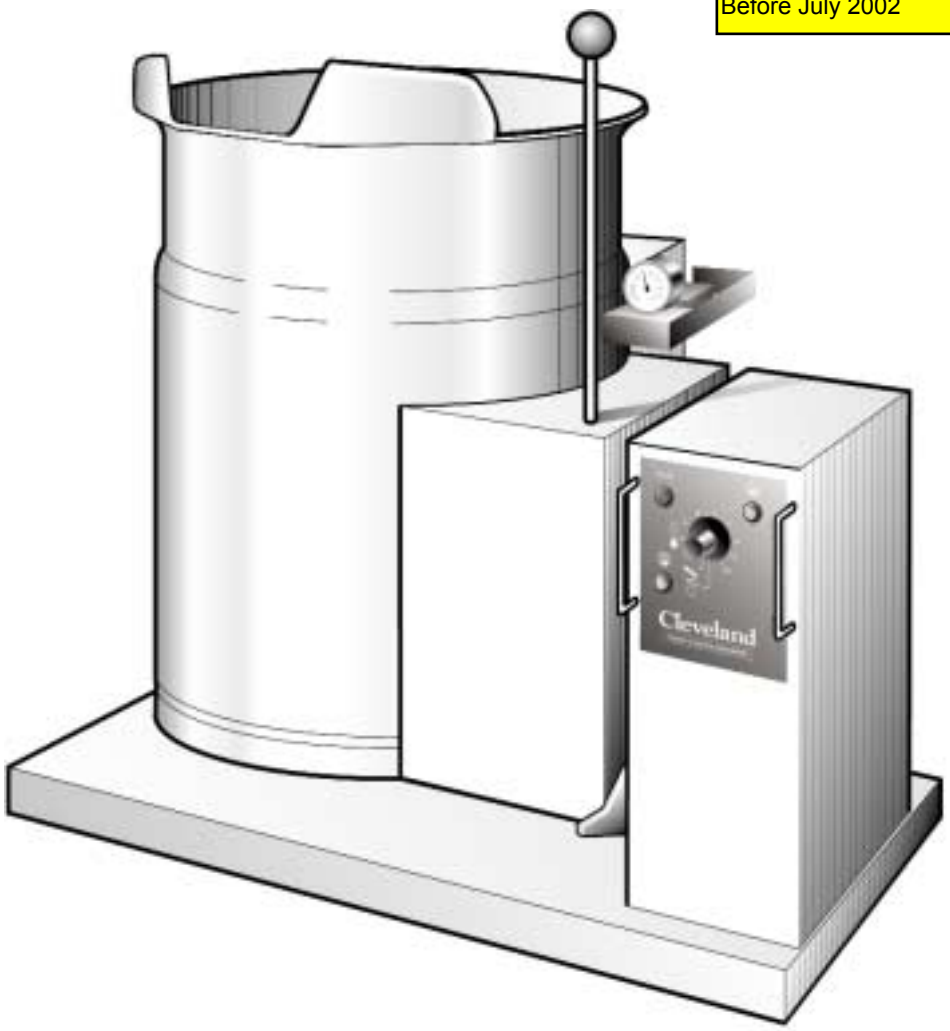
Operators Manual

Installation, Operation & Service

Gas Table Top Kettles

MODELS:
KGT-6-T
KGT-12-T

Before July 2002



Cleveland
Enodis

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Visit our web site at www.clevelandrange.com

SE95010 Rev. 4

FOR THE USER

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR ANY OTHER FLAMMABLE LIQUIDS AND VAPOURS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation operating and maintenance instructions thoroughly before installing or servicing this equipment.

IMPORTANT

POST IN A PROMINENT LOCATION, INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS. THIS INFORMATION SHALL BE OBTAINED BY CONSULTING YOUR LOCAL GAS SUPPLIER.

ALL SERVICE MUST BE PERFORMED BY A QUALIFIED CLEVELAND RANGE TECHNICIAN.

RETAIN THIS MANUAL FOR YOUR REFERENCE.

TABLE OF CONTENTS

INSTALLATION

INSPECTION

Before unpacking visually inspect the unit for evidence of damage during shipping.

If damage is noticed, do not unpack the unit, follow shipping damage instructions.

SHIPPING DAMAGE INSTRUCTIONS

If shipping damage to the unit is discovered or suspected, observe the following guidelines in preparing a shipping damage claim.

1. Write down a description of the damage or the reason for suspecting damage as soon as it is discovered. This will help in filling out the claim forms later.
2. As soon as damage is discovered or suspected, notify the carrier that delivered the shipment.
3. Arrange for the carrier's representative to examine the damage.
4. Fill out all carrier claims forms and have the examining carrier sign and date each form.

GENERAL

Installation of the kettle must be accomplished by qualified installation personnel working to all applicable local and national codes. Improper installation of product could cause injury or damage.

This equipment is built to comply with applicable standards for manufacturers. Included among those approval agencies are: UL, A.G.A., NSF, ASME/N.Bd., CSA, CGA, ETL, and others. Many local codes exist, and it is the responsibility of the owner/installer to comply with these codes.

Observe all clearance requirements to provide proper make-up air flow. Do not obstruct the flow of combustion and ventilation air. Check rating plate to ensure that kettle has been equipped to operate with the type of gas available at the installation.

Dimensions and clearance specifications are shown on the specification sheet and in the Clearance Requirements section.

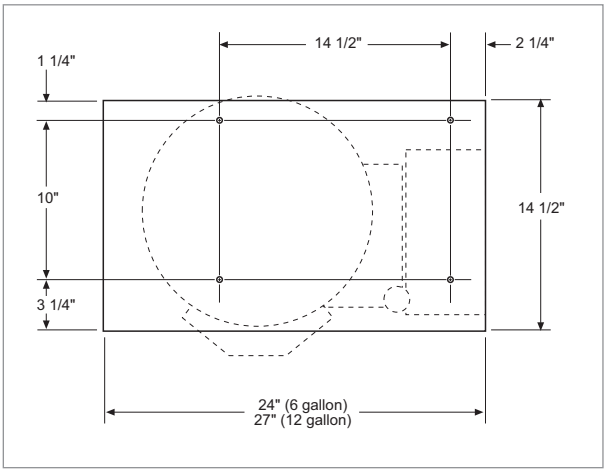
CLEARANCE REQUIREMENTS

CLEARANCE REQUIREMENTS TO COMBUSTIBLE AND NONCOMBUSTIBLE SURFACES.

Model #	Back	Left Side	Right Side
KGT-6-T	4”	0	0
KGT-12-T	4”	0	0

NOTE: To prevent removal of unit for servicing, allow sufficient room on right hand side for servicing.

ASSEMBLY



Base Mounting Diagram

Table-top models must be positioned on a firm, level stand, or existing counter top, and bolted in place. These models are supplied with four threaded mounting bushings welded to the underside of the base. An optional support stand with level adjustable legs is available. Once the kettle is secure, screw tilt handle into the threaded hole provided at the right side of kettle.

GAS

ENSURE THE GAS SUPPLY MATCHES THE KETTLE'S REQUIREMENTS AS STATED ON THE RATING PLATE.

It is recommended that a sediment trap (drip leg) be installed in the gas supply line. If the gas pressure exceeds 14” water column, a pressure regulator must be installed, to provide a maximum of 14” water column gas pressure to the gas control valve.

Connect the gas line to the manual valve located at the rear of the control box.

Installation must be in accordance with local codes and/or the National Fuel Gas Code ANSI Z223.1 Latest Edition (USA) or the latest Installation Codes for Gas Burning Appliances and Equipment CAN/ CGA B149.1 and CAN/ CGA B149.2 (Canada). Use a gas pipe joint compound which is resistant to L.P. gas. Test all pipe joints for leaks with soap and water solution. Ensure that the gas pressure regulator is set for the manifold pressure indicated on the gas rating plate.

The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.45 kPa). The appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.45 kPa).

ELECTRICAL

ENSURE THE ELECTRICAL SUPPLY MATCHES THE KETTLE'S REQUIREMENTS AS STATED ON THE RATING LABEL.

A cord and plug are supplied with the unit. Simply plug the unit into any grounded outlet rated for a minimum of 10 amps. The wiring diagram is located on the back of the console access panel.

WARNING: Electrical Grounding Instructions.

This unit is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug. Standard supply voltage is 115 volts A.C., however, optional A.C. voltages can be supplied on special order. A separate fused disconnect switch must be supplied and installed in the high voltage electrical supply line. The kettle when installed, must be electrically installed and grounded in accordance with local codes, or in the absence of local codes, with National Electrical Code, ANSI/NFPA 70-1990 (USA) or the Canadian Electrical Code, CSA C22.2, Part 1 (Canada).

VENTILATION

Gas fired kettles are only to be installed under a ventilation hood in a room which has provisions for adequate make up air. Further information can be obtained by referring to the U.S.A. National Fire Protection Associations NFPA96 regulations. These standards have also been adopted by the National Building Code in Canada.

WATER

The sealed jacket of the gas-fired kettle is precharged with the correct amount of a water-based formula, and therefore, no water connection is required to the kettle jacket. The kettle can be equipped with optional hot and cold water taps, the taps require 1/2" copper tubing as supply lines.

INSTALLATION CHECKS

Although the kettle has been thoroughly tested before leaving the factory, the installer is responsible for ensuring the proper operation of kettle once installed.

DO NOT ATTEMPT TO OPERATE THIS APPLIANCE DURING A POWER FAILURE.

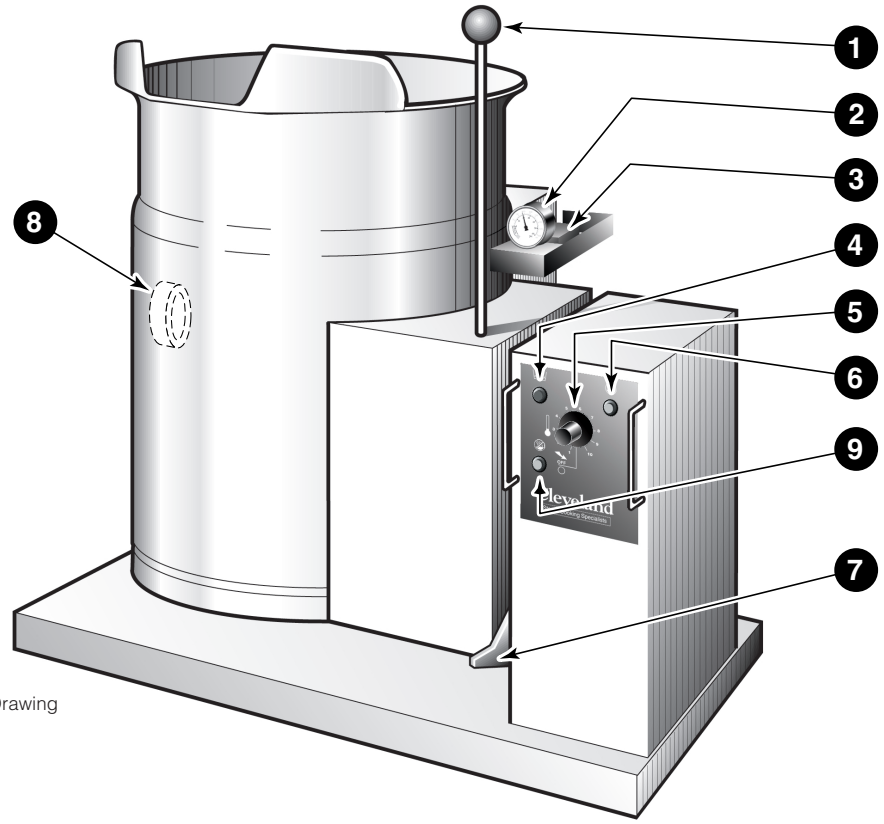
KEEP APPLIANCE AND AREA FREE AND CLEAR OF COMBUSTIBLES.

