Visit www.clevelandrange.com to locate a service or sales representative in your area.

CLEVELAND

Gas 25 Gallon Kettle

Installation, Operation, Maintenance, Parts & Service

This manual is updated as new information and models are released. Visit our website for the latest manual.

MODELS:

KGL-25
KGL-25-T

For your future reference.

Model # _____

Serial # _____

KGT-25-T

KGT-25

Model # & Serial #.

Read the manual thoroughly.

Improper installation, operation or maintenance can cause property damage, injury or death.

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WELBILT®

Part # - KE004021-2 B August 2019

STATEMENT OF RESPONSIBILITIES / DÉCLARATION DES RESPONSABILITÉS / DECLARACIÓN DE RESPONSABILIDADES

This document is for use by experienced and trained Qualified Cleveland Range, LLC Authorized Service Representatives who are familiar with both the safety procedures, and equipment they service. Cleveland Range, LLC assumes no liability for any death, injury, equipment damage, or property damage resulting from use of, improper use of, or failure to use the information contained in this document. Cleveland Range, LLC has made every effort to provide accurate information in this document, but cannot guarantee that this document does not contain unintentional errors and omissions.

The information in this document may be subject to technical and technological changes, revisions, or updates. Cleveland Range, LLC assumes no liability or responsibility regarding errata, changes, revisions, or updates.

Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to follow industry standard safety procedures, including, but not limited to, OSHA regulations, and disconnect / lock out / tag out procedures for all utilities including steam, and disconnect / lock out / tag out procedures for gas, electric, and steam powered equipment and / or appliances.

All utilities (gas, electric, water and steam) should be turned OFF to the equipment and locked out of operation according to OSHA approved practices during any servicing of Cleveland Range equipment

Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to maintain up-to-date knowledge, skills, materials and equipment.

Ce document est destiné à l'usage des Représentants de Service qualifiés et autorisés de Cleveland Range, LLC qui possèdent l'expérience et la formation ainsi que la bonne connaissance des mesures de sécurité et du matériel qu'ils entretiennent.

Cleveland Range, LLC décline toute responsabilité pour tout cas de décès, blessure, dommage matériel ou dommage aux biens résultant de l'utilisation, de la mauvaise utilisation ou du manquement d'utilisation des renseignements contenus dans ce document.

Cleveland Range, LLC s'est efforcé à fournir des renseignements précis dans ce document mais ne peut garantir que ce document soit exempt d'erreurs et d'omissions non intentionnelles.

Les renseignements contenus dans ce document peuvent être assujettis à des changements techniques et technologiques, des révisions ou des mises à jour.

Cleveland Range, LLC décline toute obligation ou responsabilité concernant les errata, modifications, révisions ou mises à jour.

Les Représentants de Service qualifiés et autorisés de Cleveland Range, LLC sont tenus de se conformer aux mesures de sécurité normalisées de l'industrie, y compris, mais sans s'y limiter, les réglementations de l'OSHA, les procédures de débranchement / verrouillage / étiquetage relatives à tous les services publics, dont l'approvisionnement en vapeur, et les procédures de débranchement / verrouillage / étiquetage relatives aux équipements et/ou appareils fonctionnant au gaz, à l'électricité et à la vapeur.

Au cours de tout entretien d'un appareil Cleveland Range, tous les services publics (gaz, électricité, eau et vapeur) doivent être FERMÉS au niveau de l'appareil et le dispositif de fonctionnement doit être verrouillé suivant les pratiques approuvées de l'OSHA.

Les Représentants de Service qualifiés et autorisés de Cleveland Range, LLC sont tenus d'actualiser en permanence leurs connaissances, compétences, matériel et équipement.

Este documento está destinado para el uso de los Representantes de Servicio calificados y autorizados de Cleveland Range, LLC quienes cuentan con la experiencia y la capacitación así como el buen conocimiento de las medidas de seguridad y de los equipos que mantienen.

Cleveland Range, LLC, declina toda responsabilidad en caso de cualquier fallecimiento, lesiones, daños al equipo o daños a la propiedad resultantes de la utilización, del uso indebido o de la falta de utilización de la información provista en este documento.

Cleveland Range, LLC se ha esforzado en suministrar información precisa en este documento, pero no puede garantizar que este documento esté exento de errores y de omisiones no intencionales.

La información contenida en este documento podría estar sujeta a cambios técnicos o tecnológicos, revisiones o actualizaciones. Cleveland Range, LLC declina toda obligación o responsabilidad con respecto a erratas, modificaciones, revisiones o actualizaciones.

Los Representantes de Servicio calificados y autorizados de Cleveland Range, LLC tienen la obligación de seguir los procedimientos estándar de seguridad de la industria; los cuales incluyen pero no se limitan a los reglamentos de la OSHA (La Administración de la Seguridad y Salud Ocupacionales), los procedimientos de desconexión, cierre y etiquetado relativos a todos los servicios públicos incluyendo el suministro de vapor y los procedimientos de desconexión, cierre y etiquetado para los equipos y/o aparatos que funcionan a base de gas, electricidad o vapor.

Cuando se esté dando servicio o mantenimiento a un aparato de Cleveland Range, todos los servicios públicos (gas, electricidad, agua y vapor) deben estar APAGADOS para el equipo en cuestión y se debe seguir el procedimiento de cierre de operaciones de acuerdo con las prácticas aprobadas por la OSHA.

Los Representantes de Servicio calificados y autorizados de Cleveland Range, LLC tienen la obligación de actualizar constantemente sus conocimientos, destrezas, materiales y equipamiento.

