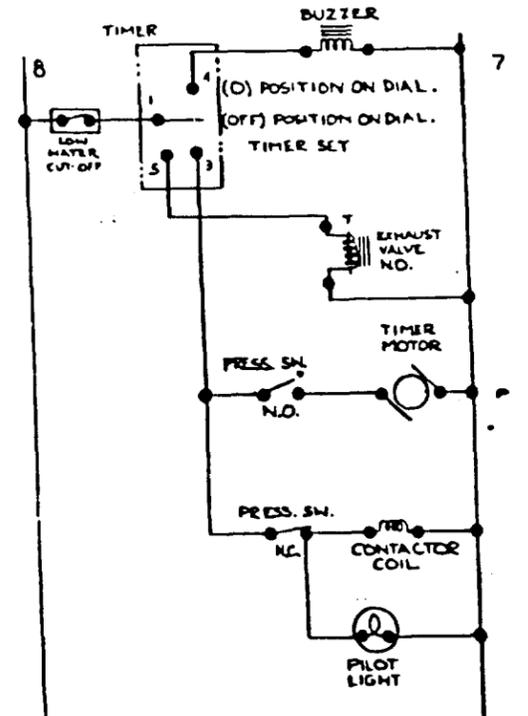
**WIRING DIAGRAM FOR ELECTRIC STEAM-IT
240V 50-60HZ CONTROLS**



POWER REQUIREMENTS	
440 / 460 / 480 VOLTS	16 AMPS
3 PHASE	3 WIRE
440 / 460 VOLTS	12.0 KW
480 VOLTS	12.5 KW

WIRING
1. CONTROLS - ALL WIRING #16 AWG, 2C STRAND, UL & CSA LISTED
G.E. CLR125 X-LINK, 600V.-125°C.
2. HEATING - ALL WIRING #14 AWG, 41 STRAND, UL & CSA LISTED
G.E. CLR X-LINK 600V.-125°C.

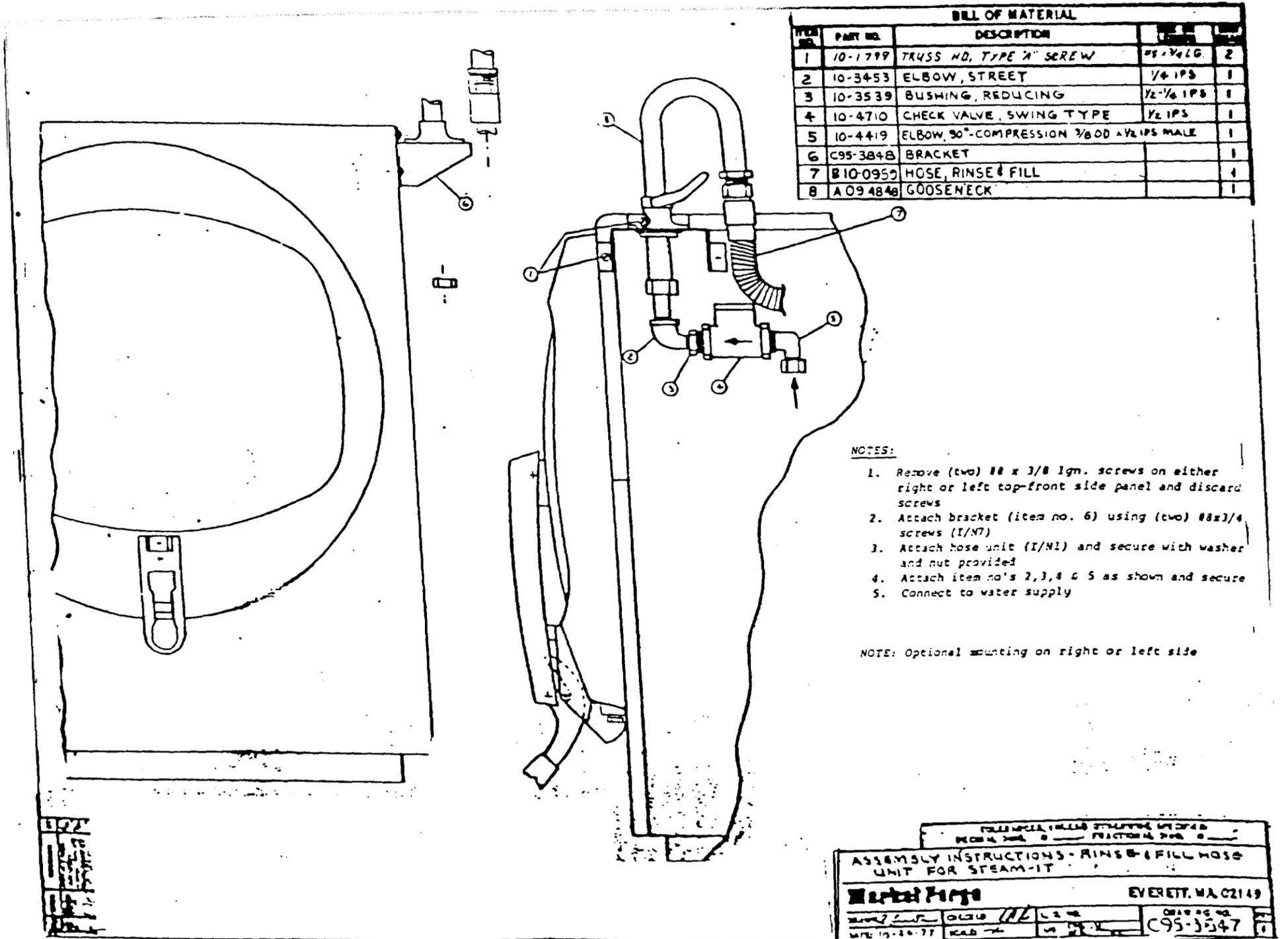
BILL OF MATERIAL			
ITEM NO.	PART NO.	DESCRIPTION	QTY



**CONTROL CIRCUIT
240V. 50-60 HZ.**

Wiring Diagram

RINSE HOSE ASSEMBLY INSTRUCTION



Rinse Hose Assembly

CHAPTER 3

MARKET FORGE STEAM-IT PRESSURE COOKER MODEL SB-ST-E

PLEASE READ CAREFULLY THE FOLLOWING INFORMATION AND THE OPERATING INSTRUCTIONS ON THE FOLLOWING PAGES.

CAUTION

The model SB-ST-E Steam-It pressure cooker cylinder is constructed of a corrosion resistant alclad aluminum alloy. The protective properties of this material afforded to the interior portion of the cylinder which is exposed to water may be destroyed by allowing a film to form. Such a film can be caused by salts or other contaminants in the water. If the water supply is known to be hard or corrosive, a source of treated water should be used. Corrosion may also occur if water is not drained daily. Do not use distilled water.

NOTE

Market Forge will not be responsible for damage resulting from the use of hard or corrosive water, from failure to drain the unit daily, or from inadequate cleaning procedures.

PRINCIPLES OF OPERATION

GENERAL The model SB-ST-E Marine Electric Steam-It pressure cooker (15 PSI operation) consists of one (1) cooking compartment into which pans of food product are loaded through an inwardly opening door. The self-contained cooker is fitted with electric heating elements for 440V/3PH/60HZ operation (16 amps) rated at 12KW input.

OPERATION SEQUENCE With water placed in the Steam-It to the recommended six quart level and the door firmly locked to make a tight seal, a cooking cycle will automatically be performed with the act of setting the timer to the length of cooking time desired. The automatic sequence of operation is:

- STEP 1. Upon setting the timer, a current flows to: The exhaust valve solenoid, activating it to close the exhaust valve: The element pressure control switch, which relays a current flow to the contactor coil causing the contactor to close and direct electricity to the heating elements: The cooking cycle light, which remains in circuit while the heating elements are on.
- STEP 2. As steam is produced within the cooking cylinder, trapped air escapes through the steam trap. The steam trap is induced to close thermostatically when live steam fully replaces the trapped air passing through it. Free-venting will automatically cease and cooking cylinder will become steam-tight. A build-up of cooking cylinder steam pressure will occur.
- STEP 3. When the steam pressure build-up reaches 10 PSI, the timer control switch will activate the timer to start its timing cycle.
- STEP 4. When the steam pressure build-up reaches 14 PSI, the element control switch will cut off the current flow to the contactor, causing it to open and cut off electricity to the heating elements. When cooling causes the pressure to drop to 13 PSI, the element control switch will again activate the contactor to

close and restore the flow of electricity to the heating elements. Thus, by controlling the contactor to open and close intermittently, the element control switch, in effect, maintains the cooking cylinder steam pressures between 13 and 14 PSI.

STEP 5. (Timer reaches "Zero" position) When the timer reaches "Zero" (the end of the cooking cycle), a circuit is completed to the buzzer allowing it to sound while the circuit to the pilot light is broken. The steam exhaust valve will open and the cooking chamber is automatically exhausted of steam. The buzzer will continue to sound until the timer knob is turned to the "Off" position.

The door will not open while there is steam pressure working against it from within the cooking cylinder. The door must be kept locked until the cooking cycle has completely finished, then open the door, allow a second or two for the vapor to clear and remove the foods.

PRELIMINARY PROCEDURES

1. Ensure that electric supply is connected and operating at unit. See Installation instructions.
2. Close drain valve (Fig. 1. No. 3) by turning valve handle clockwise.
3. Hang pan supports (Fig. 1. No. 2) on pan support studs (Cylinder side walls). The horizontal keyhole on the support should be at rear of compartment and vertical keyhole near front (see [Figure 2](#)).
4. Pour approximately six quarts of water directly into Steam-It cylinder.

NOTE

In geographical locations where a high amount of lime and alkaline (salt-lime substance) deposits are present in water supply, add two tablespoons of vinegar directly into six quarts of water in Steam-It compartment prior to starting cooking cycle. If more water is added to maintain required level, an occasional tablespoon of vinegar may be added as well, in order to compensate for new mineral deposits in fresh water.

CAUTION

A high degree of mineral salts in water can cause pitting of cooking compartment unless above directions (see NOTE) are followed; the cooking compartment thoroughly cleaned and drained each night; and the door left open. Also, do not scour cylinder with abrasive cleanser.

WARNING

DO NOT OPEN DRAIN VALVE WHILE UNIT IS OPERATING. PREMATURE OPENING MAY RESULT IN SCALDING OF OPERATOR.

PREHEATING Before each initial operation of Cooker and at any time when compartment is cold, a 5 to 8 minute preheating period is required. To preheat cooking compartment, proceed as follows:

1. Close door and lock in position by placing door handle tongue (Fig. 1. No. 4) under roller on drain casting (Fig. 1. No. 5). Press downward on door handle until door is secured.
2. Set 60-minute timer (Fig. 1, No. 7) to 5 minutes by turning past 10 and back to 5 to ensure proper setting. Indicator light will come on.

3. When preheating is ended (approximately 5 minutes) and buzzer sounds, turn timer to OFF and allow pressure to return to zero PSI on pressure gauge (Fig. 1. No. 8).
4. Open compartment door slightly by pulling up on latch handle (Fig. 1. No. 6) to allow remaining vapor to escape before raising door to full open position.

WARNING

DO NOT LEAVE HAND ON HANDLE WHILE EXCESS VAPOR IS ESCAPING. SCALDING OF HAND MAY RESULT.

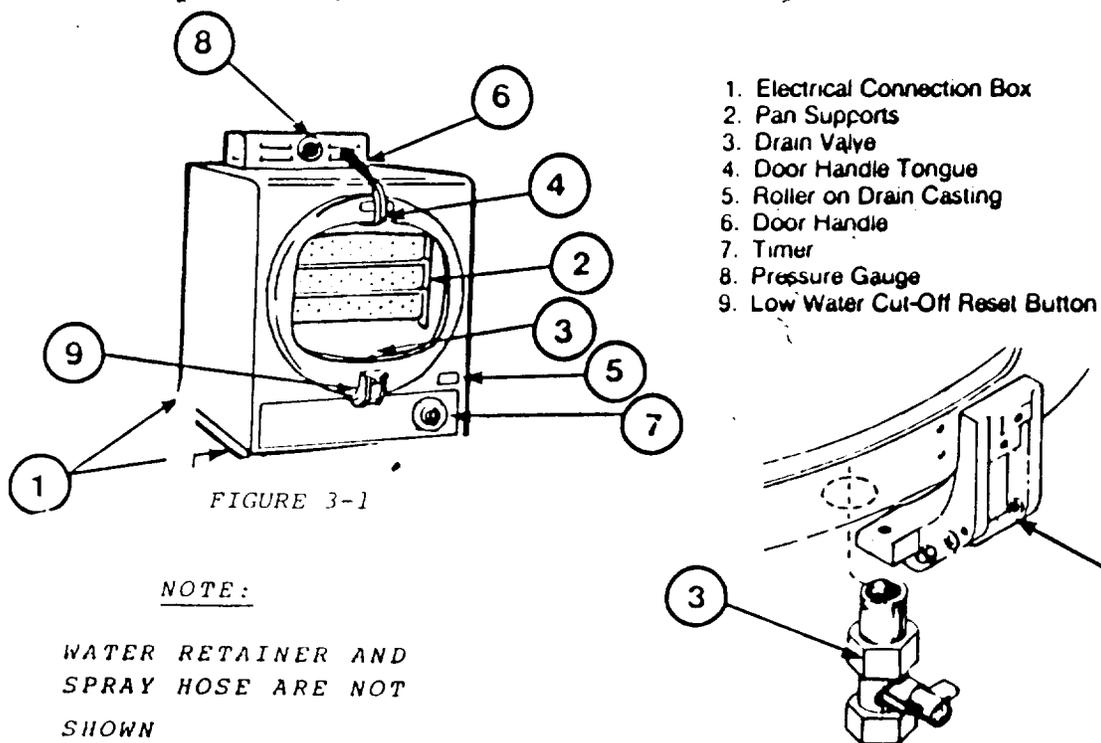


Figure 3-1 STEAM-IT CONTROLS

Once the preheating cycle is completed, the cooker compartment may be loaded. The following procedures should be followed:

- (1) Insert the pans of food into the pan support located on the right and left side of the cylinder.
- (2) Close the door and lock in position by placing the door handle tongue under the roller on the drain casting (refer to [figure 3-1](#)). Press downward on the door handle until the door is secured.
- (3) Set the timer for the desired cooking time (refer to Test Kitchen Bulletin No. 21B - [section 4](#) page 4-1 through page 4-3) by timing the timer past the desired setting and then back.

NOTE

The timer will not start until the unit is at a minimum of 9 PSI as indicated on the pressure gauge.

- (4) At the completion of the required cooking cycle, steam will automatically exhaust. When the pres-

sure reaches zero PSI on the pressure gauge, the cooker compartment door can be released by pulling on the door latch handle. The operator should allow a few seconds for the remaining vapor to leave the cylinder before completely opening the door. To stop the buzzer, turn the timer to the OFF position.

- (5) The next step is to remove the cooked food, add any desired seasoning and transfer it to the serving area.

NOTE

If perforated pans are used, they should be underlined with a solid pan.

- (6) Check the water level in the cooker before starting another cooking cycle. The water should be at the six (6) quart level.