1. Supply power to the kettle by placing the fused disconnect switch to the "ON" position.
2. Before turning the kettle on, read the vacuum/pressure gauge. The gauge's needle should be in the green zone. If the needle is in the "VENT AIR" zone, follow air venting procedure.
3. Place the kettle's power on/off switch to the "ON" position.
4. Turn the temperature control knob to "MIN .". The green LED light should remain lit, indicating the burner is lit, until the set temperature is reached. Then the green light will cycle on and off, indicating the burner is cycling on and off to maintain temperature.
5. Tilt the kettle forward. The red "LOW WATER" light should be lit when the kettle is in a tilted position. This light indicates that the burner has automatically been shut off by the kettle's safety circuit. This is a normal condition when the kettle is in a tilted position.
6. Raise the kettle to the upright position. The red "low water" light should go out when the kettle is upright. If the red light remains lit in the upright position, it indicates a low water condition, and water must be added to the reservoir before the kettle can be operated. Refer to the "Reservoir Fill Procedures", on the kettle's label, for details.
7. Turn the temperature control knob to "MAX." and allow the kettle to preheat. The green light should remain on until the set temperature is reached. Then the green light will cycle ON and OFF, indicating the burner is cycling ON and OFF to maintain temperature.

CLEANING

After installation the kettle must be thoroughly cleaned and sanitized prior to cooking. See complete cleaning instructions in this manual (page 5).

OPERATING INSTRUCTIONS



General Parts Drawing

ITEM #	DESCRIPTION	FUNCTION
1.	Tilting Handle	Used for tilting the kettle.
2.	Vacuum/Pressure Gauge	Indicate steam pressure in PSI inside steam jacket as well as vacuum in inches of mercury.
3.	Pressure Relief Valve	This valve is used to vent the kettle and in the unlikely event there is an excess steam build-up in the jacket, this valve opens automatically to relieve this pressure.
4.	Low Water Indicator Light (Red)	When lit, indicates that the kettle is low on water and will not operate in this condition (see Reservoir Fill Procedures on page 13 of this manual).
5.	On-Off Switch/ Solid State Temperature Control	Turns kettle ON/OFF and allows the operator to adjust the kettle temperature in increments from 1 (Min.) to 10 (Max.). (see Temperature Range Chart in the Operating Instructions section on page 4 of this manual).
6.	Heat Indicator Light (Green)	When lit, indicates that the kettle's burner is on. Cycles ON-OFF with burner.
7.	Marine Lock	Prevents unit from accidental tilting.
8.	Water Level Sight Glass	Displays water level in steam jacket.
9.	Ignition Failure Indicator Light (Amber)	Indicates failure of heating system to ignite.

OPERATING THE KETTLE

DO NOT ATTEMPT TO OPERATE THIS APPLIANCE DURING A POWER FAILURE.

KEEP APPLIANCE AND AREA FREE AND CLEAR OF COMBUSTIBLES.

DO NOT LEAN ON OR PLACE OBJECTS ON KETTLE LIP. SERIOUS INJURY COULD RESULT IF KETTLE TIPPED OVER, SPILLING HOT CONTENTS.

1. Before turning kettle on, read the Vacuum/Pressure Gauge (**2**). The gauges needle should be in the green zone. If the needle is in the "VENT AIR" zone, refer to the Kettle Venting Instructions (page 15). Any air that may be present will increase cooking times. Once heated, the kettle's normal maximum operating pressure is approximately 10-12 psi while cooking a water base product.

2. Ensure that the electrical service to the kettle is turned on at the fused disconnect switch.

Temperature Control Setting	Approximate Product Temperature °F	°C
MIN.	120	49
1.	130	54
2.	145	63
3.	160	71
4.	170	77
5.	185	85
6.	195	91
7.	210	99
8.	230	110
9.	245	118
MAX.	265	130

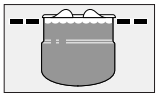
NOTE: Certain combinations of ingredients will result in temperature variations

Temperature Range Chart

3. Preheat the kettle by turning the ON/OFF Switch/Solid State Temperature Control (**5**) to the desired temperature setting (see above "Temperature Range Chart"). The Heat Indicator Light (Green) (**6**) will remain lit, indicating the burner is on, until the temperature setting is reached. When the green light goes off, the burners are off, and preheating is complete.

NOTE: When cooking egg and milk products, the kettle should not be preheated, as products of this nature adhere to hot cooking surfaces. These types of food should be placed in the kettle before heating is begun.

4. Place food product into the kettle. The Heat Indicator Light (Green) (**6**) will cycle on and off indicating the burners are cycling on and off to maintain the set temperature.



NOTE: Do not fill kettle above recommended level marked on outside of kettle.

NOTE: The Low Water Indicator Light (Red) (**4**) should not be lit during kettle operation. This light indicates that the burners have been automatically shut off by the kettle's safety circuit. It is normal for the red light to come on when the kettle is in a tilted position. However, the kettle cannot be operated when the red light remains lit while the kettle is in the upright position. This indicates a low water condition, and water must be added to the reservoir. Refer to Reservoir Fill Procedures on page 13 of this manual for details.

5. When cooking is completed turn ON/OFF Switch/Solid State Temperature Control (**5**) to the "OFF' position.

NOTE: A five minute complete shut-of period is required before relighting.

6. Pour the contents of the kettle into an appropriate container by tilting the kettle forward. Care should be taken to pour slowly enough to avoid splashing off the product.

NOTE: As with cleaning food soil from any cookware, an important part of kettle cleaning is to prevent food from drying on. For this reason, cleaning should be completed immediately after cooked foods are removed. Refer to the Cleaning Instructions (page 5) for detailed kettle washing procedures.

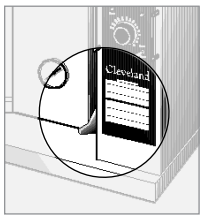
APPROXIMATE BOILING TIMES

The accompanying chart shows approximate times required for electric kettles of various capacities to boil water. The ON/OFF Switch/Solid State Temperature Control (**5**) must be set at "**10**" (Max.) throughout the heat-up period. Water will boil about 1/3 faster if the kettle is filled only to the outer steam jacket's welded seam resulting in a kettle filled to 2/3 capacity.

Kettle Capacity	Minutes
6 gallon/23 litre	20
12 gallon/45 litre	25

Approximate Boiling Times

MARINE LOCK



Your unit is equipped with a marine lock to prevent accidental tilting. The following procedure should be used to tilt the kettle.

1. Grasp the tilt handle.
2. Hold the latch down to unlock tilting mechanism.
3. Pull the handle to tilt kettle.
4. To lock, return the kettle to its upright position and push handle back.

NOTE: Inspect lock daily to ensure it is free moving and does not bind or stick. Clean lock if necessary (see Cleaning Instructions below for details).

CLEANING INSTRUCTIONS

CARE AND CLEANING

Your kettle must be cleaned regularly to maintain its fast, efficient cooking performance, and to ensure its continued safe, reliable operation.

Chloride Cleaners

WARNING: Do not use chloride base detergents. There is a growing number of non-chloride cleaners available. If unsure of the cleaners chlorine content consult the supplier. Also avoid cleaners containing quaternary salt as they can cause the stainless steel to pit and rust.

WARNING: If any gaskets or seals are found defective, replace or repair immediately. (See Service Parts Drawings for part identification.)

1. Place the kettle's On-Off Switch/Solid State Temperature Control (**5**) to the "OFF" position.
2. Prepare a warm water and mild detergent solution in the kettle.
3. Remove food soil inside the kettle using a nylon brush.

Wire Brush & Scrapers

WARNING: Do not use a metal bristle brush or scraper, as this may permanently damage the kettle's stainless steel surface.

4. Loosen food which is stuck to the kettle by allowing it to soak at a low temperature setting.
5. If the kettle is equipped with a draw-off valve, it should be cleaned as follows:
   - **a)** Remove drain screen from bottom of kettle. Thoroughly wash and rinse the screen either in a sink or a dishwasher, then replace it into the kettle.
   - **b)** Disassemble the draw-off valve first by turning the valve knob counter-clockwise, then turning the large hex nut counter-clockwise until the valve stem is free of the valve body.
   - **c)** In a sink, wash and rinse the inside of the valve body using a nylon brush.
   - **d)** Reassemble the draw-off valve by reversing the procedure for disassembly. The valve's hex nut should be hand tight only.
6. Rinse kettle interior thoroughly, then drain the rinse water. Do not leave water sitting in unit when not in use.
7. Using mild soapy water and a damp sponge, wash the exterior of the kettle, rinse, and dry.

NOTE: For more difficult cleaning applications one of the following can be used: alcohol, baking soda, vinegar, or a solution of ammonia in water.

Avoid the use of chloride cleansers, which may damage the kettle's stainless steel surface.

Steel Pads

WARNING: Steel wool should never be used for cleaning the cooking chamber of the kettle. Particles of steel wool become embedded in the cooking surface and rust, which may corrode the stainless steel.

NOTE: Unit should not be cleaned with a water jet.

8. Leave the cover off when the kettle is not in use.

RECOMMENDED CLEANERS FOR SPECIFIC SITUATIONS

Job	Cleaning Agent	Comments
Routine Cleaning	Soap, Ammonia Detergent, Medallion	Apply with cloth or sponge
Fingerprints & Smears	Arcal 20, Lac-O-Nu Ecoshine	Provides barrier film
Stubborn Stains & Discolouration	Cameo, Talc, Zud First Impression	Rub in direction of polish lines
Grease & Fatty Acids, Blood, Burnt-On Foods	Easy-Off, De-Grease It Oven Aid	Excellent removal on all finishes
Grease & Oil	Any good commercial detergent	Apply with sponge or cloth
Restoration/ Passivation	Benefit, Super Sheen	

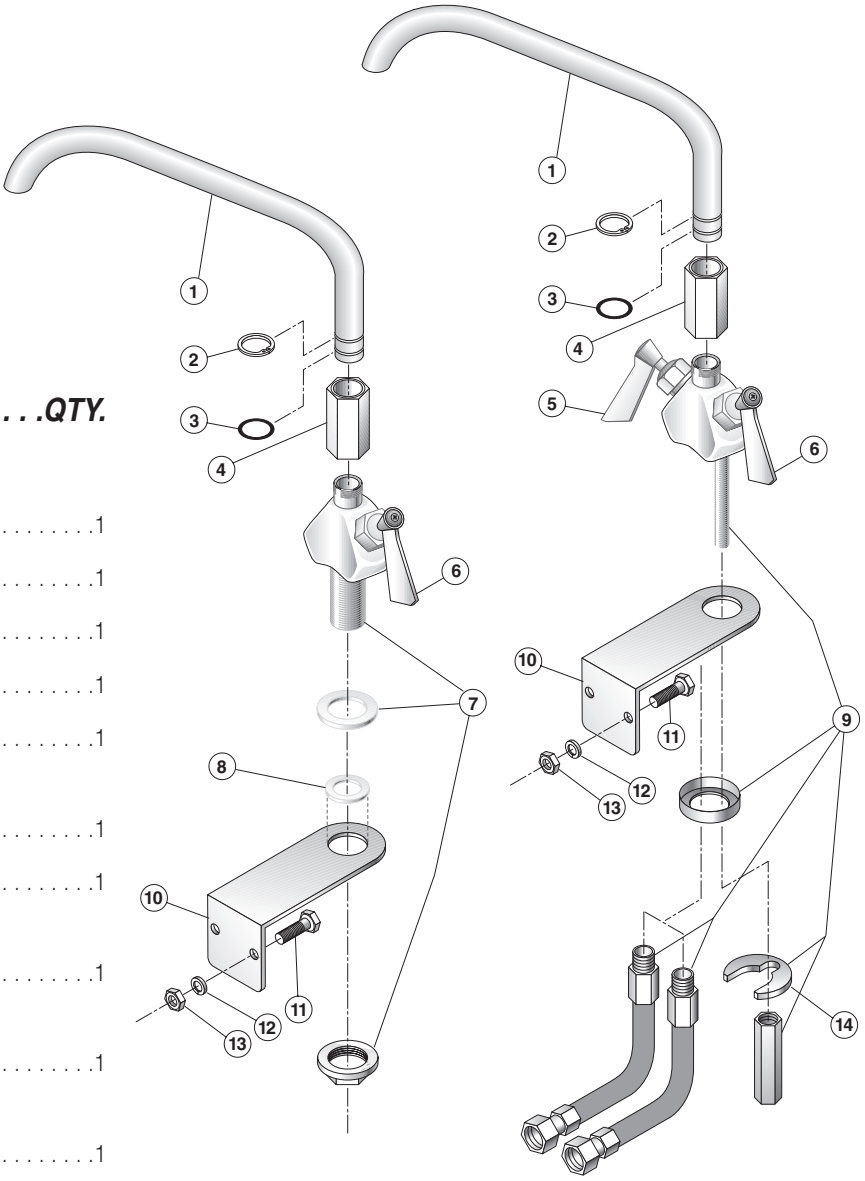
SERVICE PARTS

WARRANTY

Our Company supports a worldwide network of Maintenance and Repair Centers. Contact your nearest Maintenance and Repair Centre for replacement parts, service, or information regarding the proper maintenance and repair of your cooking equipment