WARNING / AVERTISSEMENT / ADVERTENCIA

Improper installation, operation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation and operating instructions thoroughly before installing, operating or servicing this equipment. / Toute mauvaise pratique en matière d'installation, de fonctionnement, de réglage, de modification, d'entretien ou de maintenance peut causer des dommages matériels, des blessures ou la mort. Lisez la totalité des instructions d'installation et d'utilisation avant d'installer, d'utiliser ou d'entretenir cet équipement. / La indebida instalación, operación, ajuste, modificación, servicio o mantenimiento puede ocasionar daños a la propiedad, lesiones o muerte. Lea detenidamente las instrucciones de instalacion y de operación antes de instalar, poner a funcionar o dar servicio a este equipo.

Do not lean on or place objects on lip. / Ne vous penchez pas sur oune placez pas des objets sur la lèvre. / No se apoye ni coloque objetos en el labio.

Hot product and surfaces. / Produit et surfaces chaudes. / Producto y superficies calientes.

Do not touch. / Ne pas toucher. / No la toque

Stand clear of product discharge path when discharging hot product. / Écartez-vous du chemin de décharge d'un produit chaud. / Permanezca alejado de la ruta de descarga del producto al vaciar producto caliente.

Keep hands away from moving parts and pinch points. / Gardez les mains loin des pièces mobiles et des points de pincement. / Mantenga las manos lejos de piezas movibles y puntos de presión muy localizada.

Do not fill kettle above recommended level marked on outside of kettle. / Ne remplissez pas la chaudière en excès du niveau recommandé marqué sur la chaudière. / No llene la marmita arriba del nivel recomendado marcado fuera de la marmita.

Unit must be anchored as per manual. / Unité doit être ancrée selon les directives du manuel. / Unidad debe estar fijado según el manual.

Keep appliance and area free and clear of combustibles. / Gardez l'appareil et son entourage libre de tous combustibles. / Mantenga el aparato y el área libres de combustibles.

Do not attempt to operate this appliance during a power failure. / N'essayez pas de faire fonctionner cet appareil lors d'une panne de courant. / No intente poner en marcha este aparato durante un fallo de suministro eléctrico.

Inspect unit daily for proper operation. / Inspectez l'unité tous les jours pour son bon fonctionnement. / Inspeccione diariamente el funcionamiento correcto de la unidad.

Heavy / Lourd / Pesado

Team or mechanical lift. / Équipe ou remontée mécanique. / Equipo o elevador mecánico.

Surfaces and product may be hot! Wear protective equipment. /Les surfaces et le produit peuvent être chauds! Portez un équipement de protection. / ¡Las superficies y el producto pueden estar calientes! Utilice equipo protector.

Floor may become slippery from product spillage. / Déversement de produit peut causer de plancher à être glissante. / Derrame de producto puede causar piso a ser resbaladizo.

Unit exhaust contains carbon monoxide. Operate only under a properly functioning hood with adequate makeup air. / L'échappement de l'unité émet du monoxyde de carbone. Exploiter uniquement sous une hotte fonctionnant correctement avec une source adéquate d'air d'appoint. / El escape de la unidad contiene monóxido de carbono. Operar solamente bajo una campana en buen funcionamiento con aire de relleno adecuado.

Pressurized device. / Appareil sous pression. / Dispositivo de presión.

Keep clear of pressure relief discharge. / Restez à l'écart de la soupape de sureté. / Permanezca alejado de la descarga de presión.

Do not climb, sit or stand on equipment. / Il ne faut pas monter, s'asseoir ni se tenir debout sur l'équipement. / No subirse, ni sentarse ni pararse sobre el equipo.

SERVICING / ENTRETIEN / SERVICIO

Shut gas supply off prior to servicing. / Fourniture de gaz fermée au loin avant d'entretenir. / Suministro de gas cerrado apagado antes del mantenimiento.

Remove electrical power prior to servicing. / Coupez l'alimentation électrique avant l'entretien. / Desconecte la energía eléctrica antes de darle servicio.

Risk of electric shock. / Risque de choc électrique. / Riesgo de choque eléctrico.

Ensure kettle is at room temperature and pressure gauge is showing zero or less prior to removing any fittings. / Assurez-vous que la chaudière est à température ambiante et que le manomètre est à zéro ou moins avant de retirer des accessoires. / Asegúrese de que la marmita esté a temperatura ambiente y el manómetro esté mostrando cero o menos antes de retirar cualquier accesorio.

Have a qualified service technician maintain your equipment. / Demandez à un technicien en entretien et en réparation qualifié d'effectuer l'entretien de votre équipement. / Haga que un técnico de servicio calificado mantenga su equipo

CLEANING INSTRUCTIONS

CARE AND CLEANING

Cooking equipment must be cleaned regularly to maintain its fast, efficient cooking performance and to ensure its continued safe, reliable operation. The best time to clean is shortly after each use (allow unit to cool to a safe temperature).

WARNINGS

Chloride Cleaners

Do not use detergents or cleansers that are chloride based or contain quaternary salt.

Wire Brush & Scrapers

Do not use a metal bristle brush or scraper.

Steel Pads

Steel wool should never be used for cleaning the stainless steel.

High Pressure Spray Hose

Unit should never be cleaned with a high pressure spray hose.

Stagnant Water

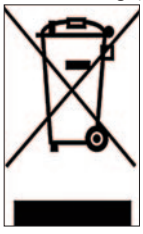
Do not leave water sitting in unit when not in use.