NOTE

If the unit is operated with an insufficient amount of water, the low water cut off will shut the unit down. When the required amount of water is added, the unit will be operational again after the LOW WATER CUT-OFF BUTTON is pressed. However, if the unit does not start after pressing the reset button, more time will be needed before the reset button starts the unit. Should a cooking cycle be interrupted by the low water cut off, the food in the Process of cooking will be affected. Proper compensation should be made for cooking already performed and a new cook cycle determined.

- (7) Clean the unit thoroughly at the end of each day the cooker is used. Ensure that the cylinder is left dry and the compartment door is left open.

CHAPTER 4

TEST KITCHEN BULLETIN 21 B

FACTS ON PARADE

1. All foods, except cakes and pastry, can be cooked in a steam cooking unit.
2. Steam cooked meals have greater nutritional value since they retain most of their vitamins and minerals.
3. Because foods are cooked faster by the higher temperatures of steam cooking, they can be prepared closer to serving time, insuring maximum freshness.
4. Steam cooked food has a higher percent yield - more portions per dollar spent.
5. The principle upon which the steam cooker is based can be likened to the domestic pressure cooker.
6. The principle upon which the steam jacketed kettle is based can be likened to the domestic double boiler.
7. Food may be served from the same pan in which it is steam cooked, thus reducing food breakage since there is no extra handling or transferring of food from cooking pans to serving pans. It also reduces pot washing tasks.
8. Some important advantages of steam cooking are: - labor saving, reducing operating costs, space saving and the lifting of heavy stock pots is eliminated.
9. Rice and spaghetti products, if thoroughly wet at the start of the cooking process, are very easily prepared.
10. Foods such as potatoes, poultry, seafood and some meats may be blanched in the steam cooker, thus reducing the total cooking time and grease absorption.
11. Fuel is used only when the steam cooking unit is in operation.
12. The steam cooker will loosen foods burned on pans making washing easier.
13. Solid pans are recommended when liquid is to be retained and perforated pans when the liquid is not to be retained.
14. Eggs may be cooked out of the shell if they are to be chopped which eliminates peeling after steaming.
15. Frozen or stale bread may be readied for serving with a small amount of steam.
16. Meats may be sauteed in the kettle before any liquid is added. Sauteeing seals in the meat juices and helps to retain flavor.
17. The steam cooker can be opened during the cooking period (by first releasing the steam pressure) to add or remove items. If any time is lost, an adjustment may be made on the timer.
18. All frozen foods must be thoroughly defrosted in order to retain the most satisfactory results.
19. Steam Cooking Information, including recommended pan size and type, weight per pan, cooking times and pan yields are given on the following pages of this bulletin.

Table 4-1 Steam Cooking Information

ELECTRIC STEAM-IT MODEL SB-ST-E

Table 4-1 Steam Cooking Information - Continued

The Steam-it is a pressure cooker which operates at 15 PSI (1 kg/cm ²). This enables the cook to prepare foods nearer to the time of service. The figures given are timer settings and thus from 2-10 minutes must be allowed to bring the compartment pressure up to 9 PSI (.6kg/cm ²). The timer is then activated and the pressure is built up to 15 PSI (1 kg/cm ²) where it remains until the end of the cooking cycle. At the end of this cycle, the steam is automatically exhausted from the compartment and the cooking cycle stops. The door should then be opened and the food removed for service.					
VEGETABLES - Frozen, Defrosted					
Three 2 1/2" (65mm) pans of thoroughly defrosted vegetables may be done at once. For uniform results, it is recommended that not more than 5# (2.26kg) of frozen defrosted vegetables be evenly distributed in a 12x20x2 1/2" (1/1-65mm) perforated pan. Loose pack peas, corn and diced carrots may be cooked, one package per 2 1/2" (65mm) pan, in the frozen state if time does not allow for defrosting.					
ITEM	Recommended 12"x20" (1/1) Perforated Pan	Approx. Raw Weight Per Pan	Number of Pans	Timer Setting in Minutes	Approx. Number Cooked 2 oz. (55g) Servings Per Pan *
Asparagus Spears	2 1/2" (65mm)	5# (2.3kg)	1 2-3	7-8 8-10	23-25
Beans, Green Regular	2 1/2" (65mm)	5# (2.3kg)	1 2-3	7-8 8-10	23-25
Beans, Green French cut	2 1/2" (65mm)	5# (2.3kg)	1 2-3	7-9 9-10	23-25
Lima Beans	2 1/2" (65mm)	5# (2.3kg)	1 2-3	6-7 7-8	23-25
Broccoli	2 1/2" (65mm)	4# (1.8kg)	1 2-3	5-6 6-7	18-20
Brussels Spouts	2 1/2" (65mm)	5# (2.3kg)	1 2-3	6-7 8-10	23-25
Carrots, Diced	2 1/2" (65mm)	5# (2.3kg)	1 2-3	5-6 7-9	23-25
Cauliflower	2 1/2" (65mm)	5# (2.3kg)	1 2-3	7-8 8-10	23-25
Corn	2 1/2" (65mm)	5# (2.3kg)	1 2-3	5-6 7-8	23-25
Peas	2 1/2" (65mm)	5# (2.3kg)	1 2-3	2-3 4-5	23-25
VEGETABLES - Fresh					
Beans, Wax Green	2 1/2" (65mm)	6# (2.7kg)	1 2-3	4-6 7-8	30-35
Broccoli 1/2-3/4" Stalk	2 1/2" (65mm)	6# (2.7kg)	1 2-3	4-5 5-6	25-30
Cabbage Cored-1/4 1/6 of head	2 1/2" (65mm)	5# (2.3kg)	1 2-3	7-9 10-12	12-20
Carrots Sliced	2 1/2" (65mm)	9# (4.1kg)	1 2-3	6-8 10-12	35-40
Cauliflower	2 1/2" (65mm)	6# (2.7kg)	1 2-3	5-6 6-7	30-35
Corn on Cob Husked	2 1/2" (65mm)	1 dozen	1 2-3	5-6 6-8	12
Potatoes French Fry Cut	2 1/2" (65mm)	10# (4.5kg)	1 2-3	7-9 10-12	50

Table 4-1 Steam Cooking Information - Continued

Potatoes Regular Cut	2 1/2" (65mm)	10# (4.5kg)	1 2-3	13-15 17-19	50
Spinach Cut and Cleaned	4" (100mm)	3# (1.4kg)	1 2	1-2 2-3	10-12 4 oz. (110g)
Squash Summer 1" sliced	2 1/2" (65mm)	7# (3.2kg)	1 2-3	5-7 8-10	30-35
Squash Winter Diced	2 1/2" (65mm)	9# (4.1kg)	1 2-3	7-9 10-12	30-35
Turnip Diced	2 1/2" (65mm)	5# (2.3kg)	1 2-3	10-15 15-20	20-25 4 oz. (110g)
VEGETABLES - Canned					
Canned Vegetables	2 1/2" (65mm)	7 1/2# (3.4kg)	1 2-3	4-5 5-7	26-30
MEAT - POULTRY - FISH					
Chicken Cut-up Blanched	8# (3.6kg)	2 1/2" (65mm)	1 2-3	10-15 15-20	15-20 Protein
Chicken Whole	Three 4# (1.8kg)	4" (100mm)	1 2	35-40 45-50	25-30 Protein
Fish Fillets	3# (1.4kg)	2 1/2" (65mm)	1 2-3	7-8 8-10	12-15 Protein
Fowl Whole	Two 5# (2.3kg)	4" (100mm)	1 2	40-45 45-60	20-25 Protein
Frankforts	5# (2.3kg)	2 1/2" (65mm)	1 2-3	1-2 2-3	35-40 Protein
Hamburgers 3 oz. (85g)	5# (2.3kg)	2 1/2" (65mm)	1 2-3	8-10 12-15	20-25 Protein
Lobster 1 # size (450g)	10# (4.5kg)	2 1/2" (65mm)	1 2	3-6 5-8	10-1# (450g)
Meatballs* 1 oz. size (28g)	6# (2.7kg)	2 1/2" (65mm)	1 2-3	15-17 18-20	20-25 Protein
Meatloaf**	15# (6.8kg)	2 1/2" (65mm)	1 2-3	25-30 30-35	50-60 Protein
MISCELLANEOUS					
Pork Chops Loin-4 oz. (114g) w/Bone	6# (2.7kg)	2 1/2" (65mm)	1 2-3	15-20 20-25	24 Protein
Sausages 10 per pound (45g each)	6# (2.7kg)	2 1/2" (65mm)	1 2-3	14-16 17-19	18-20 Protein
Turkey on Carcass	20-22# (9-10kg)	4" (100mm)	1	75-90	50-60 Protein
Turkey off Carcass	10-12# (4.5-5.4kg)	2 1/2" (65mm)	1 2	40-45 45-50	55-65 Protein
MISCELLANEOUS					
Eggs- Out of Shell	4 dozen	2 1/2" (65mm)	1 2-3	3 3-4	48 48
Rice 1 gal. water (3.78 lts)	4# (1.8kg)	4" (100mm)	1 2	17-20 21-25	60 3 oz. (85g) Portions
Spaghetti 1 1/2-2 gal. water (5.7-7.6 lts)	3# (1.4kg)	4" (100mm)	1 2	17-20 21-25	40-45 4 oz. (110g) Portions

*All portions are equivalent to approximately 1/2 cup cooked.

*Raw weight for Meatballs and Meatloaf includes hamburger and extenders and yields 2 oz. (56g) protein plus extenders for 3 oz. (85g) total portion.

CHAPTER 5

MAINTENANCE

PREVENTIVE MAINTENANCE This section contains both preventive and corrective maintenance information. Preventive maintenance may be performed by maintenance personnel at the establishment in which the cooker is installed. It is recommended that user personnel never attempt to make repairs or replacements to the equipment without the assistance of authorized service. Current Director of Authorized Service Agencies included in the rear of this manual.

CAUTION

UNDER NO CIRCUMSTANCES SHALL HARDWARE (OR PARTS) BE REPLACED WITH A DIFFERENT LENGTH, SIZE OR TYPE OTHER THAN SPECIFIED IN THE PARTS LIST. THE HARDWARE USED IN THE STEAM-IT COOKER HAS BEEN SELECTED OR DESIGNED SPECIFICALLY FOR THEIR APPLICATIONS AND THE USE OF HARDWARE OTHER THAN THOSE SPECIFIED MAY DAMAGE THE EQUIPMENT AND WILL VOID ANY WARRANTY.

WARNING

THE ELECTRIC POWER SUPPLY MUST BE DISCONNECTED PRIOR TO PERFORMING REPAIR/SERVICE WORK ON THE MODEL SB-ST-E ELECTRIC STEAM-IT PRESSURE COOKER

DISASSEMBLY AND CLEANING The door assembly must be removed from the cooker compartment for weekly cleaning. Though no tools are needed, care in following procedure is necessary to insure that the door will pass through the compartment opening.

1. With cooking compartment door open, lift pan supports up and forward to disengage from mounting studs. Remove from compartment.
2. Disengage left and right ends of door seal spring by counter-acting the force of the door lift spring with one hand while disengaging studs with the other hand ([Figure 5-1](#)).

SAFETY VALVE CHECK The Steam-It cooker has a maximum allowed working pressure of 17 PSI at 254°F.

The safety valve is a protective device which automatically relieves excessive pressure between 15 1/2 and 16 PSI, in the unlikely event of equipment malfunction. If the safety valve should leak continually with a pressure build-up, or should it cause an interruption of the cooking cycle prematurely (less than 15 1/2 PSI on the steam gauge), it must be assumed that the safety valve is defective and be replaced. However, the steam gauge should first be checked for accuracy before making this determination. The steam gauge should register zero with no pressure in the cooking compartment. If the normal zero setting has advanced somewhat through usage (a characteristic of steam gauges), the steam gauge should be replaced.

COOKING COMPARTMENT A daily cleaning of the cooking compartment is required. Remove pan supports and thoroughly wash and rinse cooker compartment interior with mild soap or aluminum cleaner. Leave door open when cooker is not in use.

CAUTION

DO NOT USE STRONG DETERGENT OR ABRASIVE CLEANERS. PITTING OF ALUMINUM INTERIOR WILL RESULT.

GENERAL INSPECTION Prior to daily use the operator should visually inspect the unit to see that there is no missing or defective hardware, cracked glass on pressure gauge, cracked timer knob, and that pan supports are properly installed.

MAINTENANCE During operation the operator should observe that the timer is indicating proper cooking time, pressure gauge is reading correctly and steam trap and exhaust valve are operating properly. The first indication of defective steam trap operation will usually be evidenced by uneven cooking. If working properly, the steam temperature will be even and cooking will be uniform through the cooking compartment. Trouble may occur either through premature closing of the steam trap before all the cold air has been exhausted or by its failure to close sufficiently to enable a proper steam pressure build-up. Either case warrants the replacement of the steam trap.

REPAIR AND REPLACEMENT Section 6 of this manual contains a listing of all replaceable parts and associated exploded views of the Steam-It. In most cases disassembly procedures will be obvious from the exploded views. Illustrated disassembly and assembly instructions follow for procedures which are not readily apparent.

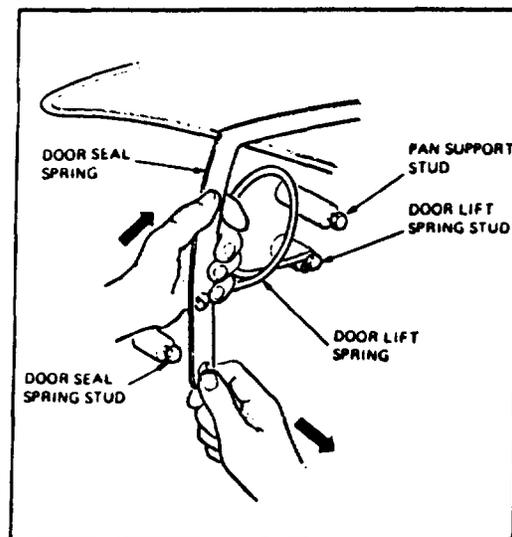


Figure 5-1. Door Spring Disengagement

Figure 5-1 Door Spring Disengagement

3. Push door lift springs to the rear and off studs.
4. Rotate the door assembly out through the door opening, door handle first, as shown in [Figure 6-2](#).
5. Inspect door gasket for cleanliness and wear. If food soil has become lodged behind the gasket or the gasket

is torn, push it off perimeter of door and clean with mild detergent-water solution, or replace as needed ([Figure 6-3](#)). A gasket which is stuck to the door is easily removed by first soaking the entire door in hot soapy water.

NOTE

To assure a pressure seal, the gasket must be cleaned of soil and scale, and be free of breaks.

6. Replace gasket on door and reassemble door assembly in compartment. Open and close door several times to check for correct operation and tight seal of door in closed position.