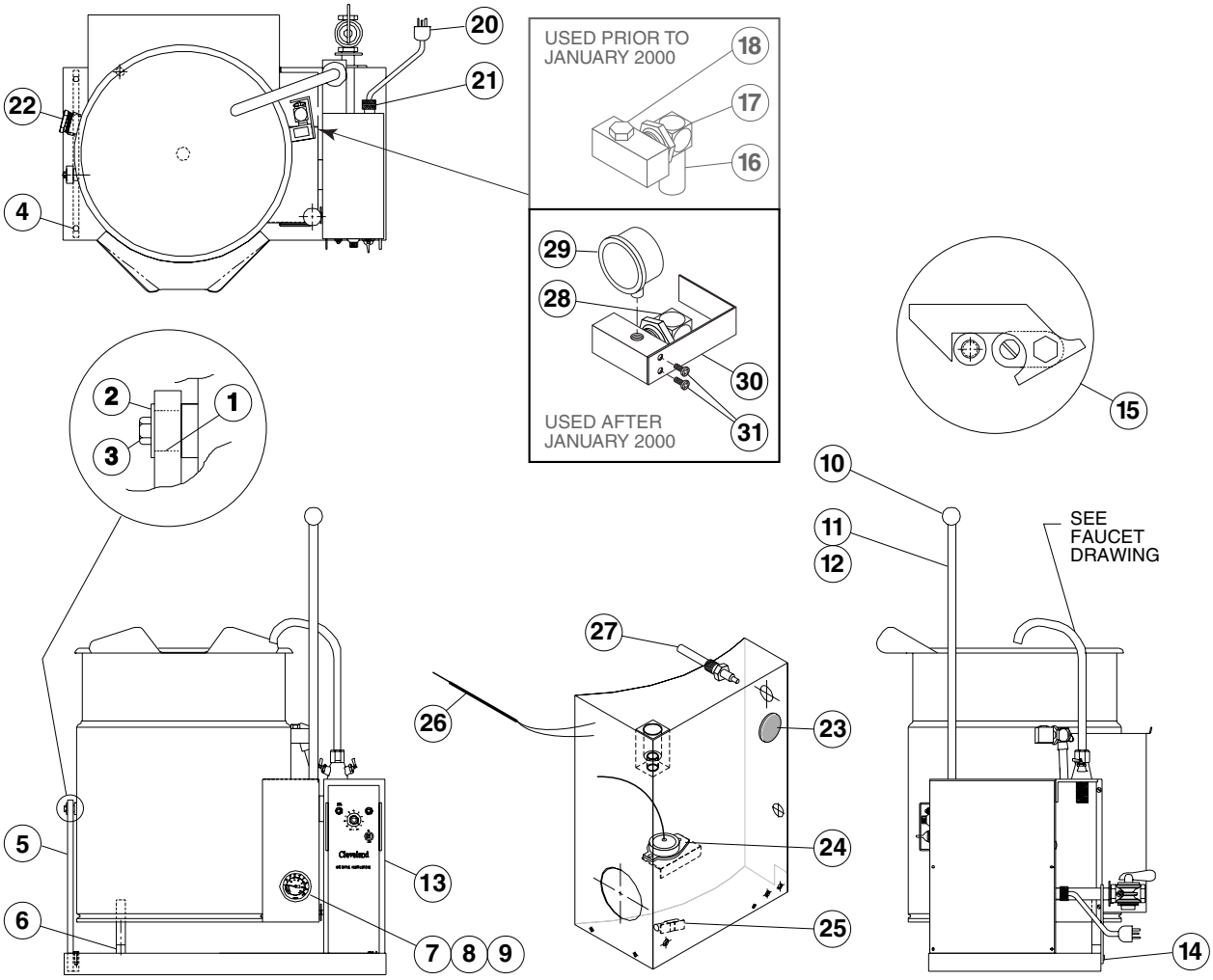
In order to preserve the various agency safety certification (UL, NSF, ASME/Ntl. Bd., etc.), only factory-supplied replacement parts should be used. The use of other than factory supplied replacement parts will void warranty.

FAUCET ASSEMBLY



ITEM NO.	*PART NO.*	*DESCRIPTION . . . . . .QTY.*
1.	KE50825-2	3/4" Spout 1
2.	FA95022	Retaining Ring 1
3.	FA05002-19	"O" Ring 1
4.	KE51736	Long Faucet Nut 1
5.	SE50020	Hot Water Stem Assembly . . . . . .1 (Double Pantry only)
6.	SE50021	Cold Water Stem Assembly 1
7.	KE51401	Single Pantry Body . . . . . .1 (c/w Item No. 6)
8.	KE50335	Adapter Washer . . . . . .1 (Single Pantry only)
9.	KE51403	Double Pantry Body . . . . . .1 (c/w Item No. 5&6)
10.	KE54159	Faucet Mounting Bracket 1
11.	FA11258	Hex Cap Screw 2
12.	FA30505	Washer 2
13.	FA21008	Hex Nut 2
14.	SE50447	Washer Horseshoe 1

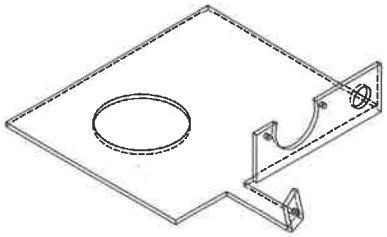
MAIN COMPONENTS

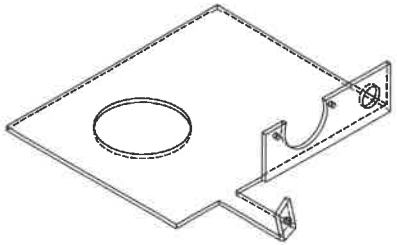


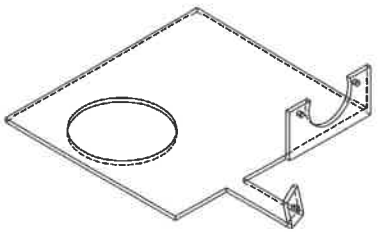
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.	SK50403	Bronze Bearing	1
2.	SK50434	Washer	1
3.	KE00349	Bolt, Modified	1
4.	KE54247	Hex Bolt, 14-20x3/4" lg.	2
5.	KE02004-1	Trunnion Support Bar and Brace Assembly (6 gallon)	1
5.	KE02004-2	Trunnion Support Bar and Brace Assembly (12 gallon)	1
6.	KE50474	Foot	1
7.	KE50429-2	Pressure Gauge	1
8.	FA05002-21	"O" Ring.	1
9.	FI05022	Compression Fitting, Brass	1
10.	KE50151-E	Knob	1
11.	KE54670-2	Handle, 6 gallon	1
	KE54670-3	Handle, 12 gallon	1
12.	FA05002-29	"O" Ring for Handle	1
13.	KE95457	Label	1
14.	FA11258	Hex Capa Screw, 14-20x3/4" lg.	4

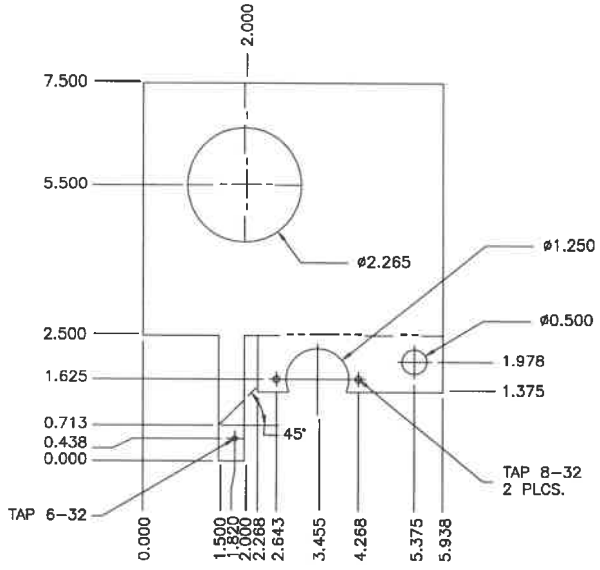
KE54431-5 HIGH LIMIT MOUNTING PLATE

#	DESCRIPTION	DATE	APPROVED
J	ADD NOTES	06/02/2015	FYOUNAN

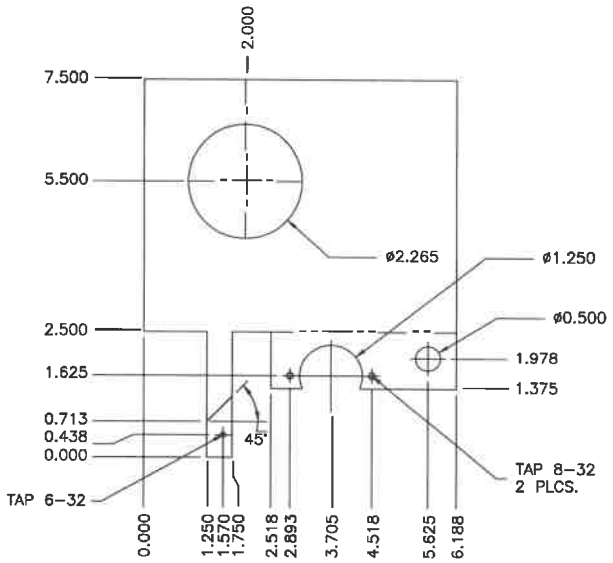




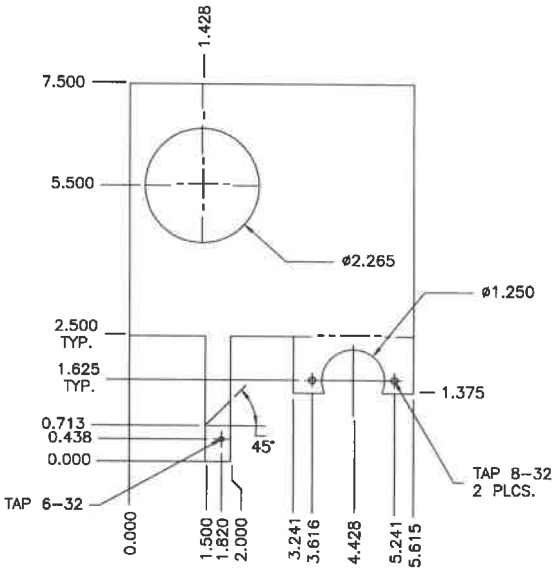




KE54431–4
KGT–6–T
REV. B



KE54431–5
KGT–12–T
REV. B



KE54431–6
KGT–12–TGB
REV. C

NOTE:
1.) ALL BENDS ARE 90°.
2.) REMOVE ALL THE SHARP EDGES.