CLEANING INSTRUCTIONS

1. Turn unit off.
2. Remove drain screen (if applicable). Thoroughly wash and rinse the screen either in a sink or a dishwasher.
3. Prepare a warm water and mild detergent solution in the unit.
4. Remove food soil using a nylon brush.
5. Loosen food which is stuck by allowing it to soak at a low temperature setting.
6. Drain unit.
7. Rinse interior thoroughly.
8. If the unit is equipped with a Tangent Draw-Off Valve, clean as follows:
   a) 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.
   b) In a sink, wash and rinse the inside of the valve body using a nylon brush.
   c) Use a nylon brush to clean tangent draw-off tube.
   d) Rinse with fresh water.
   e) Reassemble the draw-off valve by reversing the procedure for disassembly. The valve's hex nut should be hand tight only.
9. If the unit is equipped with a Butterfly Valve, clean as follows:
   a) Place valve in open position.
   b) Wash using a warm water and mild detergent solution.
   c) Remove food deposits using a nylon brush.
   d) Rinse with fresh water.
   e) Leave valve open when unit is not in use.
10. If the unit is equipped with an Air Valve, clean as follows:
    a) Open product valve.
    b) Disconnect air hoses.
    c) Remove air cylinder.
    d) Remove valve tee.
    e) Remove all O-rings.
    f) Clean air cylinder, do not submerge in water. Wipe clean and sanitize.
    g) Clean and sanitize tee and O-rings.
    h) Grease and reinstall O-rings.
    i) Reinstall valve tee to kettle outlet.
    j) Reinstall air cylinder to bottom of tee.
    k) Reconnect air hoses.
    l) Close valve and check for alignment.
11. Using mild soapy water and a damp sponge, wash the exterior, rinse, and dry.

NOTES

- ⇨ For more difficult cleaning applications one of the following can be used: alcohol, baking soda, vinegar, or a solution of ammonia in water.
- ⇨ Leave the cover off when the kettle is not in use.
- ⇨ For more detailed instructions refer to Stainless Steel Equipment Care and Cleaning (www.nafem.org/resources/stainlesssteelfinal.doc) on Nafem's webs (www.nafem.org).



DISPOSAL INSTRUCTIONS

This unit is recyclable. Do not dispose in landfill.

The unit may contain rust inhibitor and or antifreeze within the jacket. Drain unit and dispose following Federal, State and local regulations.

The majority of the unit is composed of stainless steel. Other alloys and electrical components make up a small percentage of the total. Follow Federal, state and local regulations for disposal.

PREVENTATIVE MAINTENANCE

FOR MAINTENANCE AND REPAIRS CONTACT YOUR AUTHORIZED MANITOWOC SERVICE AGENCY AND HAVE A QUALIFIED SERVICE TECHNICIAN MAINTAIN YOUR EQUIPMENT.



WARNING:

If for any reason this unit is not functioning correctly DO NOT OPERATE. Contact your authorized service agent.

DAILY PRE-STARTUP INSPECTION

1. Flue is not obstructed.
2. Draw-Off Valve is installed and handle is in place.
3. Cover lifts up and down freely and is held in place when fully open.
4. Pressure Gauge is in the green when unit is cold.
5. Green Light comes on when unit is energized.
6. Red Light comes on when unit is tilted (tilting models only).

SIX MONTH SERVICE INSPECTION

1. Perform daily startup inspection.
2. Tilt hand wheel is tight (tilting model).
3. Grease bearings on both trunnions (tilting model).
4. Check for play in gears (adjust if required) (tilting model).
5. Fasteners securing panels are in place and tight.
6. Perform pressure relief valve periodic test (see Pressure Relief Valve Testing).
7. Adequate exhaust and makeup air is supplied to working area.

YEARLY SERVICE INSPECTION

1. Perform six month service inspection.
2. Check kettle maximum temperature setting (see Calibrating Procedure).
3. Perform free air calculation (see FREE AIR CALCULATION).
4. Follow “SAFETY INSPECTION CHECKLIST”.

SAFETY INSPECTION CHECKLIST

NOTE: The following instructions are intended for use by qualified service personnel.
The following steps should be completed IN SEQUENCE.

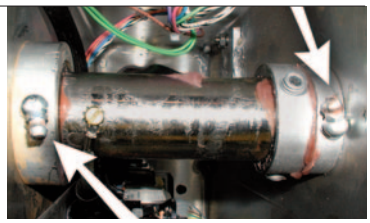
A/ KETTLE PREPARATION

1. **Disconnect main power at fused disconnect switch.**
2. Kettle should be cold. If necessary add water to kettle pot to cool unit.
3. The pressure gauge should now show a vacuum and have no indication of leakage. If gauge gauge looks damaged replace gauge.
4. Gauge must be showing a vacuum prior to proceeding. If not check for leaks, and repair kettle prior to proceeding. Refer to REFERENCE SECTION (KETTLE VENTING INSTRUCTIONS).

Pressure Gauge in Vacuum.

B/ MECHANICAL CHECKS

1. Inspect controls, replace damaged seals, switches, LED's etc..
2. Remove the console cover and check that the seal is not cracked or split. Replace seal, screws, missing or worn nylon anchor nuts. **Leave cover off**.
3. Remove the kettle bottom cover and check that the seal is not cracked or split. **Leave cover off**.