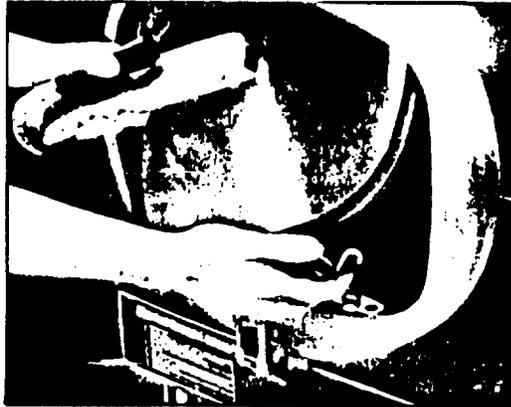


Figure 5-2. Door Removal

Figure 5-2 Door Removal

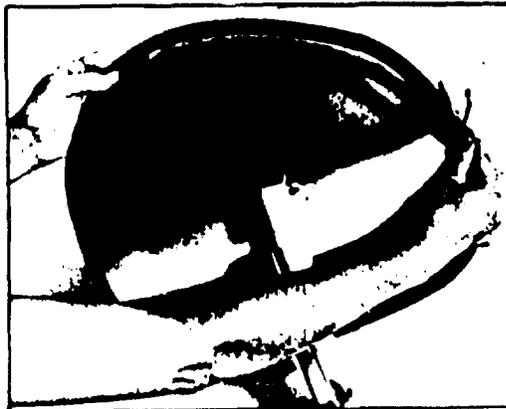


Figure 5-3. Gasket Removal

Figure 5-3 Gasket Removal

DOOR ASSEMBLY The door assembly consists of the door latch and the latch fulcrum assembly. All parts are replaceable as shown in [figure 6-4](#), Door Assembly [Figure 6-3](#), Door Handle assembly [Figure 6-2](#).

GASKET REPLACEMENT The door gasket ([Figure 6-3](#) item 6) is readily replaced by first removing the door assembly from the cooking compartment as explained in Disassembly and Cleaning Instructions. The worn gasket is removed in the same manner as described for cleaning and a replacement substituted. A new gasket

which is difficult to stretch onto the door can be made pliable by first soaking it in hot soapy water. Remounting the door in the compartment completes the replacement.

NOTE

The critical function of the door seal makes it imperative that the gasket be in good condition. For this reason it is recommended that at least one spare gasket be kept at all times.

DOOR SEAL TENSION ADJUSTMENT An adjustment screw is built into the door anchor and fulcrum assembly to allow compensation for normal variation in gasket thickness caused by wear. The adjustment screw is shown in [Figure 5-4](#). If steam escapes from around the door, sealing tension against the door opening can be increased by loosening the 1/4-20 jam nut and turning the socket head adjustment screw counterclockwise with an allen wrench. Installation of a replacement door gasket may result in excessive door latching tension and require clockwise adjustment of the screw. Trial and error will achieve the screw adjustment which both seals the door against the compartment opening yet allows door latching with only moderate force applied to the handle. The final position is set by holding the cap screw with an allen wrench while tightening the 1/4-20 jam nut.

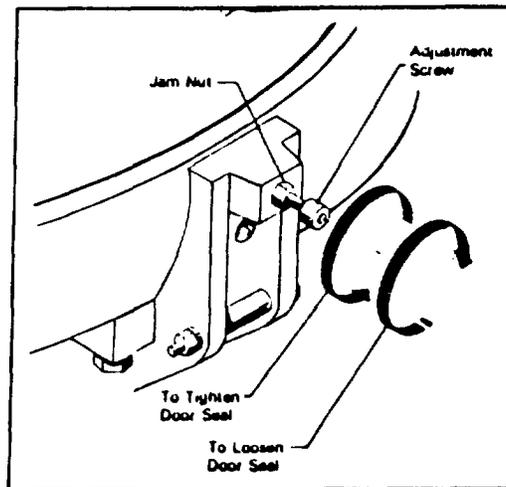


Figure 5-4. Door Seal Tension Adjustment

Figure 5-4 Door Seal Tension Adjustment

DOOR LIFT SPRING REPLACEMENT Should either spring become damaged, it is necessary to replace both left and right springs as a set ([Figure 6-3](#)). The door assembly is removed from the cooking compartment as explained in the Disassembly and Cleaning Instructions. Springs are installed by removing spring bearings (2), screws (1), and worn springs (3 and 4) and mounting replacements. Springs are marked with tabs indicating the left and right side replacement springs for installation on the appropriate side as viewed from the front of the compartment.

EXTERIOR PANEL REMOVAL Access to all internal Plumbing assemblies is from the top and front of the Steam-It cabinet. Whenever internal repairs or replacements are required, the applicable panels must first be removed. These parts are shown in [Figure 6-1](#). The following procedure is required for removal of exterior panels.

1. Raise the cooking compartment door.
2. Remove screws (7) in lower front panel (11) and timer knob

3. Slide lower front panel (11) down from cylinder and lift off.
4. To gain access to terminal block (for primary power), remove screws (1) securing terminal box cover to side panel.

STEAM EXHAUST VALVE AND TRAP REPLACEMENT The components of the steam exhaust valve assembly, trap, safety valve, silencer, pressure gauge and associated plumbing and hardware are replaced by first removing flue assembly and pressure gauge. To remove flue assembly proceed as follows:

1. Unscrew and remove exhaust silencer.
2. Detach the 3/16" copper tube connector from the pressure gauge at the ferrule nearest the pressure gauge. Then, remove the copper tube entirely by freeing it at the other ferrule.
3. Apply inward pressure at either side of the flue with a screwdriver. This will collapse the side walls slightly to allow the small fluted sections of the sheet metal to clear the edges of the flue opening provided in the outer shell of the Steam-It. With the restrictions of the flutes removed, the flue may then be lifted up over the components.
4. Replacement of safety valve, trap plumbing and exhaust valve assembly (as required) may now be made. The components of the steam exhaust valve assembly.

Cleaning & Preventive Maintenance Bulletin 7.

STEAM-ITS This is a Market Forge Steam-It ([Fig 5-5](#)) which must be cleaned once a day.

CAUTION

IF THE WATER SUPPLY IS KNOWN TO BE HARD OR CORROSIVE, A SOURCE OF TREATED WATER SHOULD BE USED. CORROSION MAY ALSO OCCUR IF WATER IS NOT DRAINED DAILY. DO NOT USE DISTILLED WATER.

Daily: [FIGURE 5-6](#) Remove pan supports (5-6) by lifting front up and off stud. Pull back of pan support forward and off stud. Wash with mild detergent and water. Rinse and dry thoroughly.

CAUTION

DO NOT USE STRONG DETERGENT OR ABRASIVE CLEANERS. PITTING OF ALUMINUM INTERIOR WILL RESULT.

Weekly: [Figure 5-7](#) Remove door (5 - 7) (Follow these instructions carefully as the clearances through the portal are close and much confusion can result if not removed in the sequence described below).

Raise the door to a fully open position and disengage the door spring from each of the door spring studs. Do this by counter-acting the force of the door lift spring with one hand while working the end of the door spring off the door assembly with the free hand. Do this on both sides of the door assembly.

When the ends of the door spring have been completely freed from their respective door spring studs, the door lift springs on either side of the door assembly can easily be slipped off their studs.



FIGURE 5-5

Figure 5-5 STEAM-IT COOKER ASSEMBLY

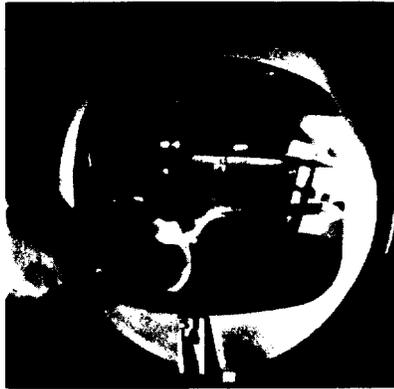


FIGURE 5-6

Figure 5-6 PAN SUPPORT REMOVAL

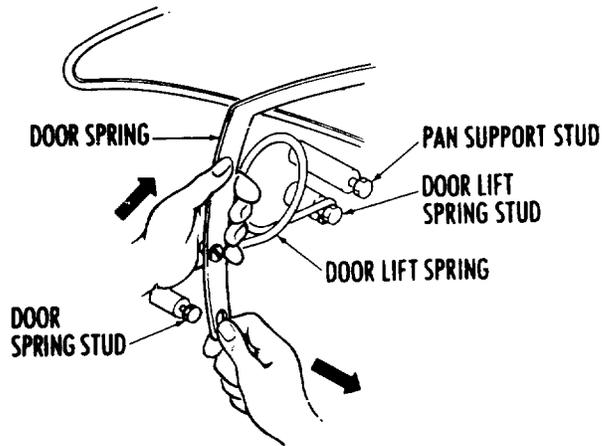


FIGURE 5-7

Figure 5-7 DOOR REMOVAL



FIGURE 5-8

Figure 5-8 DOOR ROTATION

Weekly: [FIGURE 5-8](#) Rotate the entire door assembly out through the door opening. Pass the door handle through the opening first and then one end of the door spring as shown. The remainder of the door assembly will then pass through the door opening quite easily.



FIGURE 5-9

Figure 5-9 WASHING INTERIOR INSTRUCTIONS

Daily: [FIGURE 5-9A](#) and [5-9B](#) Wash interior of Steam-It thoroughly with mild detergent and water ([Fig 5-9A](#)) Rinse and dry thoroughly. Cylinder is aluminum and can pit if not cleaned properly. Be sure to wash drain plug area if your model is so equipped ([Fig 5-9B](#))



FIGURE 5-10

Figure 5-10 GASKET REMOVAL-WASH INSTRUCTIONS

Weekly: **FIGURE 5-10** Gasket should be removed and washed when necessary. Replace gasket only when door has been removed (**Fig 5-10**)

Replace door and pan supports after unit has been thoroughly cleaned.

WEEKLY: **FIGURE 5-11 A-B-C** All equipment in (**5-11A**) is located on the top and at the back of the ST-E cooker only. Check safety valve (**Fig 5-11A**). Lift handle on valve when Steam-It is under pressure. Steam should escape. Note: Dirty water may escape for a few seconds, but then the steam should flow freely.

Steam trap (**Fig 5-11B**) should first allow air to escape and then slowly close as all air is forced out of the compartment. The sound of air escaping is quite noisy but subsides once steam pressure is built up and cooking takes place. If steam trap does not close, it should be replaced.

Exhaust silencer (**Fig 5-11C**) must be cleaned by rinsing in mild detergent and water or changed whenever it becomes clogged.

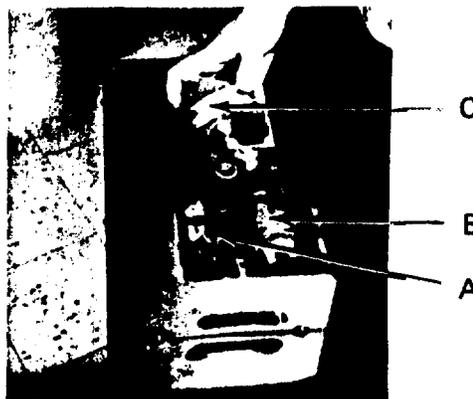


FIGURE 5-11

Figure 5-11 CONTROL FITTING MAINTENANCE

WEEKLY: **FIGURE 5-12 A-B** Your particular unit may be equipped with a different trap -- old style (**Fig 5-12A**) or new style (**Fig 5-12B**). Replacement steam traps will be of the new style.

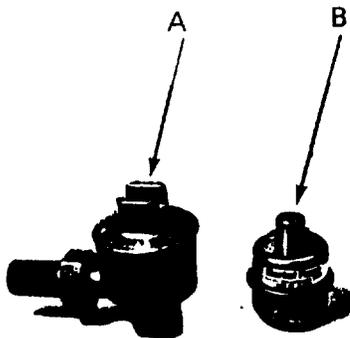


FIGURE 5-12

Figure 5-12 TRAP STEAM OLD-NEW MAINTENANCE

Table 5-1 TROUBLE SHOOTING GUIDE FOR CLEANING STAINLESS STEEL

CLEANING PROBLEM	RECOMMENDED TYPE OR CLEANER
Routine cleaning	Soap, ammonia or detergent with hot water Clear water with rinse
Overall "straw" colored film	Caused by water and detergent residue. Use mild phosphoric acid-type cleaner
Stubborn spots, stains and baked on splatter	Allchem Concentrate, Samae, Cameo Copper Cleaner, liquid or paste Nu-Steel, or DuBois Temp, Goddard's or Revere Stainless Cleaner, scouring powder, (rinse thoroughly). Steel Bright, Lumin, Zud.
Heavy tint, or heavy discoloration	Penny-Brite, Copper-Brite, DuBois, Temp, Tarnite, Goddard's or Revere Stainless Cleaner
Hard water spots, scale	Vinegar
Grease and oil	5% Oxalic acid, 5% sulfamic acid, 5-10% phosphoric acid, Dilac, Oakite #33, Texo 90, Texo 91, Organic Solvents (acetone, benzene, alcohol, trichlorethane cloroethane n.u., etc)

NOTE

Clear water rinsing followed by wipe-down with soft cloth is recommended after all cleaning procedures.

These recommendations are based on tests and studies done by the Armco Research Center, and are provided through the courtesy of:

American Iron & Steel
 Institute's Stainless Steel
 Producer's Committee

CHAPTER 6

MASTER PARTS LIST

HOW TO USE THIS MANUAL This manual contains maintenance and service instructions for the Style C, ST-E Electric Steam-It. Only ST-E Steam-Its which have serial numbers prefixed with the letter "C" may be serviced according to the instructions in this manual.

The exploded view drawing of components are aids to the identification, disassembly and assembly of parts. The parts listings provide information necessary for the ordering of replacement parts (proper part names and part numbers). When requesting parts or service, always furnish the model and serial number of your unit. These numbers are located on the name plate affixed to the top of the Steam-It.

TABLE OF CONTENTS

	<u>Page</u>
<i>MASTER ILLUSTRATED PARTS LIST</i>	<i>6- 2</i>
	<i>6- 3</i>
	<i>6- 4</i>
<i>DOOR HANDLE ASSEMBLY</i>	<i>6- 5</i>
<i>COOKER DOOR ASSEMBLY</i>	<i>6- 6</i>
<i>FULCRUM, DRAIN ASSEMBLY</i>	<i>6- 7</i>
<i>SAFETY VALVE, FLUE, STEAM GAUGE, STEAM TRAP</i>	<i>6- 8</i>
<i>EXHAUST VALVE, OLD STYLE</i>	<i>6- 9</i>
<i>EXHAUST VALVE, NEW STYLE</i>	<i>6-10</i>
<i>ELEMENT CONTROL SWITCH, OLD STYLE</i>	<i>6-11</i>
<i>ELEMENT CONTROL SWITCH, NEW STYLE</i>	<i>6-11</i>
<i>SILENCER, LOW WATER CUT OFF TIMER</i>	<i>6-12</i>
<i>RECALIBRATION PROCEDURE</i>	<i>6-13</i>
<i>TROUBLE SHOOTING GUIDE</i>	<i>6-14</i>
	<i>6-15</i>
	<i>6-16</i>

Table of Contents

NOTE

THIS PARTS AND SERVICE MANUAL COVERS THE PREVIOUS DESIGN UNITS AND THE CURRENT MODEL SB-ST-E MARINE ELECTRICALLY OPERATED PRESSURE COOKER, COUNTER TOP UNIT.