MATERIAL: ALUMINIZED STEEL 12 GA.

FOR GENERAL TOLERANCES REFER TO PWI-048

MATERIAL TYPE & GRADE: ALUMINIZED STEEL
FORM: SHEET
SIZE: 0.105" THICK (12GA.)
FINISH:

CLEVELAND RANGE LTD.
8251 KEELE STREET, CONCORD, ONTARIO, CANADA

DO NOT SCALE PRINTED DRAWING | DRAWN BY LSuditu | DATE 1/16/2007

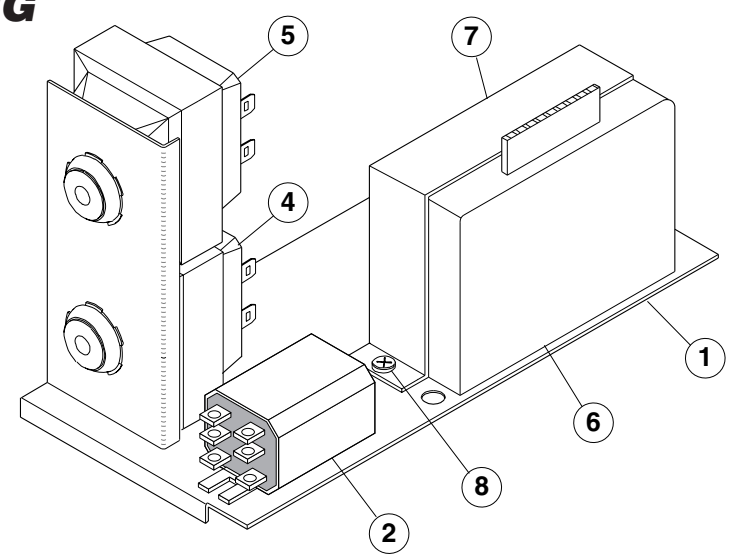
TITLE: TRUNNION PLATE KGT

SIZE C | DRAWING NO. KE54431 | SHEET 1 OF 1 | REV J

MAIN COMPONENTS (continued)

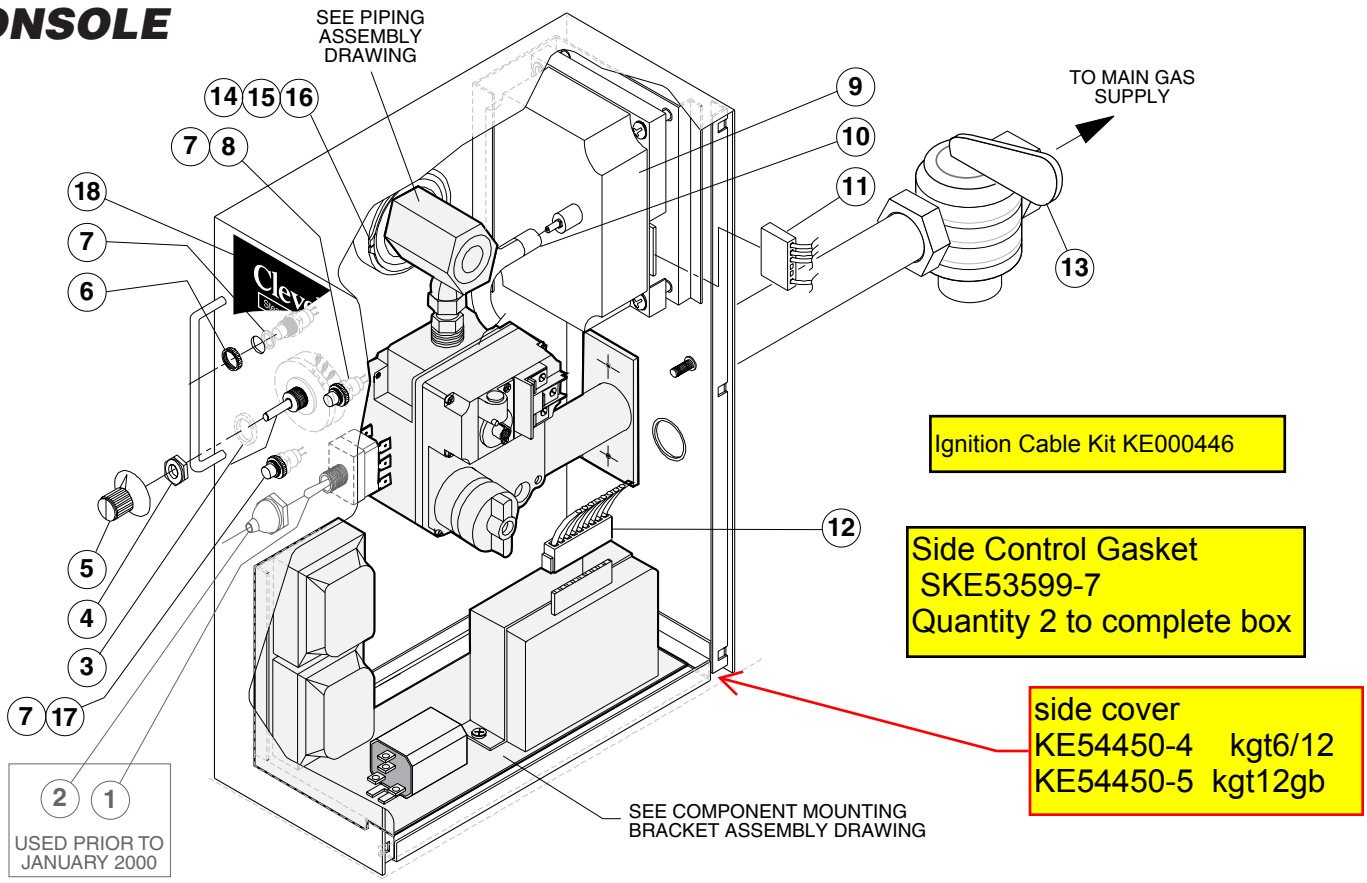
ITEM NO.	PART NO.	DESCRIPTION	QTY.
KE003672	~~SA95116~~	Marine Lock Replacement Kit	1
16.	KE50997	Blow Down Tube (used prior to January 2000)	1
17.	KE51723-1	Safety Valve (used prior to January 2000)	1
18.	KE54676	Bolt c/w "O" Ring Seal (used prior to January 2000)	1
20.	SK50562	Cord Plug	1
21.	KE54721-2	Water Tight Fitting	1
22.	KE54468	Water Level Sight Glass	1
23.	KE52196-1	Plug Button	1
24.	KE55069-8	Safety Thermostat	1
25.	KE50294-1	Mercury Switch	1
26.	KE00515	Thermistor Assembly	1
27.	KE50556-1	Water Level Probe	1
28.	KE51723	Safety Valve, 50 PSI, 1/2"	1
29.	KE50429-3	Pressure Gauge	1
30.	KE54852-1	Guard Bracket, Pressure Relief Valve	1
31.	FA11145	Screw, 10-32 x 3/8" SS	2

COMPONENT MOUNTING BRACKET ASSEMBLY



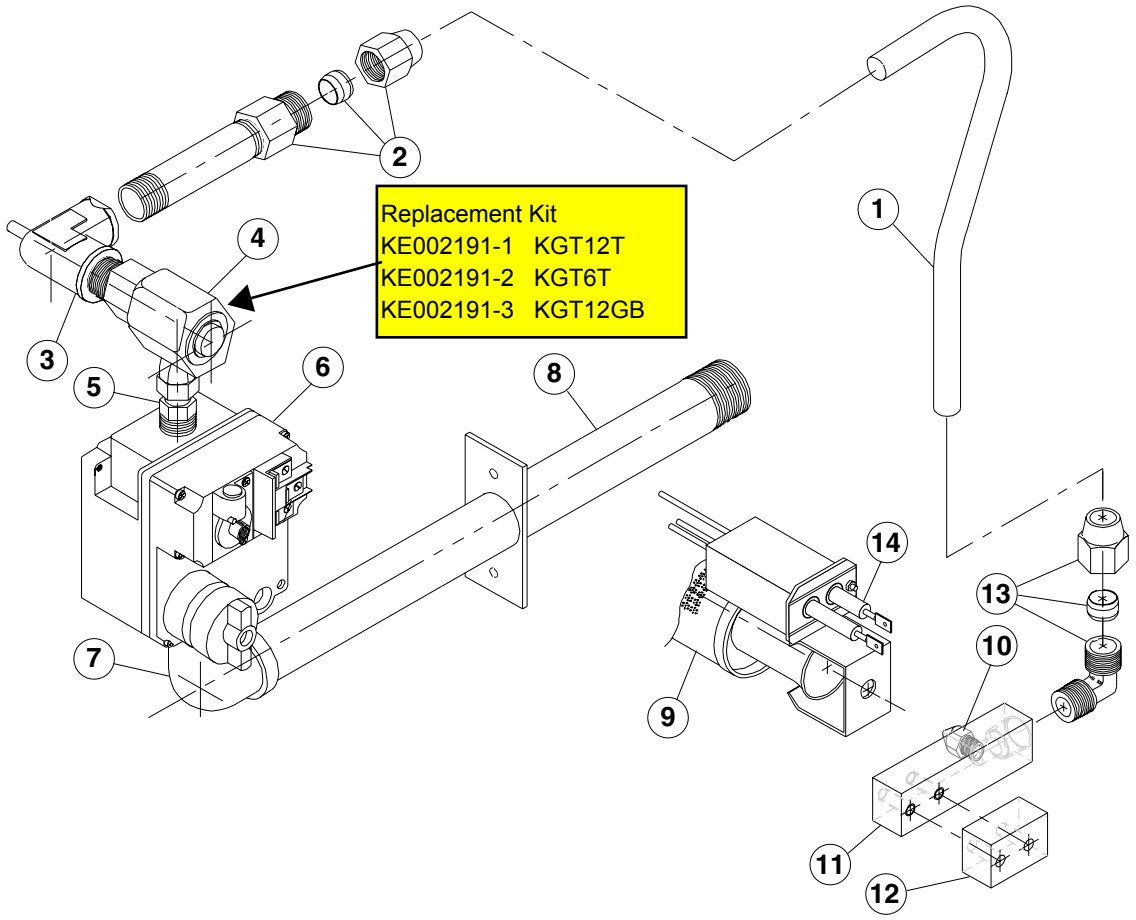
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1-9	KE01928	Component Plate Assembly	1
1.	KE01927	Component Plate Weldment	1
2.	KE50753-7	Relay	1
4.	KE53838-20	Transformer, 120/24	1
	KE53838-18	Transformer, 220/24	1
5.	KE53838-19	Transformer, 120/16	1
	KE53838-21	Transformer, 220/16	1
6.	KE00458	Solid State Control Box	1
7.	KE50303	Box Holder	1
8.	FA11089	Screw, #8-32x1/4 lg.	2
9.	FA11056	Screw, #6-32x1/2 lg.	2