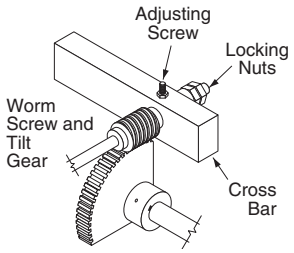
4A. Grease Nipples.

4A. For units with tilt handle-

A. Check handle for tightness. If loose apply lock tight and reinstall. Check handle knob is on end of handle and firmly tightened. If missing replace, if loose apply lock tight and reinstall.
B. Check that kettle tilts smoothly and there is no excessive wear in the trunnion bearings. Add grease to nipples as required.

4B. For units with tilt crank-

A. Check that the kettle tilts smoothly. If there is excess play adjust the worm to gear clearance with Locking Nuts or Adjusting Screw as required.
B. Check that there is no excessive wear in the trunnion bearings.
C. Apply grease to gear teeth and bearings.



4B. Illustration inverted for clarity.

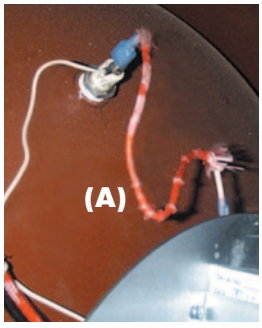
C/ MARINE LOCK TEST

1. Check that lock mechanism is not bent or damaged.
2. Check that lock clears stop pin on side box without rubbing when kettle is tilted.
3. Check side to side play. Lock should remain fully over stop pin when pushed to it's maximum side to side play.

D/ LOW WATER LEVEL PROBE:

Installation Check:

✔ Probe properly attached



✘ Probe bypassed by running **(A)** an additional wire

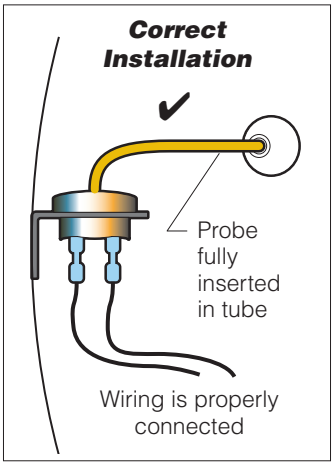
✘ Probe bypassed by **(B)** grounding the connecting wire

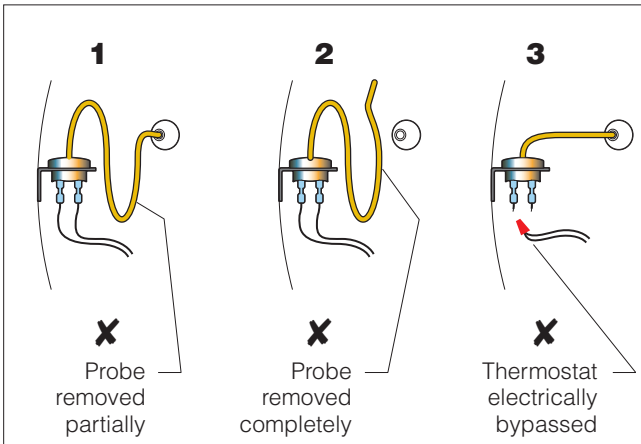
Functional Test:

1. **Turn main power on at fused disconnect switch.**
2. Turn kettle on and set temperature to maximum.
3. Green light will come on and contactors close.
4. Tilt kettle over. After approximately a five-second delay the red light will come on, green light go off and the contactors will disengage.
5. Turn kettle upright. Green light will come back on and contactors reengage.
6. Turn kettle off
7. If unit does not function as above, make required repairs.
8. **Disconnect main power at fused disconnect switch.**

E/ SAFETY THERMOSTAT

Installation Check:



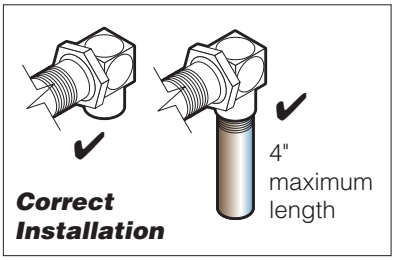


Incorrect Installations

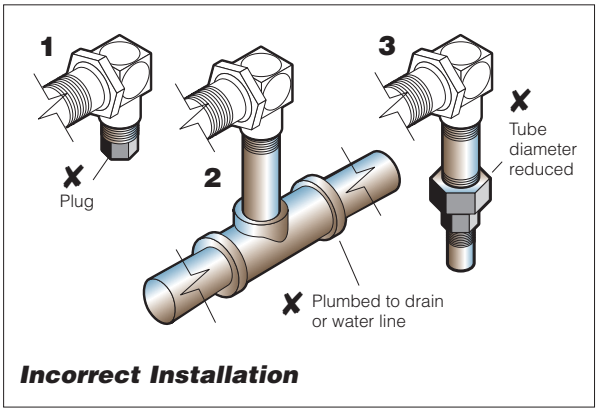
1. Safety thermostat probe is not completely inserted into tubing (except KET-3-T that has a small loop).
2. Safety thermostat probe is removed from tubing.
3. Safety thermostat electrical connection is bypassed.

F/ SAFETY VALVE

Installation Check:



The above illustrations show the variations of factory installed Safety Valves. **Any modifications are unacceptable.**



Physical Checks

1. Check that the PSI rating on the valve matches MAWP (maximum allowable working pressure) on the plate welded to the kettle.
2. Check that the Safety Valve has a "UV" stamp.
3. Check that the valve is not damaged in any way.