FIGURE 6-1

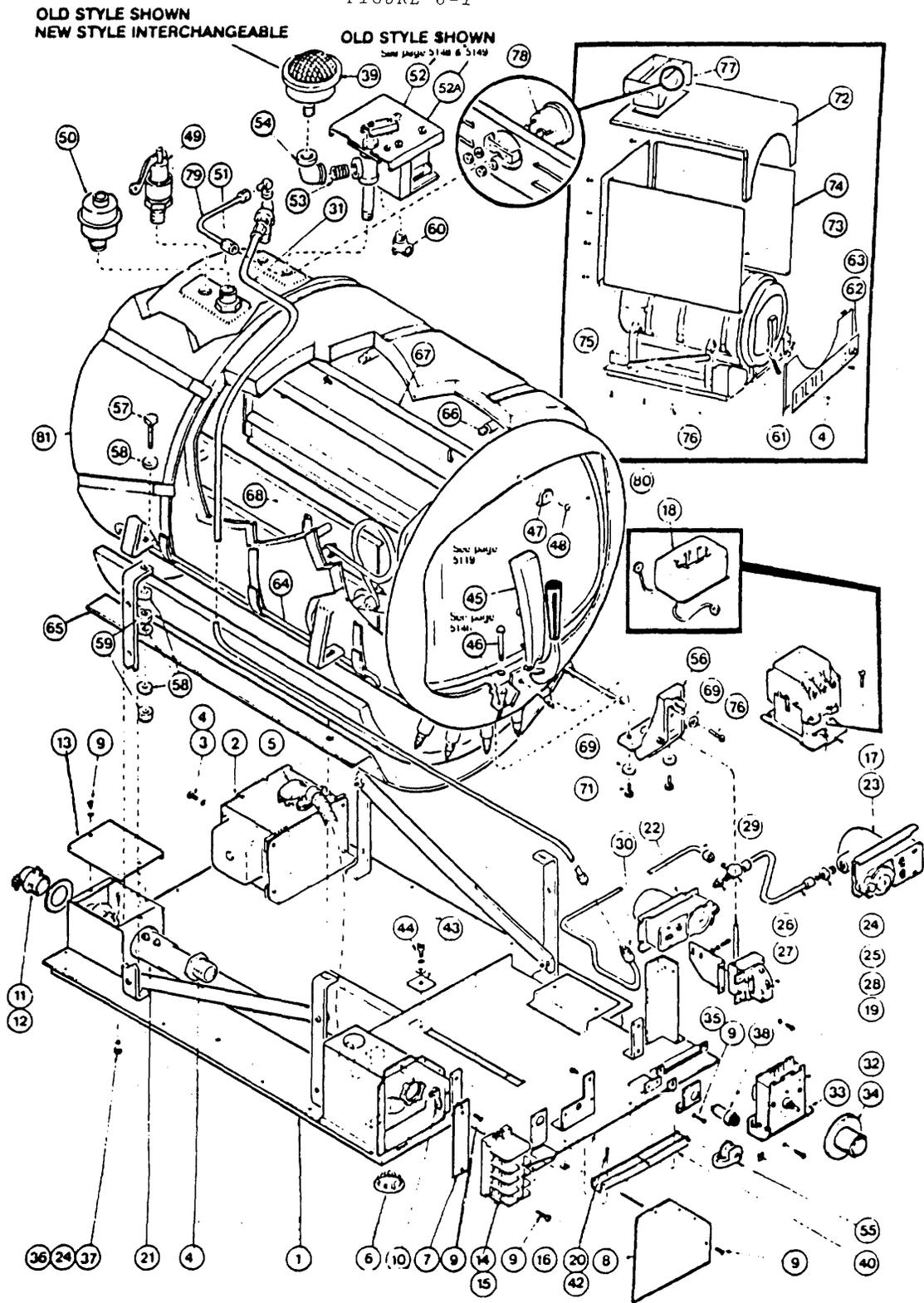


Figure 6-1 COOKER COMPARTMENT

MASTER ILLUSTRATION PARTS LIST

Item No.	Description	Part No.
1	Baseplate Ass'y Fixed	95-3301
2	Transformer (440/480 V. Units)	10-5234
3	No. 10 Lockwasher (stainless steel)	*
4	No. 10-32 x 1/2" Binding Hd Screw (st'n st'l)	*
5	Lead Ass'y., Transformer	95-3394
6	Plug Button	10-3095
7	Plate-Term. Strip Support	95-3289
8	Cover-Term Box	95-3484
9	No. 8-32 x 1/8" Rd Rd Screw (stn'l st'l)	*
10	Ground Lug	10-6969
11	Connector	95-3500
12	Reducing Washer	10-6967
13	Junction Box Cover	95-3489
14	Terminal Strip Section	10-6962
15	Term. Strip End Section	10-6963
16	Baseplate sub-Ass'y-movable	95-3302
17	Contacto-208V, 50/60 Cycle, Complete	10-5466
	Contacto-230/240V, 50/60 Cycle, Complete	10-5467
18	Coil-208V, 50/60 Cycle	10-5470
	Coil-230V, 50/60 Cycle	10-5471
19	Low Water Cut-Off	10-5990
20	No. 6-32 x 1/4" Truss Hd. Screw (st'n st'l)	*
21	Connector	10-6966
22	Pressure Control-Open on Rise	95-0998
23	Pressure Control-Closed on Rise	95-0999
24	No. 10/32 x 1/2" Rd. Screw (st'n st'l)	*
25	Adapter-Straight 1/4" O.D. -1/2" I.P.S.M	10-2904
26	Adapter-Tee 1/8 I.P.S. -1/4 O.D. -1/4 O.D.M	10-3426
27	Reducing Bushing 1/4-1/8 I.P.S	10-3652
28	Tube	95-3305
29	Tube-Pressure Control	95-3304
30	Union-Compr. Fitting 1/4 O.D.	10-1154
31	Tubing-Steam Press Line	95-3387
32	Timer, 60 Minute	95-3404
33	Bracket, Timer	95-3277
34	Knob, Dial	10-6307
35	Bracket-Pilot Light	95-3403
36	Lock Washer	10-2509
37	Hex Nut 10-32	10-2340
38	Pilot Light	10-6669
39	Exhaust Silencer	10-4963
40	Cage, Electric wires	95-0483
41	Conduit-Nipple	10-6964
42	Speednut, 6-32	10-4110
43	Washer	95-0463
44	No.10-32 x 1/8 Hex Socket Hd Cap Screw (stn stl)	*
45	Door Handle Ass'y Complete	95-0144
46	Drain Plug Ass'y Complete	95-0154

MASTER ILLUSTRATION PARTS LIST - Continued

<u>Item No.</u>	<u>Description</u>	<u>Part No.</u>
47	Handle Bumper	10-0226
48	No. 8-32 x 1/8 Binding Hd Screw Ty 'Z' (stn stl).	*
49	Safety Valve	10-4636
50	Steam Trap	10-6156
51	Adapter	10-6158
52	Old Style Exhaust Valve	
	Exhaust Valve-208V, 60 Cycle Complete	95-0944
	Exhaust Valve-230-480V, 60 Cycle Complete	95-0945
	Exhaust Valve-230V, 50 Cycle Complete	95-0946
	Exhaust Valve-208 & 230V, 50 Cycle	95-0946
52A	New Style Exhaust Valve (Not Shown)	
	Exhaust Valve-2201240V, 50160 Hz	09-6545
	Exhaust Valve-208V, 50160 Hz	09-6536
53	Nipple, 1/8 I.P.S	10-3852
54	Elbow 1/8 I.P.S. St'd 90°	10-3851
55	Buzzer (Complete)	10-6665
56	Fulcrum & Crain Ass'y	95-0115
57	5/16-18 x 1/2" sq Hd Screw (st'l Cad. Pl.)	*
58	5/16 Flat Washer, 1/8 I.D. x #16 Ga St'd (st'l Cad. Pl.)	*
59	Hex Nut 5/16-18 (st'l Cad. Pl.)	*
60	Connector, 1/8-90°	10-5036
61	Front Lower Panel Ass'y	95-3388
62	Nameplate Panel (60 Cycle)	10-6595
63	Nameplate Panel (50 Cycle)	10-7096
64	Rod	95-0466
65	Pan Insulation	95-0465
66	Stud	10-1937
67	Pan Rack Ass'y-Right Side	95-2545
68	Pan Rack Ass'y-Left Side	95-2546
69	1/4 Shakeproof Int. Tooth Lockwasher (st'n st'l)	*
70	1/4-20 x 3/4" Rd. Hd. Screw (st'n st'l)	*
71	1/4-20 x 1/8" Hex Hd. Screw (st'n st'l)	*
72	Case-Top Front Upper	95-3131
73	Case-Left Side	95-3140
74	Case-Right Side	95-3141
75	Case-Back	95-3490
76	No 8 x 1/8" Phil. Truss Hd Screw Ty. 'A' (st'l N1 Pl.)*	*
77	Flue Ass'y	95-3135
78	Pressure Gauge	10-0883
79	Tubing-Press. Gauge	95-3270
80	Door Assembly, Complete	95-0124
81	Body Assembly (208V and 236V)	95-0478
	Body Assembly (470V)	95-0479
82	Retainer, Water (not shown)	91-2601
83	Assembly, Hose Fill (not shown)	95-3849
84	Foot, Flanged, 4" (not shown)	91-2449

*These parts are available at local hardware, plumbing and electrical outlets. If not obtainable, special prices will be quoted by Market Forge upon request.

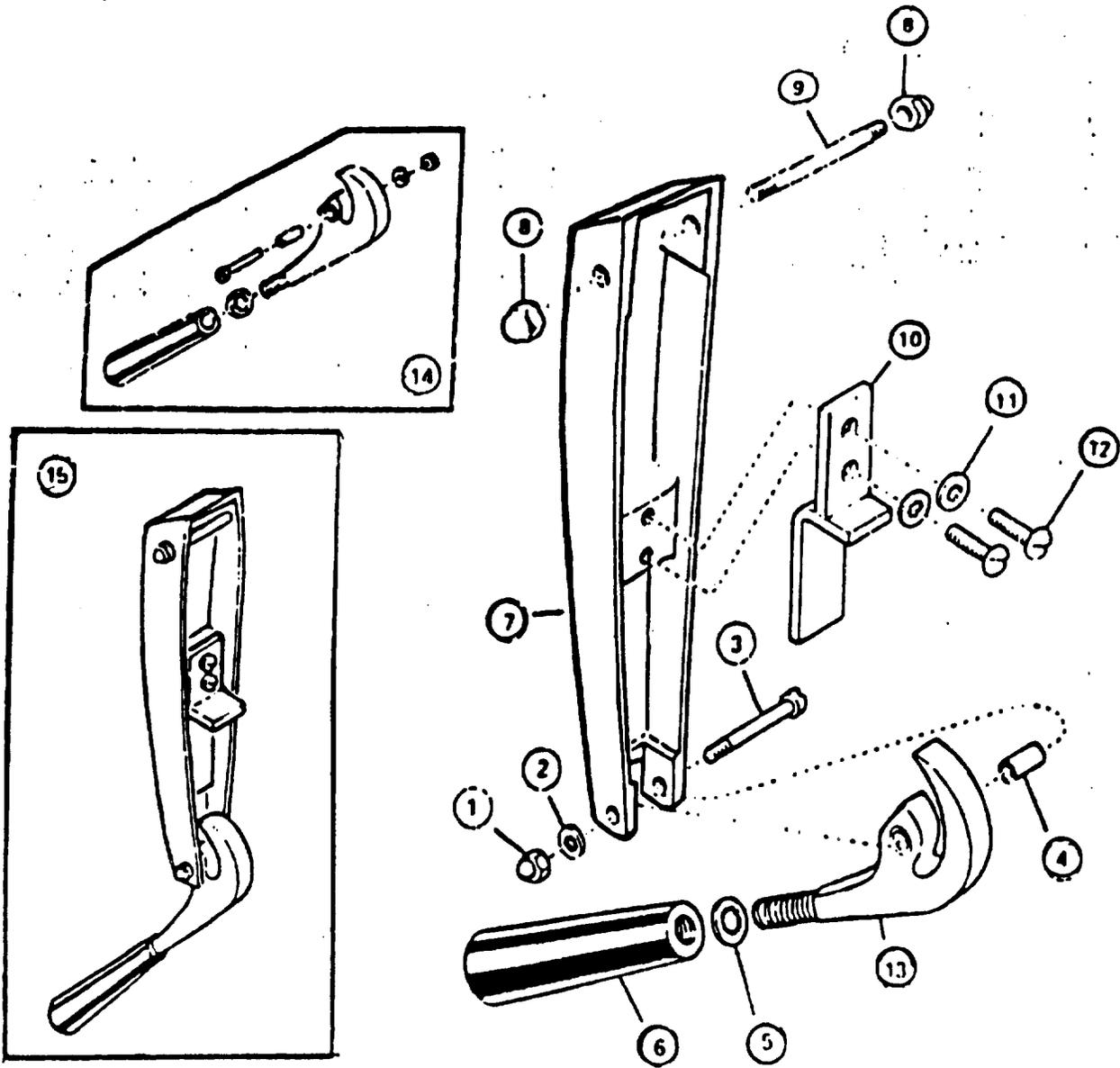


FIGURE 6-2

Figure 6-2 DOOR HANDLE ASSEMBLY

DOOR HANDLE ASSEMBLY - PARTS LIST

Door Handle Assembly Parts List

<u>Item</u>	<u>Description</u>	<u>Part No.</u>
1	No. 10-32 Acorn Nut	10-2318
2	# 10 Shakeproof Lockwasher	10-2514
3	Locking Screw	10-1999
4	Bearing Spacer	95-0120
5	3/8" Shakeproof Lockwasher	10-2517
5	Door Lock Knob	10-0050
7	Door Handle Casting	95-0134
8	1/4"-20 Acorn Nut	10-2359
9	Door Handle Bearing Stud	05-0658
10	Door Handle Bearing Bracket	95-0659
11	1/4" Shakeproof Lockwasher	10-2513
12	1/4"-20 x 5/8" Rd. Hd. Screw*	10-1731
13	Door Lock Ass'y.	95-3223
14	Door Lock Knob Ass'y (Items 1 thru 6 plus 13)	95-0145
15	Complete Door Handle Ass'y. (Hems 1 thru 13)	95-0144

*Obtain at local hardware store

THE COOKER DOOR ASSEMBLY The door of the Cooker has been engineered to establish a positive method of sealing the steam pressure within the cooking cylinder. As steam pressure builds up within the cylinder, the door seal will tend to become more positive. However, the door should be adjusted to make a good initial seal between the door gasket and the door opening without the added assistance of internal cylinder steam pressures. With the simple action of securing the door handle down in a locked position, the door gasket should be sufficiently compressed against the door opening, all the way around, to prevent any steam leakage from occurring.