CONSOLE



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.	KE50504	Switch, Toggle (used prior to January 2000)	1
2.	SK50062	Rubber Boot (used prior to January 2000)	1
3.	SE00114	Potentiometer with ON/OFF Switch, c/w Item #4	1
	KE50988-2	Potentiometer (used prior to January 2000)	1
4.	KE51005	Rubber Boot	1
5.	KE50569-1	Knob, Potentiometer	1
6.	KE50567-1	L.E.D., Red	1
7.	FA05002-18	"O" Ring	2
8.	KE50568-1	L.E.D., Green	1
9.	KE53469-2	Ignition Control Box	1
10.	KE54308	High Voltage Lead Assembly	1
11.	KE54309	Low Voltage Lead Assembly	1
12.	WH KGT	Wiring Harness	1
13.	F01518-1	Gas Shut-Off Valve	1
14.	FA05002-25	"O" Ring	1
15.	KE54434	Trunnion Washer	1
16.	FA95050	Retaining Ring	1
14.	FA05002-25	"O" Ring	1
15.	KE54434	Trunnion Washer	1
16.	FA95050	Retaining Ring	1
17.	KE50567-2	L.E.D., Amber	1
18.	KE95555-5	Label	1
	KE95457	Label (used prior to January 2000)	1

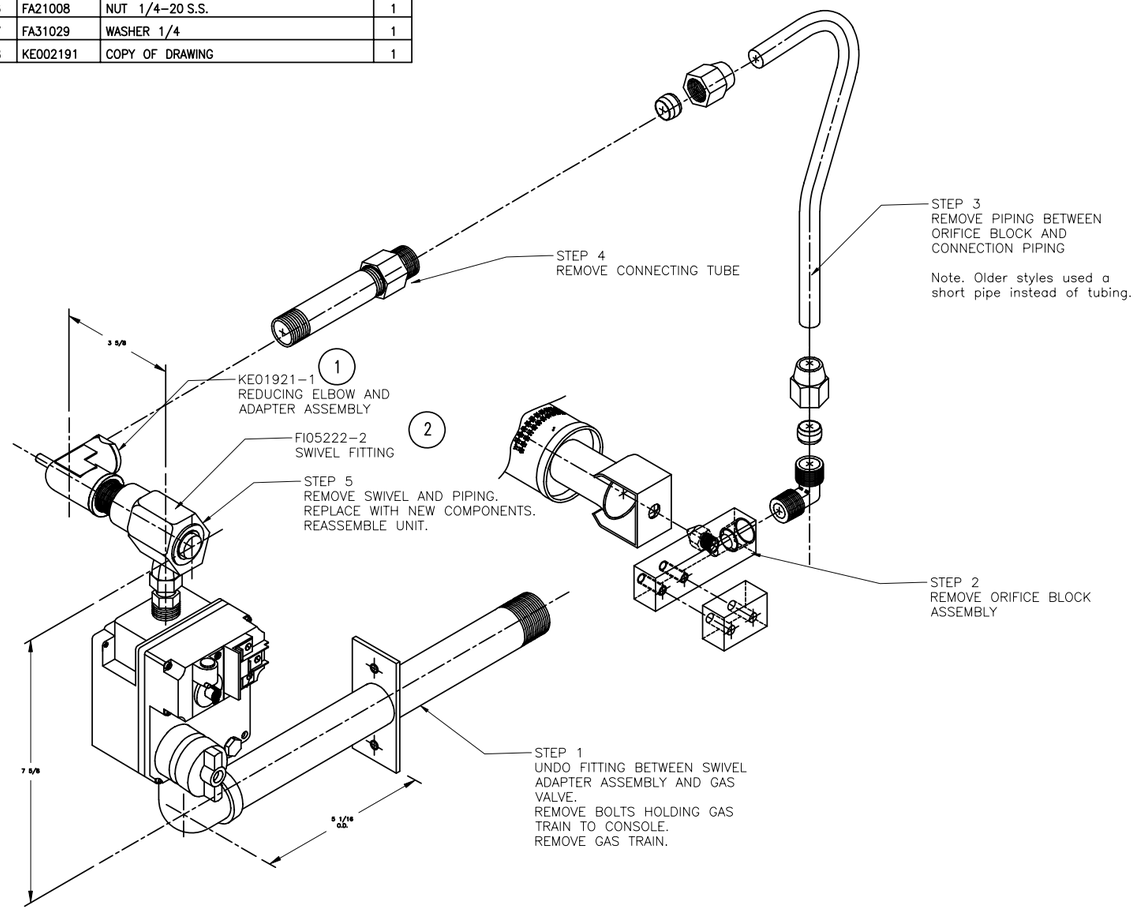
PIPING ASSEMBLY



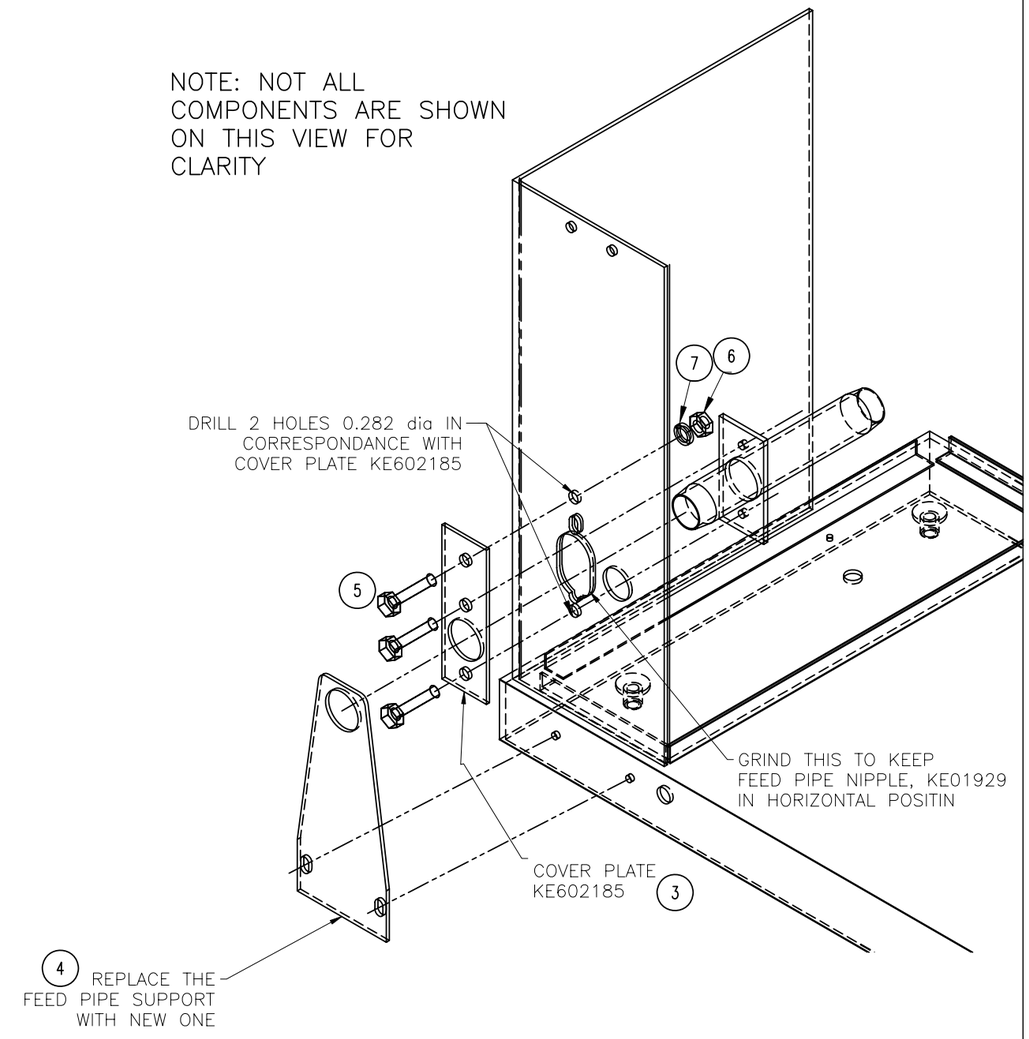
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.	KE54667	Gas Burner Tube, 12 gallon kettle	1
	KE54667-1	Gas Burner Tube, 6 gallon kettle	1
2.	KE02012	Compression Fitting and Nipple Assembly	1
3.	KE01921	Reducing Elbow Assembly	1
REPLACEMENT KIT SEE ABOVE		Swivel Elbow, Modified	1
5.	FI05163-1	Adapter, 1/2 NPT	1
6.	KE53515	Gas Valve, Modified	1
7.	FI00134	Street Elbow, 3/4" NPT	1
8.	KE01929	Feed Pipe Assembly	1
9.	KE01500-2	Gas Burner Assembly, 12 gallon kettle	1
	KE01500-3	Gas Burner Assembly, 6 gallon kettle	1
10.	KE53406-11	Gas Orifice, Natural Gas, 12 gallon kettle	1
	KE53406-1	Gas Orifice, Natural Gas, 6 gallon kettle	1
	KE53406-12	Gas Orifice, Propane Gas, 12 gallon kettle	1
	KE53406-2	Gas Orifice, Propane Gas, 6 gallon kettle	1
11.	KE54666	Orifice Support Block	1
12.	KE54700	Orifice Support Block, 6 gallon kettle only	1
13.	FI05198-5	Compression Elbow	1
14.	KE53437-1	Ignitor	1

ITEM	PART_#	DESCRIPTION	QTY
1	KE01921-1	REDUCING ELBOW AND ADAPTER ASSEMBLY	1
2	FI05222-2	SWIVEL FITTING	1
3	KE602185	COVER PLATE	1
4	KE54435-6	FEED PIPE SUPPORT KGT-12-T	1
	KE54435-7	FEED PIPE SUPPORT KGT-6-T	1
	KE54435-8	FEED PIPE SUPPORT KGT-12-TGB	1
5	KE54247	BOLT; MODIFIED 1/4-20X3/4	3
6	FA21008	NUT 1/4-20 S.S.	1
7	FA31029	WASHER 1/4	1
8	KE002191	COPY OF DRAWING	1

KIT #	WHERE USED
KE002191-1	KGT-12-T
KE002191-2	KGT-6-T
KE002191-3	KGT-12-TGB



NOTE: NOT ALL COMPONENTS ARE SHOWN ON THIS VIEW FOR CLARITY



FOR GENERAL TOLERANCES REFER TO PWI-043

MATERIAL
TYPE & GRADE
FORM
SIZE
FINISH

CLEVELAND RANGE LTD.
8251 KEELE STREET, CONCORD, ONTARIO, CANADA

DO NOT SCALE PRINTED DRAWING | DRAWN BY | DATE 2/10/2006

TITLE: KIT; TO REPLACE OLD SWIVEL KGT-T/TGB

SIZE B | DRAWING NO. KE002191.dwg | SHEET 1 OF 1 | REV A

RELEASED – EFFECTIVE

MAINTENANCE

ALL SERVICE MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN.

Cleveland Range equipment requires little preventative maintenance. We do however provide the following chart as a guideline for inspection and maintenance to keep your unit functioning at 100%.

INSPECTION AND MAINTENANCE CHECK LIST

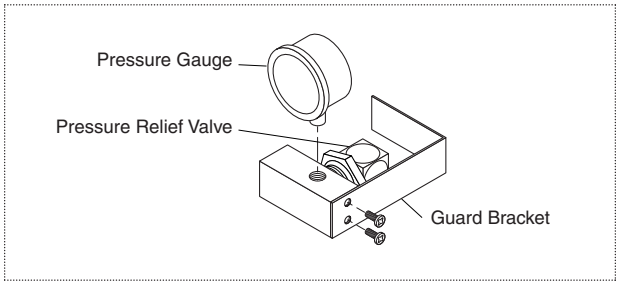
The following check should be completed every six months or more frequently if unit is in a high volume facility.

WARNING: It is imperative that damaged seals be repaired immediately to prevent equipment failure and/or damage.