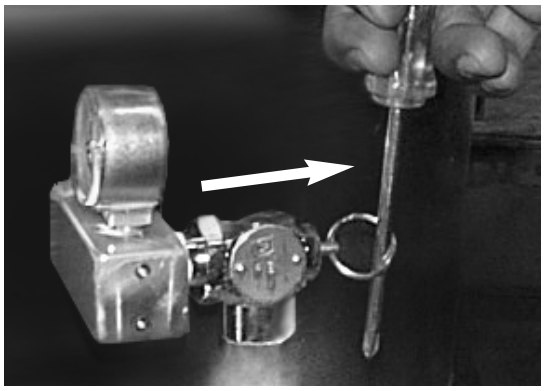
If any of the above criteria is not met, replace valve.

Pressure Relief Valve Periodic Testing Procedure

1. With the kettle empty, set On-Off Switch/Temperature Control to "10" (Max.). Allow the kettle to heat until the unit cycles off.
2. Switch On-Off Switch/Temperature Control to "0" (Off) and disconnect main power at fused disconnect switch.
3. 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.

If valve appears to be sticking replace pressure relief valve.

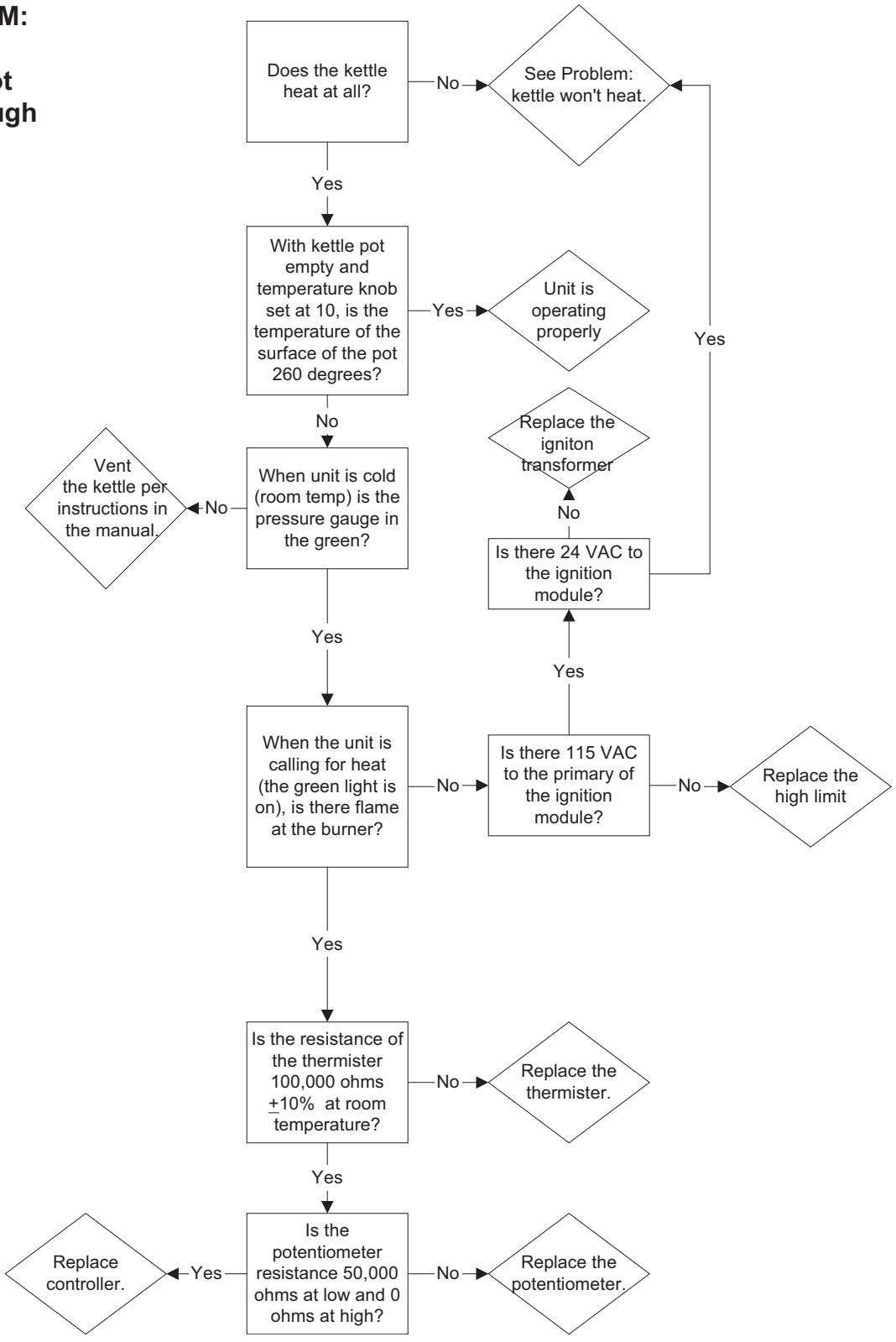
If foreign material is discharged then drain kettle and replace pressure relief valve.