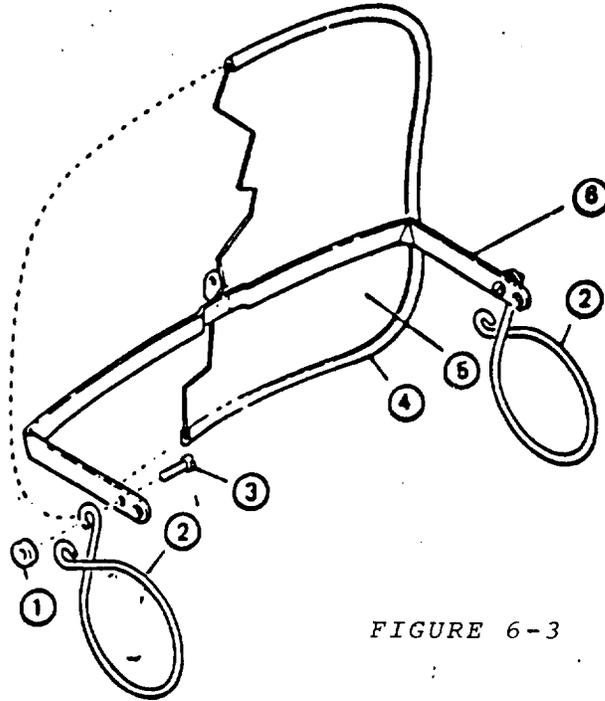


FIGURE 6-3

Figure 6-3 DOOR ASSEMBLY PARTS LIST

DOOR ASSEMBLY - Parts List

Door Assembly Parts List

<u>Item</u>	<u>Description</u>	<u>Part No.</u>
1	Pivot Spring Bearing	10-6765
2	Door Lift Springs (pair)	10-2718
3	10-32 Machine Screw 1/2" long	10-1776
4	Door Gasket	10-2666
5	Door & Door Spring Assy	95-3204
6	Door Spring Complete Door Assembly	95-0127
-	(Items 1 through 6)	95-0124

OLD STYLE
FULCRUM & DRAIN ASSEMBLY
Used from 4/75-10/85

<u>Item No.</u>	<u>Description</u>	<u>Part No.</u>
1	Fulcrum and Drain Casting	95-0116
2	1/4-20 x 3/8 Helicoil	10-3111
3	1/4" Shakeproof Washer	10-2513
4	1/4-20 Cap Screw, 1/2" long	10-1790*
5	10-32 Acorn Nut	10-2318
6	#10-Shakeproof Lockwasher	10-2514
7	Bronze Bearing	95-0198
8	Bearing Spacer	95-0120

OLD STYLE
FULCRUM & DRAIN ASSEMBLY

Used from 4/75-10/85 - Continued

Item No.	Description	Part No.
9	10-32 Machine Screw, 1 1/2" long	10-1999
10	Roller Assembly (Items 5-9)	95-0149
11	1/4-20 Machine Screw, 3/4" long	10-1763*
12	1/4-20 Allen Set Screw	10-2087
13	1/4-20 Jam Nut	10-2358
14	1/4-20 x 5/8 Helicoil	10-3116
-	Complete Fulcrum Assy. (Items 1-14)	
15	Drain Plug Handle	95-0115 95-0658
16	Drain Plug	10-2227
17	1/4-20 Acorn Nut	10-2359
18	Drain & Plug Handle Assy. (Complete)	95-2604

*Obtain at local hardware store

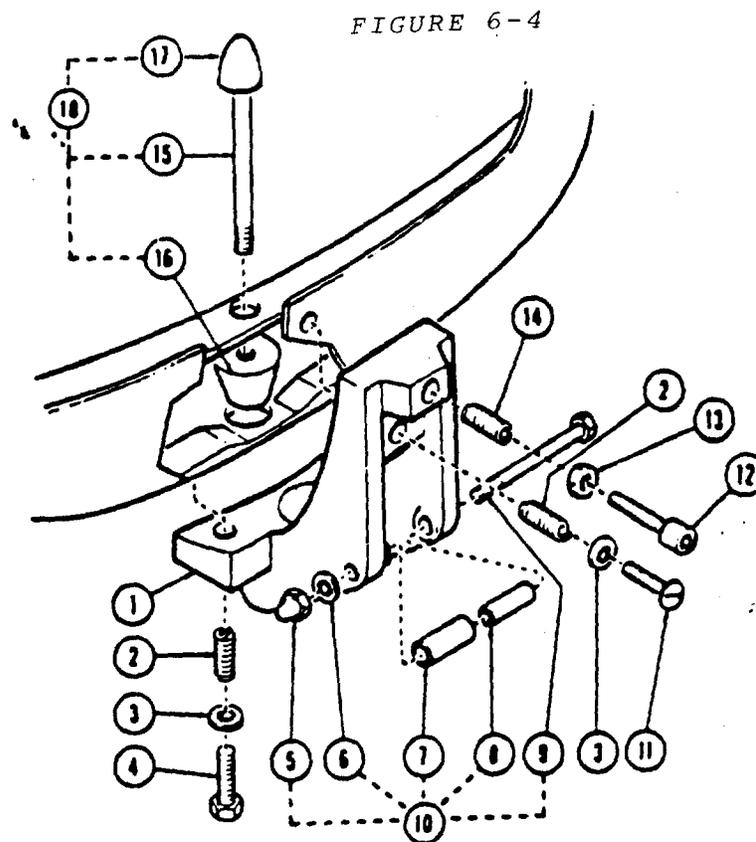


Figure 6-4 FULCRUM AND DRAIN ASSY OLD STYLE

NEW STYLE
FULCRUM & DRAIN ASSEMBLY
Built after 10/85

Item No.	Description	Part No.
1	1/4-20 x 5/8 Helicoil	10-3116
2	10-32 Machine Screw. 1 3/8" long	10-1999
3	1/4-20 Fulcrum Nut	10-2358
4	1/4-20 Allen Set Screw	10-2087
5	1/4-20 x 3/8 Helicoil	10-3111
6	1/4" Shakeproof Washer	10-2513
7	1/4-20 Machine Screw 3/4" long	10-1763
8	Bearing Spacer	95-0120
9	Bronze Bearing	95-0198
10	1/4-20 x 3/8 Helicoil	10-3111
11	1/4" Shakeproof Washer	10-2513
12	1/4-20 Cap Screw. 7/8" long	10-1790
13	#10 Shakeproof Lockwasher	10-2514
14	10-32 Acorn Nut	10-2318
15	Fulcrum and Drain Casting	95-3850
16	Ball Valve	10-1041
	Fulcrum and Drain Assembly (Items 1-15)	95-3992

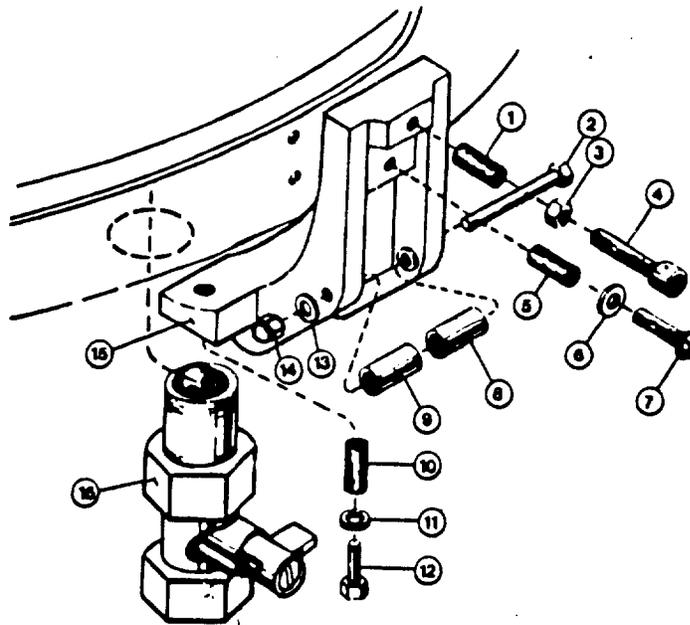


FIGURE 6-5

Figure 6-5 FULCRUM & DRAIN ASSY NEW STYLE

FULCRUM & DRAIN ASSEMBLY The Fulcrum and Drain Assembly is located at the lower front of the cooking cylinder and furnishes a sturdy anchorage for the door locking system of the door handle. Also provided in this assembly is a means of adjustment for the door seal. The drain port and drain plug provide a means of discharging accumulations of water from the cooking cylinder.

ROLLER ASSEMBLY Built Prior to 10/85 (Items 5, 6, 7, 8 & 9) Built after 10/85 (Item 2, 8, 9, 13 & 14)
The Roller Assembly must be kept free-rolling at all times. Should this assembly be allowed to become frozen due to lack of lubrication, undue strain will be put on the door handle and the fulcrum casting while the door is being locked. Use only a dry lubricant such as graphite, as oil or grease will tend to attract dirt to this area.

SAFETY VALVE The Safety Valve is set to automatically relieve the cooking compartment of excessive pressure build-ups by opening at a point between 15 1/2 lbs. and 16 lbs.

CHECKING SAFETY VALVE If the Safety Valve should leak continually with a Pressure build-up, or should it cause an interruption of the cooking cycle prematurely (less than 15 1/2 lbs. on the steam gauge), it must be determined to be defective and be replaced. However, the steam gauge should first be checked for accuracy before making this determination. The steam gauge should register absolute zero with no pressure in the cooking cylinder. If the normal zero has advanced somewhat through usage (a characteristic of stem gauges), the amount of advancement from absolute zero must be subtracted from its registered reading to determine the true steam pressure.

THE FLUE The Flue Serves as a protection shield for the Steam Trap (B), Safety Valve (A). Exhaust Valve (D), as well as a front-facing mount for the Steam Gauge (E). As servicing of these parts may at times require the removal of the flue, an exploded view drawing is provided to show their proper relative positions within the flue and the method of their assembly to the cooking cylinder.

TO REMOVE THE FLUE

1. Unscrew and remove the exhaust silencer (F).
2. Detach the 3/16" copper tube connector (C) from the Steam Gauge (E) at the ferrule nearest the steam gauge. Then, remove the copper tube entirely by freeing it at the other ferrule.
3. Apply inward pressure at either sides of the Flue at points (1) and (2) with a screwdriver. This will collapse the side walls slightly to allow the small fluted sections of sheet metal to clear the edges of the flue opening provided in the outer shell of the Steam-It. With the restrictions of the flutes removed, the Flue may then be lifted up over the pans it houses.
4. To replace the Flue, reverse the above steps.

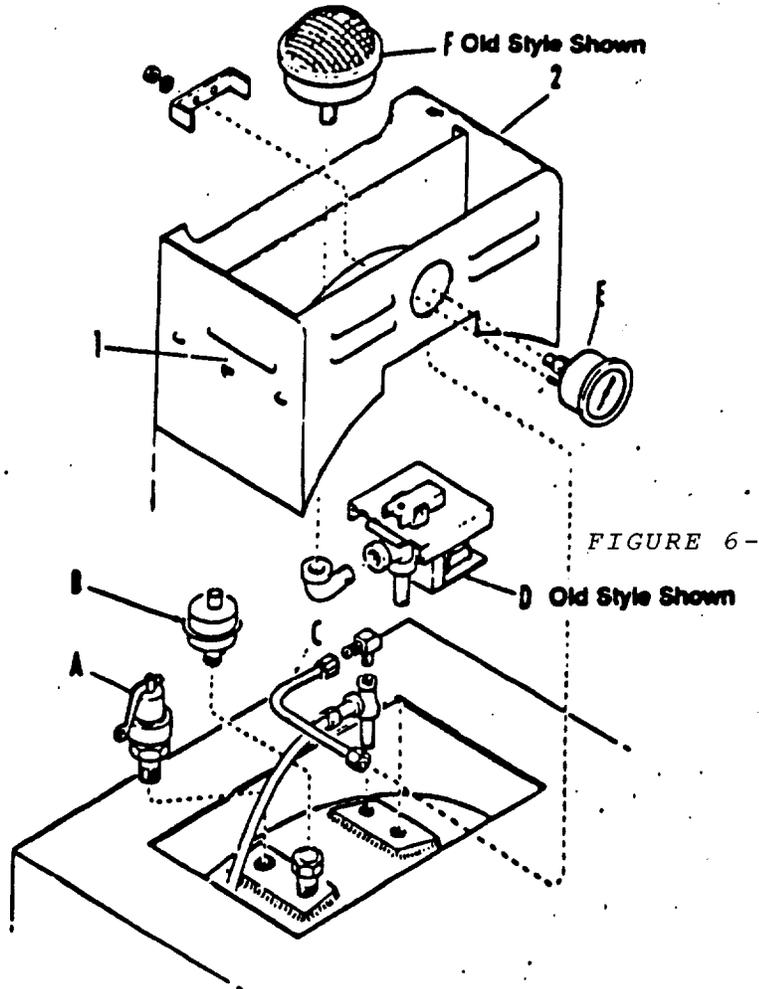


Figure 6-6 VALVE SAFETY OLD STYLE SHOWN

STEAM GAUGE Located at the top rear of the Steam-It and mounted into the forward face of the flue for visibility, the Steam Gauge registers the pressure within the Steam-It cooking chamber. To replace this unit it is necessary to disconnect the 3/16" copper tube connector and remove the two nuts holding the gauge framework in place.

STEAM TRAP The Steam Trap is located within the flue at the top row of the Steam-It. It has the very important automatic, dual function of exhausting all cold air from the cooking compartment and of making a suitable seal to allow a pressure build-up of live steam during the cooking cycle. Failure of this unit to operate properly will result in uneven cooking.

HOW IT WORKS With the introduction of steam into the cooking compartment, the cold air escapes through the Steam Trap. When sufficient generated steam displaces the cold air, it passes through the Steam Trap, and the thermostatic element becomes heated and expands to "make" a seal against the seat. This action encloses the live steam within the cooking compartment and allows a steam pressure build-up to occur.

TROUBLE TESTS AND REMEDIES the first indication of defective Steam Trap operation will usually be evidenced by uneven cooking. If working properly, the steam temperature will be even and cooking will be uniform through the cooking compartment. Trouble may occur either through premature closing of the Steam Trap before all the cold air has been exhausted or by its failure to close sufficiently to enable a proper steam pressure build-up. Either case warrants the replacement of the Steam Trap.