ITEM	CHECK
SIDE CONSOLE SEAL	Insure there are six screws firmly holding down the cover. If not replace **SCREWS AND/OR MISSING OR WORN NYLON ANCHOR NUTS.**
Bottom Cover Gasket	**CHECK TO SEE IT IS IN PLACE AND IS NOT CRACKED OR SPLIT.**
Tilt Handle	**CHECK HANDLE FOR TIGHTNESS. IF LOOSE APPLY LOCK TIGHT AND REINSTALL.** **CHECK HANDLE KNOB IS ON END OF HANDLE AND FIRMLY TIGHTENED. IF LOOSE APPLY LOCK TIGHT AND REINSTALL.**
Pressure Gauge	**CHECK THAT THE GAUGE DOES NOT HAVE MOISTURE ON ITS INSIDE FACE.** **REPLACE IF MOISTURE IS PRESENT.** **CHECK THAT THE GAUGE SHOWS A VACUUM (NEEDLE IS WELL INTO THE GREEN ZONE) WHEN COLD AND SHOWS BETWEEN 25-40 PSI WHEN UNIT IS HOT. IF NOT FOLLOW VACUUM LEAK TEST (PAGE 15).**
Pressure Relief Valve	**CHECK PRESSURE RELIEF VALVE AS DESCRIBED IN PRESSURE RELIEF VALVE PERIODIC TESTING PROCEDURE (PAGE 12).**
Temperature Check	Following Calibrating Procedure (page 12) check the inner kettle surface temperature with a digital surface thermometer and adjust if required.

CALIBRATING PROCEDURE

1. Insure the unit has a vacuum before you begin calibrating procedures. If unit requires venting refer to Kettle Venting Instructions on page 15 of this manual.
2. Turn kettle ON and set temperature control knob to 10 (Max.).
3. Allow the unit to cycle twice.
4. Check temperature of the inner kettle surface with a digital surface thermometer.
5. Temperature should be between 260° F and 265° F.
6. Using a screw driver adjust temperature by turning the potentiometer on the black box. Turn very little. Turn clockwise to INCREASES and counter-clockwise to DECREASE temperature.
7. Allow the unit to cycle twice.
8. Check temperature of the inner kettle surface with a digital surface thermometer.
9. Repeat steps **4.** through **8.** until unit is calibrated.



Pressure Relief Valve/Gauge Assembly Drawing

PRESSURE RELIEF VALVE PERIODIC TESTING PROCEDURE

WARNING: IMPROPER REFILLING OF KETTLE JACKET WILL RESULT IN IRREVERSIBLE DAMAGE TO UNIT.

Most insurance agencies require periodic testing of pressure relief valves used on pressure vessels. This procedure will allow you to safely and quickly test your kettle's pressure relief valve. We recommend this test be performed twice a year.

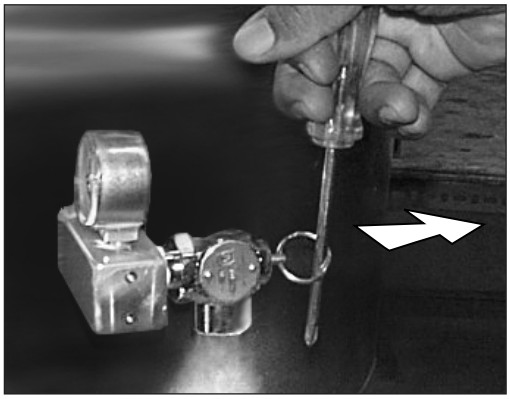
NOTE: The following instruction is intended for use by qualified service personnel.

WARNING: Kettle surface will be hot and steam will be released during testing. Take necessary precautions including the use of gloves and eye protection to prevent personal injury.

DANGER: PRESSURE RELIEF VALVE WILL EXHAUST HIGH TEMPERATURE STEAM. CONTACT WITH SKIN COULD RESULT IN SERIOUS BURNS. KEEP FACE, HANDS AND BODY CLEAR OF DISCHARGE.

DANGER: WORKING ON MACHINES WITH POWER COULD RESULT IN SEVERE ELECTRICAL SHOCK.

1. Remove guard bracket from pressure relief valve/gauge assembly.
2. With the kettle empty, turn unit ON and set temperature control to 10 (Max.). Allow the kettle to heat until the unit cycles off.
3. Switch unit OFF and disconnect main power at fused disconnect switch.



4. Stand to the side of the pressure relief valve discharge tube and pull valve open for a maximum of one second. Repeat test three to four times. Each time the mechanism should move freely and be accompanied by a rapid escape of steam.
5. Replace guard bracket from pressure relief valve/gauge assembly.

If valve appears to be sticking replace pressure relief valve.

If foreign material is discharged then drain kettle (see Kettle Jacket Filling & Draining Procedures on page 14) and replace pressure relief valve.

See Reservoir Fill Procedure (page 13) for full instructions on the correct method for refilling kettle jacket.

WARNING: Improper refilling of kettle jacket will result in irreversible damage to unit.

NOTE: Rust inhibitor is purchased locally. Read directions and do not exceed manufacturer's recommendation (excessive rust inhibitor can also cause solidification).

RESERVOIR FILL PROCEDURES

WARNING: IMPROPER REFILLING OF KETTLE JACKET WILL RESULT IN IRREVERSIBLE DAMAGE TO UNIT.

The kettle's water level must be maintained at the proper level. Under normal operating conditions, the sealed water reservoir should never require the addition of water.

If the red "low water" light comes on during use (while the kettle is in an upright position), the water level has reached a critically low level. The low water protection control has automatically shut off the gas burner. The following procedure must be completed before further use:

DANGER: PRESSURE RELIEF VALVE WILL EXHAUST HIGH TEMPERATURE STEAM. CONTACT WITH SKIN COULD RESULT IN SERIOUS BURNS. KEEP FACE, HANDS AND BODY CLEAR OF DISCHARGE.

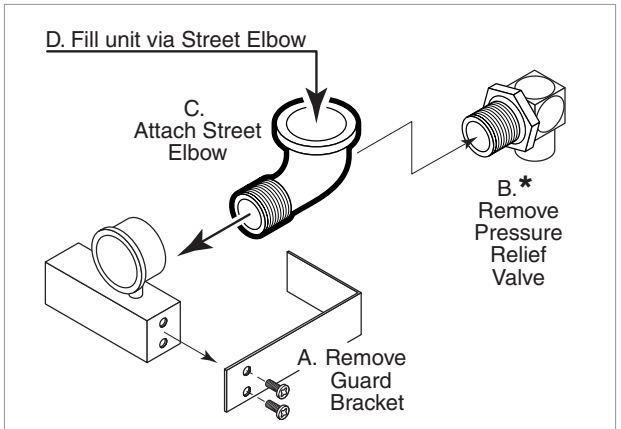
DANGER: WORKING ON MACHINES WITH POWER COULD RESULT IN SEVERE ELECTRICAL SHOCK.

NOTE: Have a qualified service technician repair the leakage problem and add water to the unit. Ensure that the red "low water" light is on when the kettle is upright. On tilting kettles, it is normal for the red light to come on when the kettle is in a tilted position.

CAUTION: Only distilled water should be used when adding water to a partially filled water reservoir (If unit is completely empty see Kettle Jacket Filling & Draining Procedures on page 14). Local tap water conditions may cause kettle damage which is not covered under warranty. Rust inhibitor is purchased locally. Read directions and do not exceed manufacturer's recommendation (excessive rust inhibitor can also cause solidification).

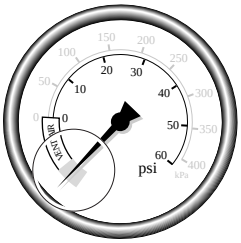
DISTILLED WATER REQUIREMENTS

Kettle Capacity	When red "Low Water Light" comes on, add distilled water	When the reservoir is completely empty, add distilled water
6 gallon	70 ounces	160 ounces
12 gallon	120 ounces	2 gallon



***Important**- Pull ring on Pressure Relief Valve prior to removal to insure vessel is not pressurized.

Pressure Relief Valve/Gauge Assembly Drawing



1. Ensure kettle is at room temperature and pressure gauge showing zero or less pressure.
2. Shut off power to the kettle at the fused disconnect switch.
3. Remove Guard Bracket (A).
4. Pull Pressure Relief Valve (B) open to insure vessel is not pressurized.
5. Remove Pressure Relief Valve (B).
6. Replace Pressure Relief Valve (B) with Street Elbow (C).

Sight Glass

7. Add distilled water (D) through the Street Elbow (C), using a funnel if necessary. Fill the unit to the high level mark on the Sight Glass.
8. Apply a thread sealant (i.e. Teflon tape) to the Pressure Relief Valve's (B) thread and replace.
9. Replace Guard Bracket (A).
10. Restore power to unit at the fused disconnect switch.
11. The kettle must now be vented. (Refer to the Kettle Venting Instructions on page 15).

KETTLE JACKET FILLING & DRAINING PROCEDURES

Under normal circumstances the kettle does not require the draining of all fluid. If the red "low water" light is on, follow the Reservoir Fill Procedures (page 13) in this manual.

If unit must be drained follow the procedures described on the following pages.

WARNING: IMPROPER REFILLING OF KETTLE JACKET WILL RESULT IN IRREVERSIBLE DAMAGE TO UNIT.

Use only a mixture of water and rust inhibitor to refill kettle jacket (see instructions below).

Contact your local water treatment company and purchase rust inhibitor with the specifications described below.

Recommended Corrosion Inhibitors for Closed Systems.

DESCRIPTION

Recommended for our units is a blend of SODIUM NITRITE and BORAX for corrosion inhibition of ferrous metals and axoles for copper and copper alloy corrosion protection. Product should be formulated for hot or cold closed recalculating water systems.

Source the chemicals stated above from your local water treatment company. Mix only with water and follow manufactures recommended mixing rate.

DISPOSAL OF INHIBITOR

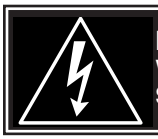
Do not dispose of chemicals in any system which may discharge into water supplies used for drinking or washing or that could accidentally discharge into such systems, or into stream accessible to animals.

Follow all Federal, State and local codes when disposing of product.

Refill Quantities *(water and corrosion inhibitor mixture)*

Kettle Size	U.S. Gallons	Liters
6 gallon	1.5	5.70
12 gallon	2.19	8.3

Draining Procedure



DANGER: WORKING ON MACHINES WITH POWER COULD RESULT IN SEVERE ELECTRICAL SHOCK.

DANGER: PRESSURE RELIEF VALVE WILL EXHAUST HIGH TEMPERATURE STEAM. CONTACT WITH SKIN COULD RESULT IN SERIOUS BURNS. KEEP FACE, HANDS AND BODY CLEAR OF DISCHARGE.

DANGER: EXTREMELY HOT SURFACES. WORK ONLY ON COLD KETTLE.

1. Shut off gas supply.
2. Disconnect gas line and electrical connection.
3. Remove bolts holding kettle to table.
4. Pull ring on pressure relief valve to insure there is no pressure within the kettle jacket.

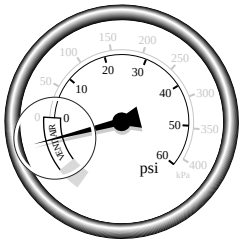
Sight Glass

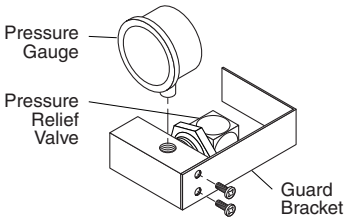
5. Remove sight glass.
6. Tilt kettle on its side (sight glass down) and allow to drain (pull ring on pressure relief valve to speed up draining).
7. Tilt kettle upright and refill with water. Tilt kettle again on its side and allow to drain. Repeat until water drains clear.
8. Apply a thread sealant (i.e. Teflon tape) to the sight glass threads and replace.