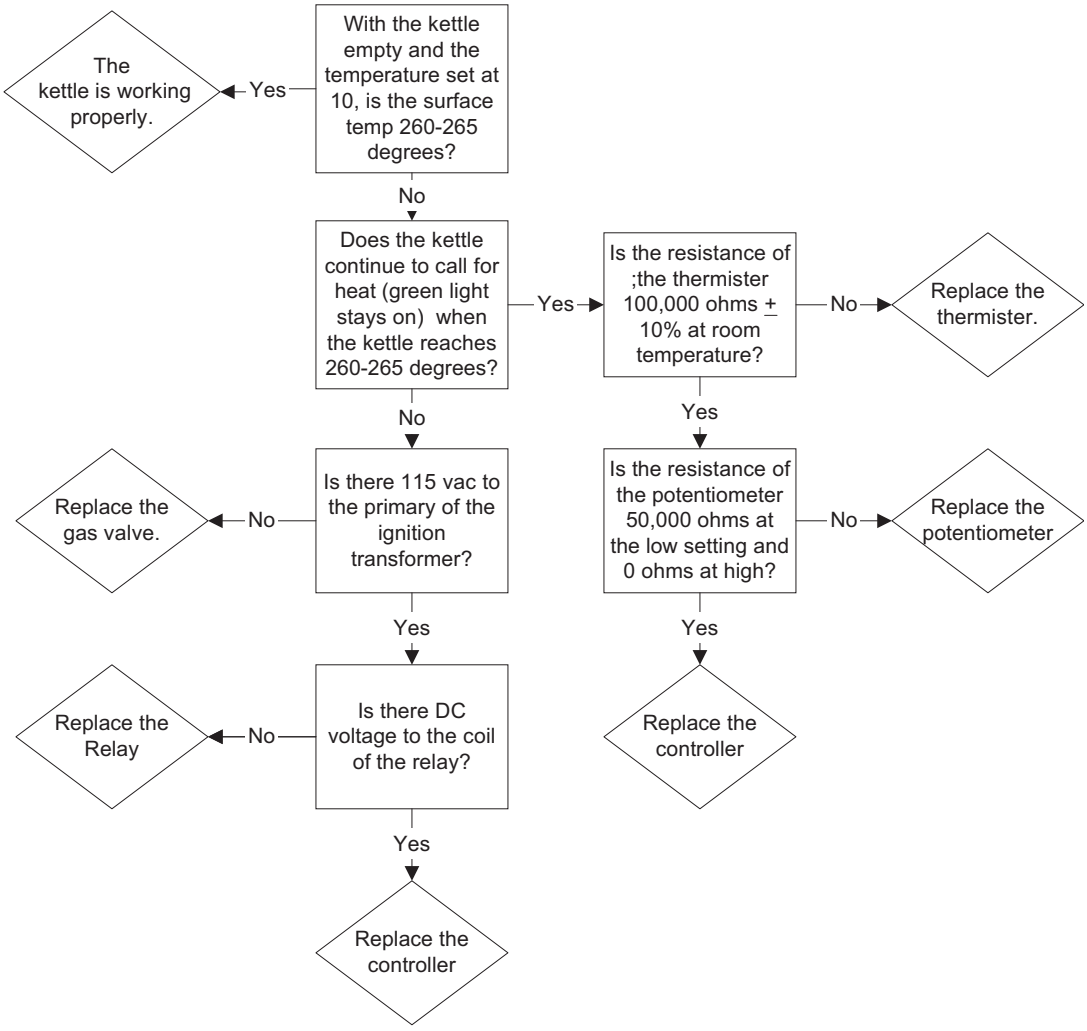
TROUBLESHOOTING GUIDE

PROBLEM:
KGL-25
Kettle Won't Heat

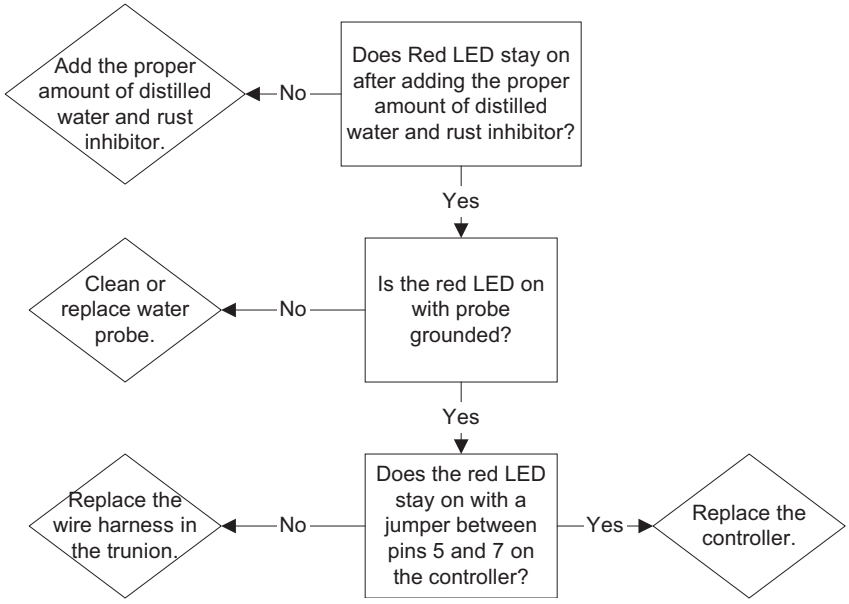
PROBLEM:
KGL-25
Kettle Not
Hot Enough



PROBLEM: KGL-25 Kettle Gets Too Hot

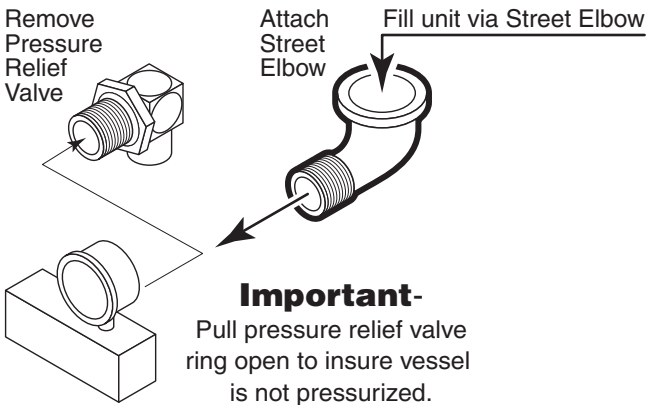


PROBLEM: Red Add Water LED Stays On



KETTLE JACKET CLEANOUT AND PASSIVATION PROCEDURES

The following procedure should be preformed at least once every three years to prevent possible corrosion and ensure the optimum life of the kettle.