OLD STYLE—BUILT PRIOR TO JULY 1983

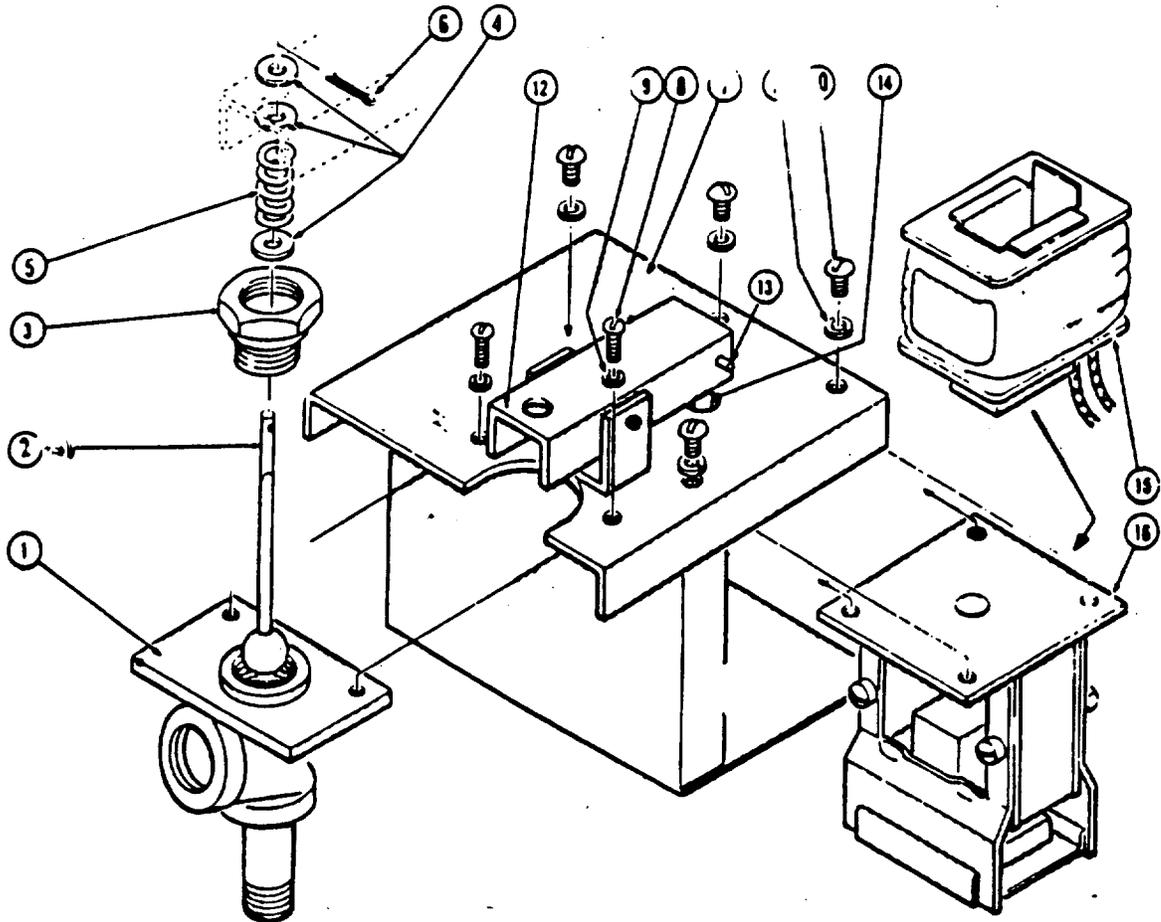


FIGURE 6-7

Figure 6-7 OLD STYLE-BUILT PRIOR TO JULY 1983

EXHAUST VALVE - Parts List

<u>Item No.</u>	<u>Description</u>	<u>Part No.</u>
1	Tee Assembly	95-0756
2	Ball & Pin Assembly	95-0372
3	Diaphragm Body Assembly	95-2077
4	No. 10 Flat Washer 3/16" I.D.x 1/2 O.D.x.086 (Cad. Pl.)	10-2425
5	Spring, Compression	10-4675
6	Pin, Cotter 1/16 x 1/2" (st'n.st'l.)	10-1663
7	Solenoid Bracket Assembly	95-0431
8	No. 10-32 x 3/8" Rd. Hd. Screw (Cad. Pl.)	10-1759
9	No. 10 Lockwasher (Cad. Pl.)	10-2506
10	1/4-20 x 3/8" Rd. Hd. Screw (Cad. Pl.)	10-1701
11	1/4 Lockwasher (Cad. Pl.)	10-2500
12	Channel	96-0755

EXHAUST VALVE - Parts List - Continued

<u>Item No.</u>	<u>Description</u>	<u>Part No.</u>
13	Pin, Roll 1/8 x 1-1/8" (Cad. Pl.)	10-1678
14	Pin, Solenoid	96-0760
15	Coil-208V, 60 cycle	10-6663
	Coil-208V, 60 cycle	10-6664
	Coil-230V, 60 cycle	10-6656
	Coil-230V, 50 cycle	10-6667
16	Solenoid-208V, 60 cycle, complete	10-6662
	Solenoid-208V, 50 cycle, complete	10-6667
	Solenoid-230V, 60 cycle, complete	10-6655
	Solenoid-230V, 50 cycle, complete	10-6660
	Exhaust Valve-208V, 60 cycle, complete	95-0944
	Exhaust Valve-208V, 60 cycle, complete	96-0947
	Exhaust Valve-230-480V, 60 cycle, complete	95-0945
	Exhaust Valve-230V, 50 cycle complete	95-0946
	Assembly (Items 1 thru 6) complete	95-3197

NEW STYLE EXHAUST VALVE

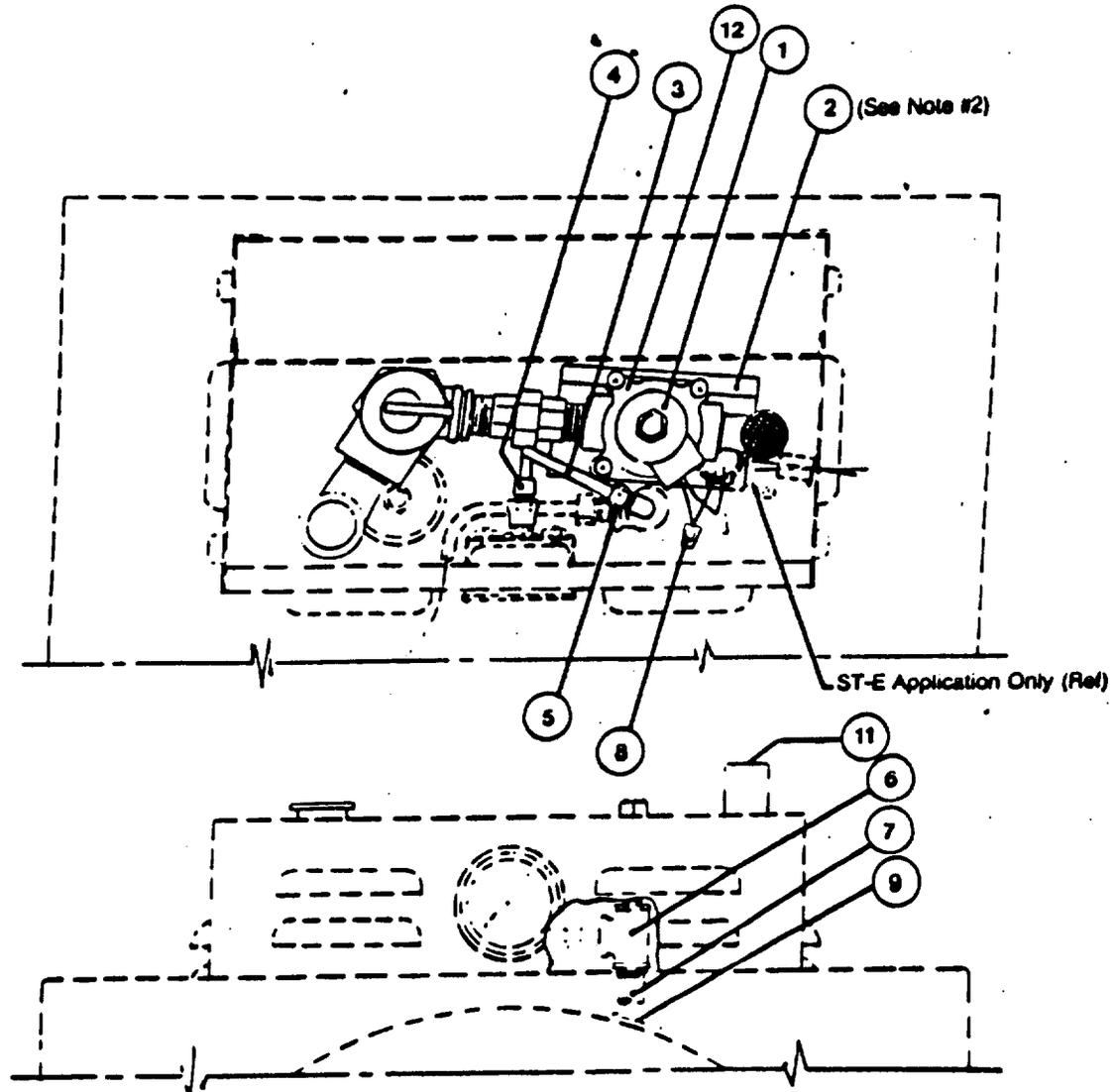


FIGURE 6-8

Figure 6-8 NEW STYLE EXHAUST VALVE-BUILT AFTER JULY 1983

New Style Exhaust Valve Parts List

Item No.	Description	Part No.	Qty.
1	Assy piping exhaust, 208-240V, 50/60Hz	C95-3996	1
2	Heat Deflector Plate	C95-3990	1
3	Tubing, Pressure Gauge	A95-3270	1
4	Pem. Conn. Brass 1/8 I.P.S. x 3/16 O.D.	10-3361	1
5	90° Comp. 1/2 I.P.S. male 3/16 O.D.	10-3360	1
6	Tee reducing-brass (existing)	10-3432	Ref.
7	Nipple, brass chr. pl. (existing)	10-3420	Ref.
8	Marr Connector	10-5143	2
9	Plug, Countersunk 1/4 I.P.S. br. chr. pl.	P09-4838	1
10	Packing, corrugated carton (8x8x6)	10-1643	1

New Style Exhaust Valve Parts List - Continued

Item No.	Description	Part No.	Qty.
11	Silencer, exh. Steam-It	A10-4963	1
12	Exhaust Valve only 220-240V 50/60Hz	09-6545	
	Exhaust Valve only 208V 50/60Hz	09-6536	

Replacement Instructions

- A. Disconnect fitting pressure gauge
- B. Remove flue enclosure
- C. Remove old exhaust by unscrewing 1/4 I.P.S. nipple from cylinder.
- D. Remove safety relief valve assy from 1/4 I.P.S. nipple.
- E. Remove all fittings from the reducing tee and remove tee and nipple by unscrewing nipple from cylinder remount nipple and tee in the front 1/4 I.P.S. tap hole. (Note that the use of the rear 1/2 I.P.S. tap hole is eliminated, install plug as shown).
- F. Mount new exhaust valve assy onto 1/2 I.P.S. nipple previously use to mount safety relief valve. (Before mounting exhaust valve assy, install heat deflector plate on valve as shown).
- G. Reconnect 1/4 O.D. tubing (Steam pressure line) as shown.
- H. Remount flue enclosure.
- I. Install all new fittings, tubing and wire joints as shown.

NOTE

1. All parts shown potted are existing, to be reused with new assy.
2. Do not remove knockout from item #2 for 8T-AG units
3. All items (except ref. items) and one print of this drawing to be included with this kit item #10 to be used for shipping.

OLD STYLE-BUILT PRIOR TO SEPTEMBER 1980

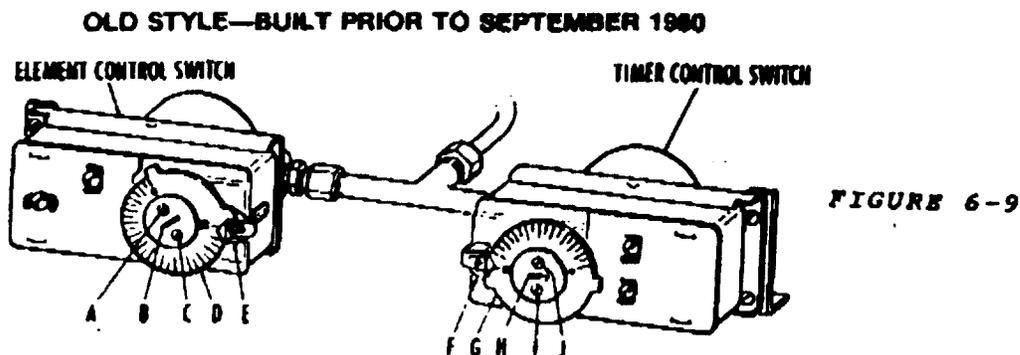


Figure 6-9 ELEMENT CONTROL SWITCH-OLD STYLE PRIOR TO SEPT 1980

ELEMENT CONTROL SWITCH The Element Control Switch, located under the removable front lower panel, just left of center, governs the flow of current to the heating elements to maintain cylinder pressures at a near-constant 14 PSI.

HOW IT WORKS A copper tube extending from the top of the cylinder to the rear portion of the Element Control Switch constantly reflects internal cylinder steam pressures upon the built-in bellows of the Element Control Switch to cause it to open or close an electrical circuit to the contactor coil. With little or no pressure applied to the bellows. The circuit to the contactor will be closed, and providing the timer is set to cycle, the contactor will click in and current will flow to the heating elements. When the pressure rises In 14 PSI (original factory setting), the bellows will be sufficiently compressed by the steam back-pressure to break the circuit to the contactor coil, the contactor will click out and current flow to the heating elements will cease. When cooling allows the pressure to drop below 13 lbs., the bellows will again complete the contactor coil circuit, activate the contactor to click in, and allow the heating elements to energize. Thus, by working intermittently to open and close the contactor coil circuit, the Element Control Switch, in effect, regulates current flow to the heating elements.

DIAL ADJUSTMENT Two dial settings determine the operational range of the Element Control Switch. The larger dial (D) determines the maximum build-up of cylinder steam pressure while the smaller dial (E) governs the range of differential between the switch's cut-in and cut-off points.

Should a lower cylinder cooking pressure be desired, adjust the larger dial (D) by inserting a screwdriver into the slot (B) found at the center and turning it slightly counterclockwise to lower the pressure. Clockwise rotation will increase the pressure. Pressure must not be adjusted to exceed 14 lbs. as the safety valve is set to automatically open just above this point.

The cut-in and cut-off points of the Element Control Switch may be adjusted by rotating the small screw at the center of the smaller dial (E). Normal factory setting is for a one pound differential between cut-in and cut-off. To increase the range of differential, rotate screw clockwise; to decrease the range of differential, rotate the screw counterclockwise. Check adjustments through a trial cycle by observing pressure gauge reading when contactor clicks out at maximum cylinder pressure and again when it clicks in after cylinder cooling. The difference in pressures as read on the pressure gauge should, at these points, be approximately one pound.

RECALIBRATING ELEMENT CONTROL SWITCH The Element Control Switch may be recalibrated should it vary somewhat, through usage from its original factory setting.

At the precise moment of contactor "click-out", the dial setting of the Element Control Switch and the steam pressure gauge reading should both be 14 lbs. A slight override of steam pressure build-up will normally occur and indicate itself on the pressure gauge after the contactor has "clicked-out". This is normal and is not to be interpreted as an Element Control Switch out of calibration.

NEW STYLE-BUILT AFTER SEPTEMBER 1980

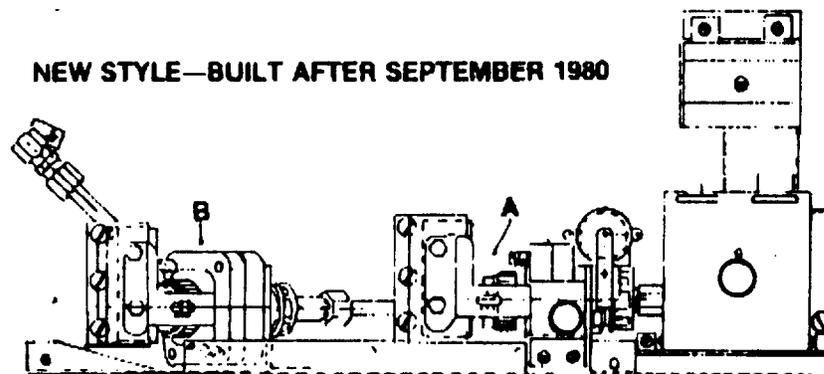


Figure 6-10 ELEMENT CONTROL SWITCH-NEW STYLE BUILT AFTER SEPT 1980

PRESSURE CONTROL SWITCH (BARKSDALE) Models built after September 1980 use 2 Barksdale Pressure Switches in place of the White-Rodgers Element Control Switch and the Timer Control Switch.