Refilling Unit

(see Reservoir Fill Procedures on page 13 for details).

KETTLE VENTING INSTRUCTIONS



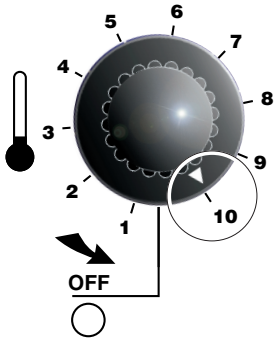


The following venting procedure should be followed when the Vacuum/Pressure Gauge needle is in the "VENT AIR" zone:

NOTE: Check for and eliminate leaks prior to venting (See Repairing Leaks in Steam Jacketed Kettle Fittings.

DANGER: PRESSURE RELIEF VALVE WILL EXHAUST HIGH TEMPERATURE STEAM. CONTACT WITH SKIN COULD RESULT IN SERIOUS BURNS. KEEP FACE, HANDS AND BODY CLEAR OF DISCHARGE.

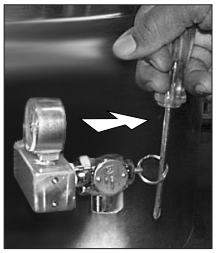
DANGER: WORKING ON MACHINES WITH POWER COULD RESULT IN SEVERE ELECTRICAL SHOCK.



1. Remove guard bracket from pressure relief valve/gauge assembly.

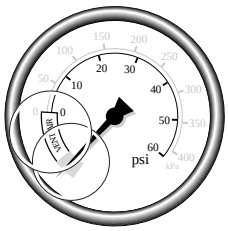
2. Turn kettle ON and set Temperature Control to **10** (Max.), heat the empty kettle until unit cycles off.

3. Vent kettle by pulling safety valve ring 8-10 times in short 2-3 second blasts with a 5 second interval between pulls.



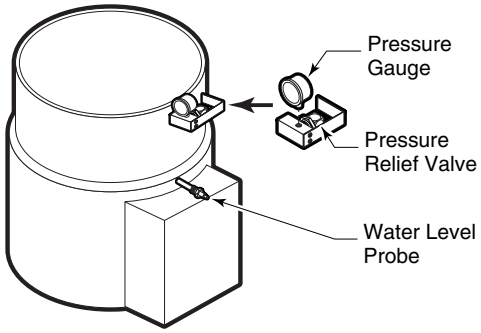
NOTE: If unit cycles ON, stop venting and wait for kettle to cycle OFF before continuing.

4. Turn kettle OFF. Add cold water to kettle until its surface temperature is below 100°F. The pressure gauge needle should be in the green zone, indicating a vacuum in the kettle's jacket.



5. Replace guard bracket from pressure relief valve/gauge assembly.

VACUUM LEAK TEST PROCEDURE



If the kettle will not hold vacuum, test for leaks at:

A. Water Level Probe.

B. Pressure Relief Valve.

C. Pressure Gauge.

LEAK TEST PROCEDURE:

1. Heat kettle until unit cycles off.

2. Shut off power to the kettle at the fused disconnect switch.

3. Spread Bubble Type Leak Detector over suspected areas and watch closely for bubbles.

4. Repair areas as required.

REPAIRING LEAKS IN STEAM JACKETED KETTLE FITTINGS

If unit will not hold a vacuum the most likely cause is a leak at one of the fittings.

Often, the easiest way to eliminate a leak is reseal the suspect areas.

1. Water Level Probe

Remove,clean threads, apply teflon thread sealant and reinstall.

2. Pressure Relief Valve

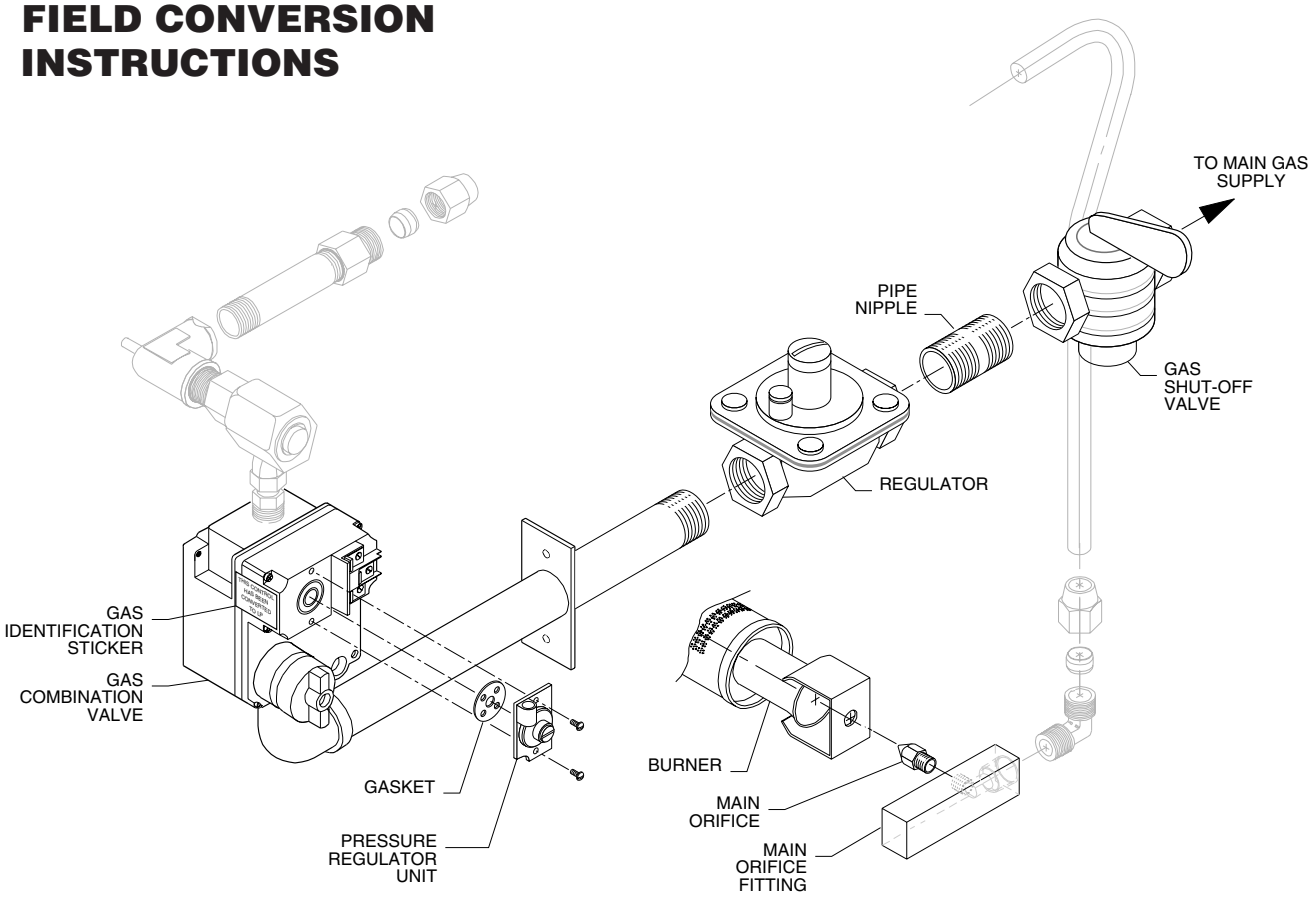
A/ Inspect for signs of leaks. Replace if required.

B/ Remove, clean threads, apply teflon thread sealant and reinstall.

3. Pressure Gauge

A/ Inspect face of gauge. If it contains moisture on the inside of face replace.

FIELD CONVERSION INSTRUCTIONS



Natural Gas to Propane Gas

NOTE: Use thread sealant compatible with propane gas on all threaded piping connections.

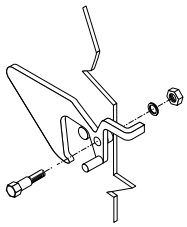
1. Shut off main gas supply and disconnect kettle from supply line.
2. Remove GAS SHUT-OFF VALVE from kettle supply pipe and install REGULATOR (pre-set to 10 " W.C. pressure) supplied in field conversion kit.
3. Re-install SHUT-OFF VALVE using PIPE NIPPLE supplied in kit.
4. Remove side cover from control console.
5. Remove PRESSURE REGULATOR UNIT from GAS COMBINATION VALVE inside console, and replace with blocked PRESSURE REGULATOR UNIT from kit. Make sure GASKET is correctly seated in recess in GAS COMBINATION VALVE during installation.

NOTE:
Place GAS IDENTIFICATION STICKER on face of GAS COMBINATION VALVE.

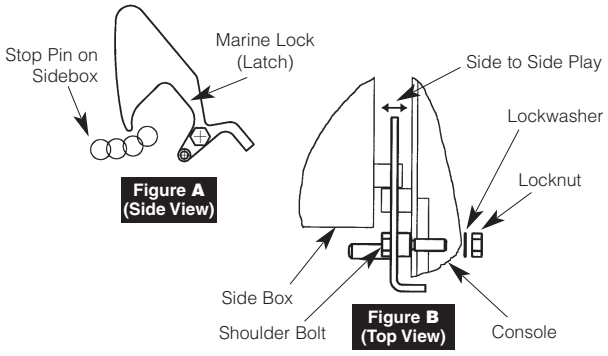
6. Tilt kettle. Remove kettle side box cover. Remove screw securing end of BURNER. Remove BURNER. Support MAIN ORIFICE FITTING and remove MAIN ORIFICE. Install new orifice from kit.
7. Replace BURNER. Check ORIFICE/BURNER alignment insuring ORIFICE points straight into the center of the BURNER.
8. Reconnect to gas supply. Turn on propane gas. Tilt kettle to upright position, turn on power and check all gas connections for leaks.
9. Turn off power and main gas supply, and replace all covers. Attach GAS IDENTIFICATION STICKER to nameplate.

PART NO.	DESCRIPTION
SE50438	Field Conversion Kit, 6 gallon
SE50438-1	Field Conversion Kit, 12 gallon
KE53406-2	Main Orifice, 6 gallon
KE53406-12	Main Orifice, 12 gallon
KE54618	Regulator
FI00607	Pipe Nipple
KE53515-2	Pressure Regulator Unit & Gasket

Field Conversion Kit



MARINE LOCK TESTING PROCEDURE



1. Check that lock clears stop pin on side box without rubbing when kettle is tilted (Figure **A**).

2. Check side to side play. Lock should remain fully over stop pin when pushed to it's maximum side to side play (Figure **B**).

3. Check that the kettle when pushed fully upright moves the lock to a closed position. To check this:

A/ Hold the latch firmly in the unlocked position while tilting the kettle back to an upright position.