Important-
Pull pressure relief valve ring open to insure vessel is not pressurized.

RUST INHIBITOR

Use a “radiator rust inhibitor” that can be purchased at your local automotive centre. It should not contain any anti-freeze and preferably no lubricant.

To ensure satisfactory mixing follow the manufacturer’s instructions.

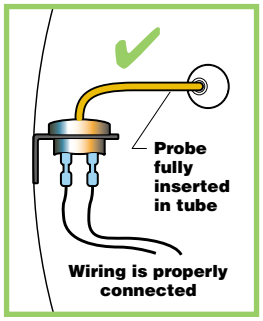
DISPOSAL - Follow all Federal, State and local codes when disposing of product.

PROCEDURE

1. Ensure kettle is at room temperature and pressure gauge showing zero or less pressure.
2. Shut off and disconnect gas supply.
3. Remove electrical plug from power source.
4. Remove bolts holding kettle to tabletop.
5. Pull ring on pressure relief valve to insure there is no pressure within the kettle jacket.
6. Remove pressure relief valve.
7. Replace pressure relief valve with street elbow (see above illustration).
8. Remove sight glass from left side of kettle.
9. Tilt kettle on its side (sight glass opening facing downwards) and allow to drain. Flush out with water.
10. Tilt kettle upright, apply a thread sealant (i.e. Teflon tape) to the sight glass threads and replace.
11. Refer to chart below to determine the required volume of water.

Kettle Size	Volume of Mixture	
	U.S. Gal.	Liters
25 U.S. Gal.	3.8	14.5

12. In a separate container mix water with the required rust inhibitor.
13. Fill jacket via the street elbow with the mixture.
14. Remove street elbow.
15. Apply a thread sealant (i.e. Teflon tape) to the pressure relief valve and replace.
16. Reconnect gas and electrical supplies.
17. Turn kettle on, vent and heat to high for 1/2 hour.
18. Cool kettle.
19. Repeat steps 5-15.
20. Replace bolts holding kettle to tabletop.
21. Reconnect gas and electrical supplies.
22. Turn kettle on and vent kettle.



SAFETY THERMOSTAT CONNECTION

LOW WATER LEVEL PROBE CONNECTION

FIELD CONVERSION INSTRUCTIONS -

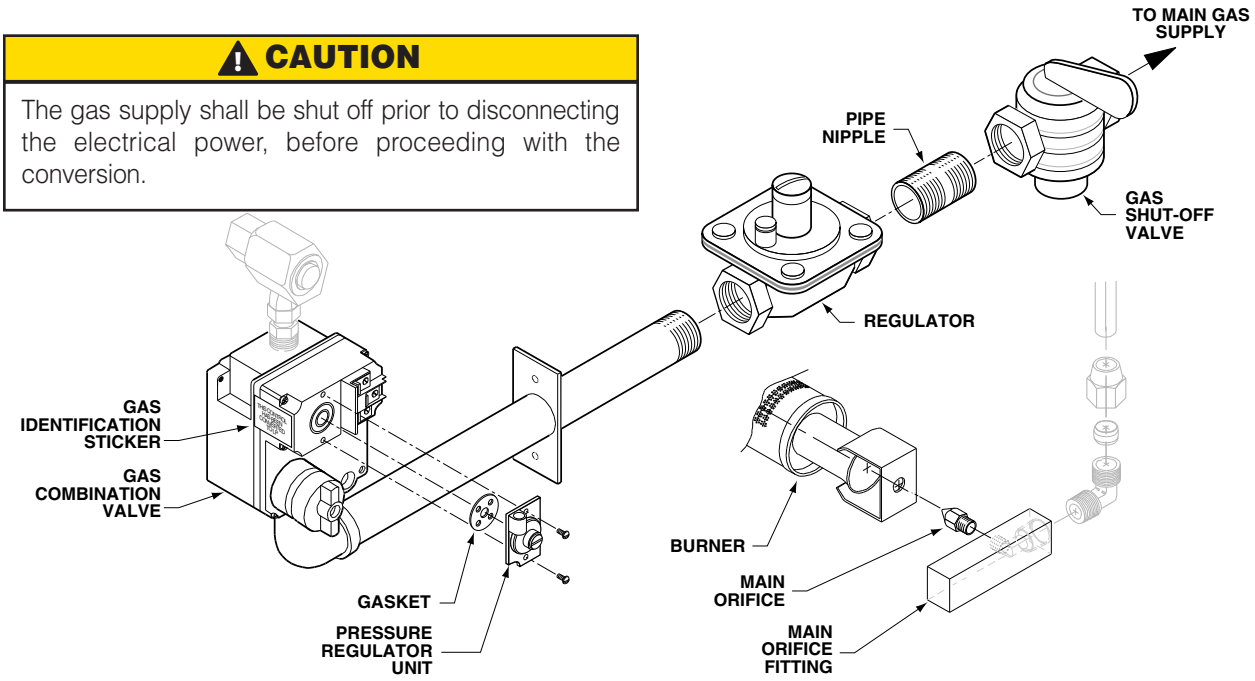
Natural Gas to Propane Gas

Atmospheric Burner Gas Kettles

	BTU's per Hour	Gas Type	Water Column	# of Orifices
KGL-25, KGL-25-T	90000	NAT	4.2	2
	90000	LP	10	2

⚠ CAUTION

The gas supply shall be shut off prior to disconnecting the electrical power, before proceeding with the conversion.