OPERATING PRESURE ADJUSTMENT (BARKSDALE) The Operating pressure is determined by setting the right switch (A) of approximately 10 PSI and the left switch (B) at approximately 14 PSI. Both switches were set at the factory. These swings can be verified by looking through the slot (in the Red Rectangle) and observing the alignment of the black line inside with the white scales on either side of the slot.

To readjust turn the white knurled knob in appropriate direction to raise or lower pressure.

WARNING

Because power must be on to adjust pressure switches, be sure to protect against electrical shock.

Check adjustments through a trial cycle and observe pressure readings on pressure gauge when switch (B) clicks off at maximum cylinder pressure and when switch (A) clicks on after cylinder cooling. Making adjustments as needed being careful not to let switch (B) pressure be set to exceed 14 lbs. Since the safety valve is set to automatically open just above this point.

RECALIBRATING PRESSURE CONTROL SWITCH The equation valve (differential) is factory set and cannot be recalibrated.

CLEANING EXHAUST SILENCER The Exhaust Silencer should be removed and cleaned periodically. As the cooking chamber is exhausted of steam through the silencer, impurities can build up from food particles. Cleanings should be frequent enough to prevent clogging to occur. For this reason, the Exhaust Silencer is made easily accessible and simple to remove. To Clean:

1. Remove the one-piece Exhaust Silencer from the unit by unscrewing it in a counter-clockwise direction.
2. Clean the Silencer by sloshing it in hot soapy water and rinse it in clear water. If dirt has clogged the Silencer, presoak it in an alkaline cleaning solution.
3. After cleaning, stand the silencer on edge to allow it to drain.
4. Screw it back into the elbow of the Exhaust Valve, (Clockwise).

LOW WATER CUT-OFF the Low Water Cut-Off is mounted above the timer assembly under the front lower panel with its thermostat bulb extending and inserting into a channel provided for it at the outer edge of the cast-in heating elements. It functions as a safety feature to shut off the complete unit in event the water runs dry.

HOW IT WORKS If the Steam-It operated with no water or the water has evaporated away, the temperature of the cooking cylinder will rise and by heat induction effect the thermostat bulb of the Low Water Cut-out. Electric current flow will be broken at the Low Water Cut-Off and the unit will shut down. With the replacement of water into the cooking cylinder, the thermostat bulb will be cooled and the unit will then again be operative after the reset button has been pressed. If the unit does not start after pressing the reset button, more time will have to be allowed for further cooling.

NOTE

Should a cooking cycle be started with insufficient water, and interrupted due to safety action of the Low Water Cut-Off, the food in the process of cooking will be affected. Proper compensation will have to be made for the cooking performed and with proper amount of water in the cooking cylinder, a new cycle determined and set to complete the process.

TIMER The Timer, located at the lower right front of the Steam-It provides a means of manual control. The Steam-It is put into an automatic cycle of Cooking with the Setting of the Timer to any of its calibrated periods of cooking. Its timing cycle, however, is automatically delayed by the Timer Control Switch until free-venting has occurred and a cylinder pressure build-up to 10 PSI has been reached.

TROUBLE TESTS AND REMEDIES If the timer should fail to operate the Steam-It and a check shows all wiring to be in good order, and should the Timer Control Switch be found in good order as ascertained by a continuity check, the Timer must be regarded as defective and must be replaced. The Timer is replaceable only as a complete unit.

TIMER CONTROL SWITCH The Timer Control Switch, located under the removable front lower panel just right of center, automatically delays the timer count-down at the beginning of the cycle until the Steam-It has fully free-vented out all cold air from within the cooking cylinder and pressure has reached 10 PSI. This delay insures the timer to count only that portion of the cycle when cylinder steam pressure is actually acting on the foods. This, of course, is important when processing foods which only require very short periods of cooking time.

HOW IT WORKS The copper tube which extends from the top of the cylinder to the rear portion of the Timer Control Switch Constantly reflects internal cylinder steam pressure upon the Timer Control Switch's built-in bellows. While cylinder free-venting is occurring, the switch keeps the timer circuit open. After free-venting has terminated and when the cylinder pressure has built-up to approximately 10 PSI, the contacts will be forced closed by back-pressures working on the bellows, the timer circuit will be completed, and the timer will then start its countdown.

DIAL ADJUSTMENTS (Refer to Fig. 11) The cut-in point of the Timer Control Switch has been factory set at its maximum setting of 10 lbs and should not be altered unless it is found that the timer does not start until well after 10 lbs. of steam pressure has been realized on the pressure gauge. In this case, insert a screwdriver into the center slot (H) of the larger dial (G) and rotate slightly counter-clockwise to adjust timer to start at 10 PSI.

RECALIBRATING TIMER CONTROL SWITCH Should the Timer Control Switch vary through usage from its original factory setting, it may be restored to proper working order by recalibration.

A visual check of the Timer Control Switch during a trial cycle will quickly determine the need of recalibration. With the Timer Control Switch dial set at 10 Lbs. (fully clockwise). the timer Control should cut-in when 10 lbs. of steam pressure is registered on the steam pressure gauge. By watching the smaller dial (F) of the Timer Control Switch, the cut-in of the switch may be observed and heard to click forward at the moment the circuit is made to the timer motor. At that precise moment the pressure gauge should measure 10 lbs.

CAUTION

IF PROBLEM DEVELOPS DURING THE COOKING CYCLE OF THIS ELECTRIC STEAM PRESSURE (15PSI OPERATION) CONSULT THE TROUBLE SHOOTING GUIDE ON PAGE 6-14 THROUGH PAGE IN THIS MANUAL.

RECALIBRATION PROCEDURE AS FOLLOWS:

1. Set the larger dial (D) of the Element Control Switch at 14 lbs, pressure (dial (D) fully clockwise).
2. Loosen the two small screws (A) and (C) located on either side of the dial slot (B).
3. First, note the position of the slot (B) in relation to the dial (D). Then, while holding the dial stationary, insert a screwdriver in the slot to adjust. (Clockwise to increase steam pressure - counterclockwise to decrease pressure). Tighten screws to hold this adjustment.
4. Check this new setting by operating the Steam-It through a trial cycle and note the pressure gauge reading at

the precise moment when the contactor "clicks out". This should be at 14 lbs. (Check may also be made by continuity). Repeat the process of adjustment until the Steam-It test operates to satisfaction.

THE PILOT LIGHT The Pilot Light is located at the lower right front of the front panel. This unit is wired to operate when the heating elements are on. The circuit will be broken when the timer returns to the "ZERO" position. Thus, when the pilot light is on and off it signifies that the heating elements are cycling on and off to maintain cooking pressure in the cooking chamber.

Table 6-1 TROUBLE SHOOTING GUIDE

TROUBLE	POSSIBLE CAUSE	CORRECTION
Steam-It fails to operate at all. (No pressure buildup)	1. Blown fuse.	1. Replace fuse. If it blows again, check that source of electric supply is 60 Amp.
	2. Wiring is defective.	2. Check all wiring. Repair or replace.
	3. Not installed correctly	3. Check wiring diagram for correct hookup.
	4. Element control switch or contactor coil not in circuit.	4. Check both element control switch and contactor coil for continuity. Repair or replace either if found defective.
	5. Current not passing through timer to start unit.	5. Check timer for continuity of primary circuit through timer control switch.
Steam-It operates but fails to buildup to 14 lbs pressure.	1. Steam trap fails to properly close.	1. Replace the steam trap.
	2. Exhaust valve fails to hold pressure at 14 lbs.	2. Check for correct adjustment-or strip down, clean and repair.
	3. Steam leaks around door.	3. Clean seating surfaces and gasket to make sure they are free of food particles. Check for worm gasket, or make door adjustment.
	4. Safety valve blows off below 15 lbs pressure.	4. Replace safety valve.
	5. Element control switch not properly adjusted.	5. Re-adjust.
Unit releases pressure before cooking cycle has terminated on timer.	1. Power loss.	1. Check for disruption at source of electric supply.
	2. Low water cut-off has functioned prematurely.	2. Adjust or replace low water cut-off
Timer does not function at 10 PSI of cylinder pressure to start countdown.	1. Loose or broken electrical leads to the timer or timer control switch.	1. Repair or replace defective wiring.
	2. Timer motor defective.	2. Check timer motor for continuity. Replace complete timer if found defective.
	3. Timer control switch defective or out of adjustment.	3. Make continuity check, adjust, replace if necessary.
Uneven cooking.	1. Steam trap closing prematurely, preventing removal of air from the cooking chamber.	1. Replace the steam trap.
Heating elements cutting out before 13 lb pressure is	1. Pressure cutting off electric at the element control switch too soon.	1. Make adjustments on the dial of the element control switch to remedy.
Indicator light fails to light with 60 minute timer set.	1. Power to Steam-it off	1. Locate external circuit breaker for incoming power and place in ON position
	2. Indicator light burned out	2. Replace light.
	3. Faulty wiring	3. Inspect conditions of wire, and lightness of all connections. Correct as needed.
	4. 60-Minute timer contact faulty.	4. Replace 60-Minute timer.

Table 6-1 TROUBLE SHOOTING GUIDE - Continued

TROUBLE	POSSIBLE CAUSE	CORRECTION
Excessive steam pressure in compartment (above 15 lbs)	1. Safety valve fails in closed position	1. Replace valve
	2. Pressure switch contacts fail in closed position	2. Replace switch
Buzzer fails to sound at end of cooking cycle	1. Faulty wiring	1. Check wiring from buzzer to terminal block and timer
	2. Faulty buzzer	2. Replace buzzer
	3. Faulty timer	3. Replace timer

CHAPTER 7**VENDOR PARTS LIST**

LIST OF PARTS BY OTHER MANUFACTURERS

Parts By Other Manufacturers

<u>MF PART #</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>	<u>OEM PART #</u>
09-6545	Valve, Exhaust	Skinner Valve Div. 95 Edgewood Ave. New Britain, CT	719Z4
10-0050	Handle, Door	Dimco Gray Co. 8200 S Suburban Rd. Centerville, OH 45459	1-190-116
10-1041	Valve, Ball	Wm. Steinen Mfg. Co. 29 E Halsey Rd. Parsippany, NJ 07054	V51-B
10-2666	Gasket, Door	Stalwart Rubber Co. 14622 Ravenna Rd Burton, OH 44021	none
10-4664	Cast, Element	Precision Tubl. Heater Corp. Div of UM 111 Alpha Dr. Franklin, TN 37064	none
10-4963	Exhaust Silencer	Allied Wittan Co. 13805 Progress Pkwy N. Royalton, OH 44135	0606801
10-5234	Transformer	Standard Electric Supply Co. 1339 Main St. Waltham, MA 02154	KVA 250 Cat HS1A250
10-5467	Contactoer	Arrow Hart Co. PO Box 9050 Charlottesville, VA 22906	X330-8038C
10-5990	Low Water Cut Off	Robert Shaw New Stanton Div Youngwood, PA 15697	LCH 24-048
10-6156	Steam Trap	Barnes & Jones, Inc. 34 Crafts St. Newtonville, MA 02160	D-30-1
10-6293	Timer, 60 Minute	Deltrol Controls 2745 South 19th St. Milwaukee, WI 53215	Model 138 46496-62
10-6363	Body Insulation	Ward Process, Inc. PO Box 85 Cochituate, MA 01778	none
10-6364	Pan Insulation	Ward Process, Inc. PO Box 85 Cochituate, MA 01778	none

Parts By Other Manufacturers - Continued

MF PART #	DESCRIPTION	MANUFACTURER	OEM PART #
10-6365	Back insulation	Ward Process, Inc. PO Box 85 Cochituate, MA 01778	none
10-6665	Buzzer	Trinetics 55807 Currant Rd. Mishawaka, IN 46544	22110-3
10-6767	Boss, Support	D & E Screw Machine Prod. 214 Andover St. Wilmington, MA 01887	none
10-6770	Boss, Support Door Pivot	D & E Screw Machine Prod. 214 Andover St. Wilmington, MA 01887	none
10-6771	Boss, Support Pan Sup- port	D & E Screw Machine Prod. 214 Andover St. Wilmington, MA 01887	none
10-6962	Terminal Block	Standard Electric 1339 Main St. Waltham, MA 02154	Buchanan #824
10-6963	End Section	Standard Electric 1339 Main St. Waltham, MA 02154	Buchanan #830
10-7955	Valve, Watts	Watts Regulator Sales Co. Rt. 114 815 Chestnut St. N. Andover, MA 01845	3/4" 415-Z 15#
10-8410	Pressure Switch	Barksdale IMO Delaval Div 3211 Fruitland Ave. Los Angeles, CA 90058	E15-H15PL8
10-9267	Gauge, Pressure	Dresser Inc. Harrison Rd. Berea, KY 40403	20W1001TH02BXUC2B30 #9205
95-0134	Handle Castings	Ross Aluminum 707-815 N Oak Ave. Po Box 609 Sidney, OH 45365-0609	none
95-0136	Door Lock	TOC Finishing Corp 22 Clifton St. Somerville, MA 02144	none
95-2545	Pan Rack	Accurate Metal Finishing 414 South St. Randolph, MA 02368	none

CHAPTER 8

**DIRECTORY OF
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PARTS DISTRIBUTORS
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Fax: (205) 322-1440

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(800) 433-9390 (WA)
Fax: (206) 525-2890

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(800) 824-8875 (AZ)
Fax: (602) 230-8225

ARKANSAS BROMLEY PARTS & SERVICE

806 Iazard
Little Rock, AR 72201
Phone: (501)374-0281
(800) 482-9269 (USA)
Fax: (501) 374-8352

CALIFORNIA RIDGE ELECTRIC CO.