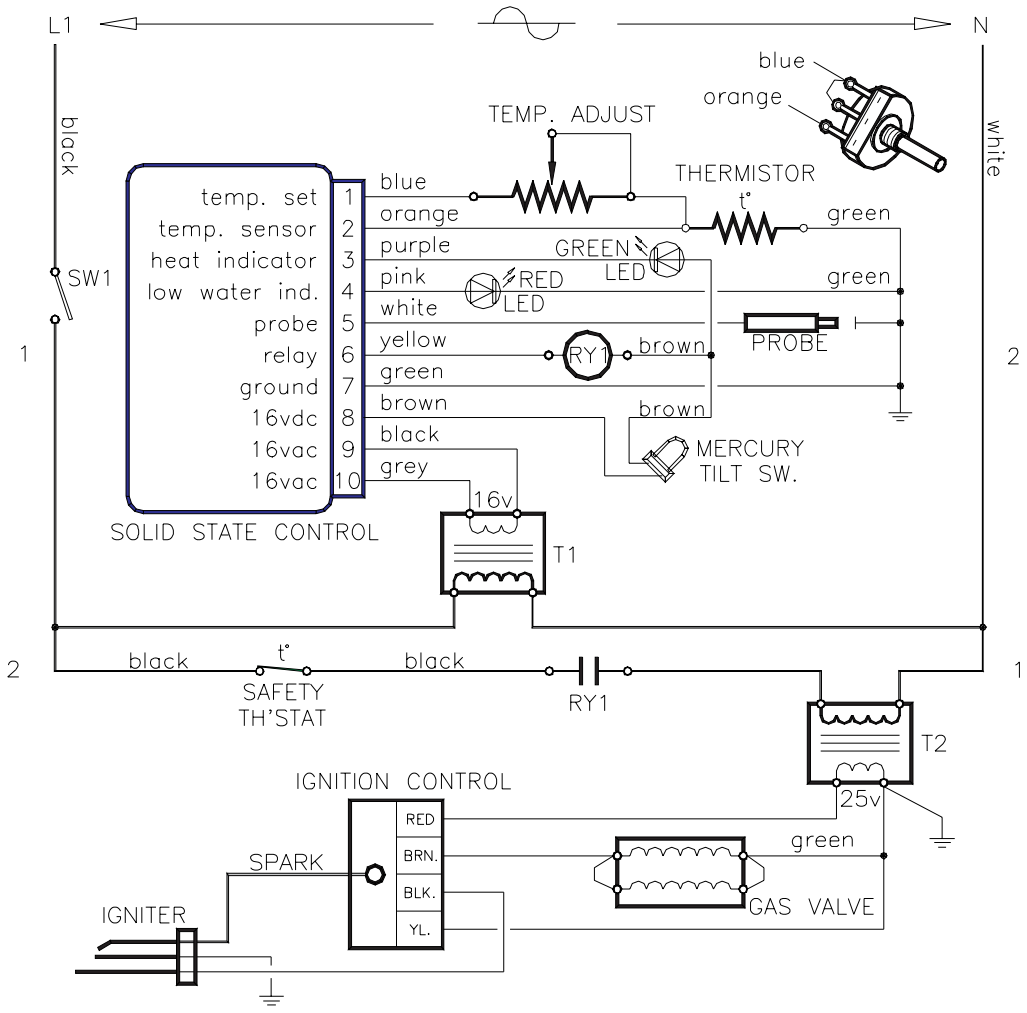
B/ The kettle sidebox will force the lock into a new position.

C/ Hold the lock in this position and try to tilt the kettle forward. The latch should prevent the kettle from tilting.

4. Check shoulder bolt is firmly seated against console body.

5. Check on inside of console box that shoulder bolt locknut is secure.

WIRING DIAGRAM



OPERATING SEQUENCES

1.	Turn On-Off Switch/ Temperature Control Knob "ON"	* 16 volt relay is energized and powers solid state control system. * Temperature knob is turned up and control box calls for heat. * Relay (RY-1) closes and powers 24 volt transformer. * Ignition control box is powered.
3.	Ignitor Sparks	* Gas valve is energized. * Ignitor sparks and ignition occurs.
4.	Temperature Reached	* Solid state controls senses temperature reached. * Relay (RY-1) opens and 24 volt transformer loses power. * Ignition control box is turned off. * Gas valve closes.
5.	Maintaining Temperature	* Solid state controls senses temperature drop. * Relay (RY-1) closes and powers 24 volt transformer. * Ignitor control box is powered. * Steps three and four are repeated.

SOLID STATE CONTROL SEQUENCE

Our solid state controls consist of the following components.

On-Off Switch/ Temperature Control Knob (Potentiometer)	* Provides or interrupts electrical power to the control system. * Rotate to change resistance from 0 to 50,000 ohms. This resistance is compared to the resistance on the thermistor using a voltage comparator circuit inside the control box. * If the resistance is lower than the thermistor resistance then the control box will provide 16v dc to pin #8. The green indicator light illuminates and the control relay (RY-1) is energized closed to provide power to the heating system.
Control Box	* Analyzes inputs from water level probe, tilt switch, potentiometer, thermistor. * Energizes control relay (RY-1)
Water Level Probe	* Senses water in jacket.
Tilt Switch	* When kettle is in upright position tilt switch is closed to complete circuit between pin #8, the relay (RY-1) and green indicator light.
Thermistor	* The thermistor resistance decreases as temperature increases. When the thermistor resistance equals the potentiometer then 16v dc is removed from pin #8. The control relay (RY-1) returns to the normally open position.
Green LED Light	Indicates that the control box is calling for heat. Pin #8 powered.
Red LED Light	Indicates that the water level probe is not immersed in water. Not enough water in the jacket or kettle tilted.
Relay (RY-1)	When energized allows the heating circuit to function. Electric elements or gas burner system.

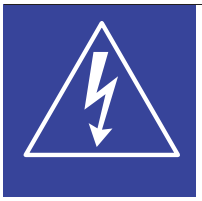
NOTES:

***** A ground loop circuit must be established between kettle body, water in jacket, water level probe and control box. If this loop is present, it indicates that there is sufficient water in the kettle for safe operation.

***** If there is not sufficient water in the jacket then the loop is broken and the control box will prevent 16v DC from being supplied to pin #8. The control relay (RY-1) will remain (or return) to the normally open position and the unit cannot heat. The red LED light will be illuminated.

Symbol Legend *(page 1 of 2)*

❒ English ❒ French ❒ Spanish ❒ Italian ❒ German ❒ Chinese-Simplified ❒ Chinese-Traditional



RISK OF ELECTRICAL SHOCK
DANGER DE SECOUSSE ÉLECTRIQUE
PELIGRO DE ELECTROCHOQUE
PERICOLO DI SCOSSA
STROMSCHLAG-GEFAHR
有触电危险
有觸電危險

SPLASHPROOF
ANTIÉCLABOUSSURES
A PRUEBA DE SALPICADURAS
PROTETTO CONTRO GLI SPRUZZI
SPRITZWASSERDICHT
防溅水的
防濺水的

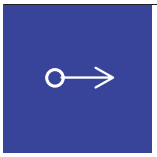
DISCONNECT ELECTRICAL SUPPLY BEFORE WORKING ON KETTLE
COUPER LE COURANT AVANT D'INTERVENIR SUR L'ÉQUIPEMENT
DESCONECTAR LA ALIMENTACION ELECTRICA ANTES DE REALIZAR TRABAJOS EN EL EQUIPO
DISINSERIRE LA CORRENTE PRIMA DI LAVORARE SULLA MACCHINA
STROMVERSORGUNG AUSSCHALTEN, BEVOR AM GERÄT GEARBEITET WIRD
操作设备前切断电源
操作設備前切斷電源

MAIN POWER
ALIMENTATION ÉLECTRIQUE
ALIMENTACION PRINCIPAL
ALIMENTAZIONE
HAUPTSTROM
主电源
主電源

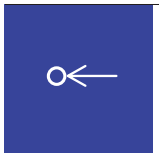
ON
MARCHE
ENCENDIDO
ACCESO
AN
开
開

OFF
ARRÊT
APAGADO
SPENTO
AUS
关
關

PAUSE, INTERRUPTION
PAUSE, INTERRUPTION
PAUSA, INTERRUPCION
PAUSA, INTERRUZIONE
PAUSE, UNTERBRECHUNG
暂停，间断
暫停，間斷



CONTINUE
CONTINUER
CONTINUAR
CONTINUA
WEITER
继续
繼續



RESET
RÉENCLENCHER
RECONECTAR
RESET
NULLSTELLEN
重新设定
重新設定

START OF ACTION
DÉBUT DE L'ACTION
INICIAR FUNCIONAMIENTO
INIZIO OPERAZIONE
FUNKTION STARTEN
开始操作
開始操作

STOP OF ACTION
ARRÊT DE L'ACTION
PARAR FUNCIONAMIENTO
ARRESTO OPERAZIONE
FUNKTION STOPPEN
停止操作
停止操作

FAST START
DÉMARRAGE RAPIDE
INICIO RAPIDO
AVVIAMENTO RAPIDO
SCHNELLER START
快启动
快啓動

FAST STOP, EMERGENCY
ARRÊT RAPIDE D'URGENCE
PARADA RAPIDA, EMERGENCIA
ARRESTO RAPIDO, EMERGENZA
SCHNELLER STOPP, NOTFALL
快止动，紧急
快止動，緊急

Symbol Legend *(page 2 of 2)*

❒ English ❒ French ❒ Spanish ❒ Italian ❒ German ❒ Chinese-Simplified ❒ Chinese-Traditional

AUTOMATIC TEMPERATURE CONTROL
COMMANDE AUTOMATIQUE DE LA TEMPÉRATURE
AJUSTE AUTOMATICO DE TEMPERATURA
CONTROLLO AUTOMATICO TEMPERATURA
AUTOMATISCHE TEMPERATURREGELUNG
自动温度控制
自動溫度控制

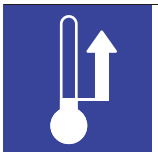
LOW WATER
NIVEAU BAS DE L'EAU
NIVEL DE AGUA BAJO
LIVELLO BASSO
WASSERSTAND NIEDRIG
低水量
低水量

BURNER AND/OR ELEMENT ENERGIZED
BRÛLEUR ET/OU ÉLÉMENT ALLUMÉ
QUEMADOR O ELEMENTO ENCENDIDO
FIAMMA E/O ELEMENTO ATTIVATI
BRENNER ODER ELEMENT EINGESCHALTET
燃烧器和/或元件带电
燃燒器和/或元件帶電

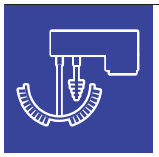
IGNITION FAILURE
PANNE D'ALLUMAGE
FALLO DE ENCENDIDO
MANCATA ACCENSIONE
ZÜNDUNGSFEHLER
点火失效
點火失效

HEATING
ÉBULLITION
CALEFACCION
RISCALDAMENTO
HEIZUNG
加热
加熱

COOLING
REFROIDISSEMENT
REFRIGERACION
RAFFREDDAMENTO
KÜHLUNG
冷却
冷卻



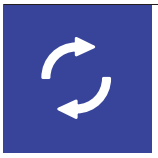
HEAT ADJUSTMENT
RÉGLAGE DE LA CHALEUR
REGULACION DE CALOR
REGOLAZIONE RISCALDAMENTO
WÄRMEREGULIERUNG
热调节
熱調節



MIXER BRIDGE
PONT DU MÉLANGEUR
PUENTE DE MEZCLADORA
MENSOLA MESCOLATORE
MISCHER-BRÜCKE
搅拌桥
攪拌橋

LEFT KETTLE
BOUILLOIRE GAUCHE
HERVIDOR IZQUIERDO
BOLLITORE SINISTRO
LINKER KOCHKESSEL
左壶
左壺

RIGHT KETTLE
BOUILLOIRE DROITE
HERVIDOR DERECHO
BOLLITORE DESTRO
RECHTER KOCHKESSEL
右壶
右壺

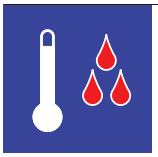


MIX
MÉLANGER
MEZCLAR
MESCOLATURA
MISCHEN
混合
混合

LIFT
LEVER
LEVANTAR
SOLLEVARE
HEBEN
提升
提升

UP
HAUT
ARRIBA
SU
RAUF
向上
向上

DOWN
BAS
ABAJO
GIÙ
RUNTER
向下
向下



HOT WATER
EAU CHAUDE
AGUA CALIENTE
ACQUA CALDA
HEISSES WASSER
热水
熱水

COLD WATER
EAU FROIDE
AGUA FRIA
ACQUA FREDDA
KALTES WASSER
冷水
冷水