1235 G St.
Fresno, CA 93706
Phone: (209) 268-5031
Fax: (209) 268-8315

GCS SERVICE

946 East 12th St.
Los Angeles, CA 90021
Phone: (213) 749-7785
(800) 431-3530 (USA)
Fax: (213) 749-7788

GCS SERVICE

1904 E. McFadden Ave.

Santa Ana, CA 92705
Phone: (714) 542-1798
Fax: (714) 542-4787

GCS SERVICE

Suite 313
9030 Kenamar Dr.
San Diego, CA 92121
Phone: (619) 549-8411
(800) 422-7278 (CA)
Fax: (619) 549-9870

GCS SERVICE

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S. San Francisco, CA 94080
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(800) 969-4427
Fax: (415) 871-4019

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3830 S. Windermere
Englewood, CO 80110
Phone: (303) 781-55M
(800) 624-2117
Fax: (303) 761-8861

CONNECTICUT A-TECH

80 Eastern Blvd.
Glastonbury, CT 06033
Phone: (203) 659-29M
(800) 832-8324 (USA)
Fax: (203) 659-9680

DELAWARE ELMER SCHULTZ SERVICES

36 Belmont Ave.
Wilmington, DE 19804
Phone: (302) 655-8900
Fax: (302) 656-3673

DISTRICT OF COLUMBIA. G.C.S. SERVICE

5001 College Ave., Drawer P
College Park, MD 20740
Phone: (301) 927-7330
(800) 638-7278 (USA)
Fax: (301) 779-3038

FLORIDA CLINE COMMERCIAL SERVICE

928 W. Forsyth St
Jacksonville, FL 32204
Phone: (904) 356-7986
Fax: (904) 356-1805 "z">NASS FOOD EQ.
7250 N.E. 4th Ave.
Miami, FL 33138

Phone: (305) 754-7808
(800) 432-8155 (FL)
Fax: (305) 757-1175

NASS SERVICE CO., INC.
1108 S. Woods Ave.
Orlando, FL 32805
Phone: (407) 425-2681
(800) 432-2795 (USA)
Fax: (407) 425-3463

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Tampa, FL 33603
Phone: (813) 879-2461
(800) 282-4718 (FL)
Fax: (813) 875-6438

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Pensacola, FL 32507
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Fax: (904) 456-7294

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3373 N.W. 168th St.
Miami, FL 33056
Phone: (305) 621-6666
Fax: (305) 621-6656

ALT SERVICE
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Tallahassee, FL 32310
Phone: (904)878-5343
Fax: (904) 656-6810

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Atlanta, GA 30340
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(800) 334-3599 (USA)
Fax: (404) 452-7473

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Grovetown, GA 30813
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Fax: (404) 855-7311*

FOOD SERVICE EQUIPMENT
514 Main St. S.W.

*to be area Code 706, effective 8/3/92

Gainesville, GA 30501
Phone: (404) 535-3715*
Fax: (404) 535-1476*

HAGINS APPLIANCE
3 W. Victory Drive
Savannah, GA 31405
Phone: (912) 233-8372
Fax: (912) 234-3133

TOTAL SERVICE CO.
545 Third St.
Macon, GA 31201
Phone: (912) 743-6505
Fax: (912) 741-1848

HAWAII FOOD EQUIPMENT PARTS & SRV.
300 Puuhale Rd.
Honolulu, HI 96819
Phone: (808) 847-4871
Fax: (808) 842-1560

IDAHO CONTRACT SERVICE INC.
3265 S. 300 W.
Salt Lake City, UT 84115
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Fax: (801) 484-0652 "z">RESTAURANT APPLIANCE
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(800) 433-9390 (WA)
Fax: (206) 525-2890

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Decatur, IL 62522
Phone: (217) 429-4229
Fax: (217) 429-0226

GCS SERVICE
1455 S. Michigan Ave.
Chicago, IL 60605
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(800) 942-9689 (USA)
Fax: (312) 427-5966

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St. Louis, MO 63123
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Fax: (309) 797-3631

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(800) 692-8052 (USA)
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(800) 229-6477 (USA)
Fax: (816) 472-6134

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Fax: (606) 231-7781

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Fax: (502) 637-3221

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Fax: (606) 255-0748

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Fax: (203) 659-9680

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(800) 288-7060 (USA)
Fax: (616) 241-6376

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(800) 279-9987 (USA)
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Fax: (901) 526-3379

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Fax: (504) 733-2559

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(800) 229-6477 (USA)
Fax: (816) 472-6134

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(800) 284-4GCS (USA)
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(800) 624-2117
Fax: (303) 761-8861

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W. Billings, MT 59102
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Fax: (406) 652-6828

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Omaha, NE 68102
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Fax: (402) 346-6145

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Las Vegas, NV 89103
Phone: (702) 736-7400
Fax: (702) 798-7531

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Bow, NH 03304
Phone: (603) 624-2663
Fax: (603) 224-9173

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(800) 221-3026 (USA)
Fax: (718) 366-5359

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Pleasantville, NJ 08232
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Fax: (609) 641-8703

NEW MEXICO DEL OCO CO.
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Albuquerque, NM 87105
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Fax: None

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Fax: (518) 563-3219

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(800) 221-3026 (USA)
Fax: (718) 366-5359

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Fax: (716) 482-6759

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Phone: (315) 422-9271
Fax: (315) 472-5400

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W. Columbia, SC 29170

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(800) 877-2662 (USA)
Fax: (803) 794-4603

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Fax: (701) 235-0539

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Fax: (216) 753-7244

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(800) 582-4008 (OH)
Fax: (513) 984-2111

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(800) 621-8259 (USA)
Fax: (216) 431-7705

**ARR/CRS-COLUMBUS RESTAURANT
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(800) 282-5406 (USA)
Fax: (614) 476-1196

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(800) 365-7600
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(800) 522-3706 (OK)
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(800) 222-8767 (USA)
Fax: (412) 262-2245

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(800) 422-8171 (PA)
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York, PA 17405
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(800) 828-7312 (USA)
Fax: (717) 854-0281

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Fax: (401) 521-5560

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(800) 877-2662 (USA)
Fax: (803) 794-4603

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Fax: (404) 855-7311*

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Savannah, GA 31405
Phone: (912) 233-8372
Fax: (912) 234-3133

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Fargo, ND 58103
Phone: (701) 235-7407
Fax: (701) 235-0539

TENNESSEE CAMP ELECTRIC CO.
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Phone: (901) 527-7543
(800) 238-7345 (USA)
Fax: (901) 526-3379

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Nashville, TN 37210
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(800) 831-7174 (TN)
Fax: (615) 244-8885

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Chattanooga, TN 37404
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Fax: (615) 624-3383

TEXAS SAN ANTONIO RESTAURANT
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San Antonio, TX 78217
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(800) 888-3271 (USA)
Fax: (512) 824-9437

GCS SERVICES
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Dallas, TX 75229
Phone: (214) 484-2954
(800) 442-5026 (USA)
Fax: (214) 484-2531

ARMSTRONG REPAIR
5750-A Royalton
Houston, TX 77081

*be Area Code 706, effective 8/3/92

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(800) 392-5325 (USA)
Fax: (713) 665-5542

W.H. KIRK CO.
1100 Cordell St.
Houston, TX 77009
Phone: (713) 869-9511
Fax: (713) 881-4625

UTAH CONTRACT SERVICE INC.
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Salt Lake City, UT 84115
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Fax: (801) 484-0652

COMMERCIAL SERVICES
177 River St.
Montpelier, VT 05601
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(802) 863-4176 (Burlington)
Fax: (802) 223-0382

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(800) 638-7278 (USA)
Fax: (301) 779-3038

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540 N. Third St.
Philadelphia, PA 19123
Phone: (215) 627-5400
Fax: (215) 627-5408

OLD DOMINION ELECTRIC
925 W. 21 st St.
Norfolk, VA 23517
Phone: (804) 622-3627
(800) 582-7575 (USA)
Fax: (804) 622-8866

OLD DOMINION ELECTRIC
340 Salem Ave. S.W.
Roanoke, VA 24016
Phone: (703) 343-3639
Fax: (703) 345-3144

OLD DOMINION ELECTRIC
2 West Cary ST.
Richmond, VA 23220
Phone: (804) 644-1675
Fax: (804) 644-1677 til 5 p.m.

WASHINGTON RESTAURANT APPLIANCE

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Seattle, WA 78115
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(800) 433-9390 (WA)
Fax: (206) 525-2690

ARCO ELECTRIC SERVICE

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Portland, OR 97214
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Fax: (504) 236-9166

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Coraopolis, PA 15108
Phone: (412) 262-2330
Fax: (412) 262-2245

AUTHORIZED FACTORY SERVICE

105 A Street
S. Charleston, WV 25303
Phone: (304) 744-7320
(800) 654-4606 (USA)
Fax: (304) 744-6882

WISCONSIN HEPEX INC.

9036 N. 51 st St.
Brown Deer, WI 53223
Phone: (414) 354-8200
(800) 242-5421 (WI)
Fax: (414) 354-8240

GENERAL PARTS

720 E. Lake St.
Minneapolis, MN 55407
Phone: (612) 827-5583
(800) 328-5032 (USA)
Fax: (612) 827-0790

WYOMING HAWKINS APPLIANCE

3830 S. Windermere
Englewood, CO 80110
Phone: (303) 781-5548
(800) 624-2117
Fax: (303) 761-8861

CONTRACT SERVICE INC.

3265 So. 300 W.
Salt Lake City, UT 84115
Phone: (801) 484-4402
Fax: (801) 484-0652

CANADA

R.G. HENDERSON & SONS LTD.

1 Thorncliffe Park Drive
Toronto, Ontario,
Canada M4H 1G9
Phone: (416) 922-1112
Telex: 065-24522
Fax: (416) 422-5514

CHOQUETTE-CKS INC.

8145 Blvd. St. Laurent
Montreal, W., Quebec, Canada H2P 2M1
Phone: (514) 384-6549
Fax: (514) 384-6632

DAVIS FD. EQ. SERV. LTD.

3756 Napier St.
Burnaby, BC, Canada V5C 3E5
Phone: (604) 298-1500
Fax: (604) 298-1195

NORTHSTAR REPAIR

11518 - 119th St.
Edmonton, Alberta, Canada T5G 2X7
Phone: (403) 453-6213
Fax: (403) 453-8006

EUROPE

ALFA SERVICES

399 Lewisham Hi St.
London SE 136NZ, England
Phone: 9-011-44-81-690-8422
Telex: 262414
Fax: 9-011-44-81-690-2241

LIMITED ONE YEAR WARRANTY We warrant that Market Forge cooking equipment will be free from defects in material and factory workmanship for a period of one year from the EFFECTIVE WARRANTY DATE, which shall be the date the equipment is placed in service or 15 months from date of shipment from our factory, whichever comes first. Providing the equipment is unaltered, has been properly installed, maintained and operated, we will repair or replace, at our option, F.O.B. Everett, Massachusetts, that pan of any such equipment that becomes defective due to defects in material and/or factory workmanship during the applicable warranty period, subject to the following limitations.

Market Forge will replace, repair, or adjust at no cost any part of all equipment which becomes defective due to material or factory workmanship within ninety (90) days of the EFFECTIVE WARRANTY DATE. Any labor required for any such repair, replacement or adjustment after ninety (90) days shall be paid by the user or dealer, unless our extended labor warranty contract has also been purchased to cover this particular equipment. **Adjustments are only covered in the first 30 days of the one-year warranty.**

With respect to STEAM BOILER SHELLS only, there is an additional four (4) year warranty limited to the replacement of such shells. Whenever we replace a steam boiler shell after one (1) year from the EFFECTIVE WARRANTY DATE, the user shall pay a pro-rata share of the then selling price thereof based on the number of months elapsed from the EFFECTIVE WARRANTY DATE. There is no labor compensation when boiler shells

are pro-rated. Boiler shells which have not been properly maintained will not be considered for proration. Factory inspection may be necessary. *Boiler shells should be descaled every 90-120 days, by an authorized service agent to insure efficiency and prevent premature failure.

There is only a 90 day parts and labor warranty on the following: gaskets, steam traps, air vents, knobs, dynaseal washers, rubber washers, cathodic descalers or anodes, sight glass. Any parts used in conjunction with a boiler descaling (cleaning) are the responsibility of the owner/ user regardless of time in use.

All warranty service, labor or parts (shipped or replaced) must be performed by the appointed Market Forge authorized service agent for your area. Any repairs performed by non-authorized servicers will void the warranty. We reserve the right to disallow any request for reimbursement of charges incurred by others.

WITH RESPECT TO EQUIPMENT REQUIRING WATER CONNECTIONS, WATER SUPPLY SHOULD BE ANALYZED TO MAKE SURE HARDNESS IS NO GREATER THAN 2.0 GRAINS PER GALLON, PH LEVEL IS WITHIN THE RANGE OF 7.0-8.5, AND TDS LEVEL NO GREATER THAN 250 P.P.M., WATER WHICH FAILS TO MEET THESE STANDARDS SHOULD BE TREATED BY INSTALLATION OF A WATER CONDITIONER. EQUIPMENT FAILURE CAUSED BY INADEQUATE WATER QUALITY IS NOT COVERED UNDER WARRANTY.

THIS WARRANTY IS LIMITED TO COOKING EQUIPMENT INSTALLED WITHIN THE CONTINENTAL UNITED STATES AND CANADA. IN ALASKA, HAWAII, AND ELSEWHERE OUTSIDE CONTINENTAL U.S. AND CANADA, THIS WARRANTY IS LIMITED TO THE REPLACEMENT OF PARTS ONLY.

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, MADE BY MARKET FORGE FOR ITS COOKING EQUIPMENT EXCEPT THIS WARRANTY, WHICH IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND IN LIEU OF ALL OTHER OBLIGATIONS OR LIABILITY ON THE PART OF MARKET FORGE, INCLUDING LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR LOSS OF PROFITS OR GOODWILL. NO OTHER WARRANTIES ARE AUTHORIZED ON BEHALF OF MARKET FORGE. MARKET FORGE COOKING EQUIPMENT IS NOT DESIGNED FOR PERSONAL, FAMILY OR HOUSEHOLD PURPOSES AND ITS SALE FOR SUCH PURPOSES IS NOT INTENDED, BUT IN THE EVENT THAT OUR COOKING EQUIPMENT IS SO USED, THEN THIS WARRANTY SHALL NOT APPLY AND THE EQUIPMENT SHALL BE SOLD AS IS, WITHOUT WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

EXTENDED LABOR WARRANTY The very great majority of all warranty service problems become apparent within the first 90 days of use. However, some people prefer to have labor coverage as well as replacement parts coverage beyond that period. This **EXTENDED LABOR WARRANTY** is available at extra cost in Continental U.S. and Canada which provides an additional nine months labor coverage following the standard three month labor coverage from the **EFFECTIVE WARRANTY DATE**. The cost of this **EXTENDED LABOR WARRANTY** is 3% of the cost of the equipment covered. If the **EXTENDED LABOR WARRANTY** was purchased by your dealer to cover your equipment, then we provided the dealer with written acknowledgment of it when we delivered the equipment. He was, in turn, to give you a copy of this **EXTENDED LABOR WARRANTY** form. When service is performed, please show this to the service mechanic to avoid confusion. **EXTENDED LABOR WARRANTY** has also been recorded at our factory.

FREE - MECHANICAL START-UP **MECHANICAL START-UP** to insure that the equipment has been installed and is operating properly is provided **FREE OF CHARGE** on all equipment purchased. The authorized factory service agency will provide this service once the equipment has been installed and hooked up. Call them to set up an appointment.

ASSOCIATION AND AGENCY APPROVALS • All gas and electric steam generators and kettles are built in accordance with ASME code, are National Board Registered, and bear National Board Approved Stampings.

- It is Market Forge policy to build equipment that is design certified by the American Gas Association, Canadian Gas Association, Underwriter's Laboratories, Canadian Standards Association and National Sanitation Foundation. However, our program of constant product improvement makes it necessary for new or improved models to be submitted for testing by these agencies as they are developed, and consequently not all models bear the appropriate agency or certification at all times. Quotations are submitted on this basis. All orders accepted on this basis. Alterations to meet local requirements are responsibility of others.

- For up-to-date information on agency approvals on a specific model, contact your Market Forge sales representative or the Market Forge Home Office. We reserve the right to modify materials and specifications without notice.