⚠WARNING:

This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, and explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.

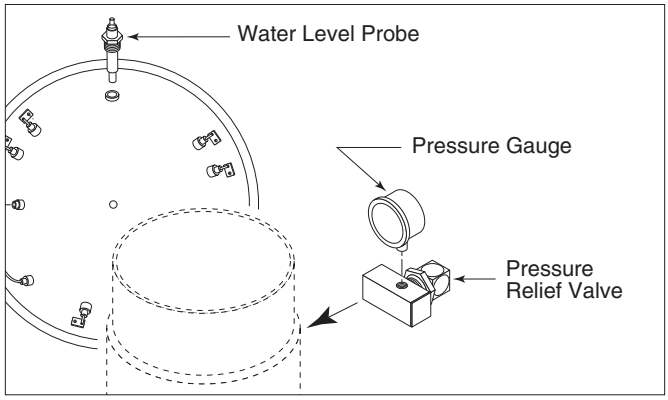
Conversion Kit *(KE003716-3)*

Part No.	Description	Quantity
KE53406-18	Orifice	1
KE55240-4	Valve Conversion Kit	1
KE603910-2	Instruction Sheet	1
KE603911-3	Rating Label	1

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

1. Disconnect electrical connection.
2. Shut off main gas supply and disconnect kettle from supply line.
3. Remove **GAS SHUT-OFF VALVE** from kettle supply pipe and install **REGULATOR** (pre-set to 10 " W.C. pressure) supplied in field conversion kit.
4. Re-install **SHUT-OFF VALVE** using **PIPE NIPPLE** supplied in kit.
5. Remove side cover from control console.
6. 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.
7. 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.
8. Replace **BURNER**. Check **MAIN ORIFICE/BURNER** alignment insuring **MAIN ORIFICE** points straight into the center of the **BURNER**.
9. Reconnect to gas supply. Turn on propane gas. Tilt kettle to upright position, turn on power and check all gas connections for leaks.
10. Check inlet pressure is between 12-14 inches W.C.
11. On the underside of the console cover with indelible marker place the following information: Company, Name, Address & Date of Conversion.
12. Turn off power and main gas supply, and replace all covers. Attach GAS IDENTIFICATION STICKER to nameplate.
13. Place gas conversion label next to rating label.
14. Reconnect electrical and gas supplies.

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.

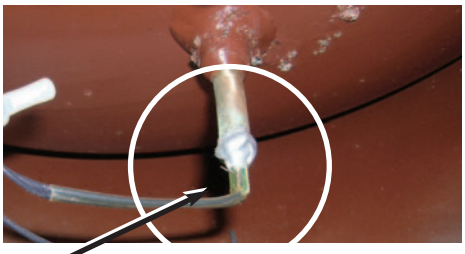
3. Pressure Gauge
A/ Inspect face of gauge. If it contains moisture on the inside of face replace.
B/ Remove, clean threads, apply teflon thread sealant and reinstall.

If leek persist replace all these components at the same time.

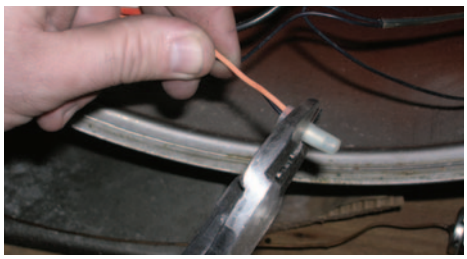
THERMISTOR REPLACEMENT

1. **Disconnect main power at fused disconnect switch.**

2. Remove bottom cover.



3. Locate thermistor.

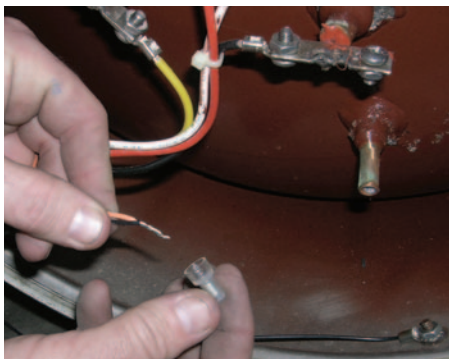


4. Cut pigtail connection off.

5. Remove wire from ground lug.

6. Remove thermistor from tube.

7. Add new “eye” connector to one of the thermistor leads and fasten to ground lug.



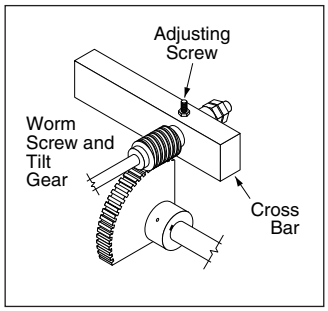
8. Connect orange wire to the other thermistor lead and fasten with pigtail connector.

9. Insert thermistor as far as possible into tube and hold in place. While holding add silicon to secure thermistor into tube. Insure silicon completely surrounds tube and thermistor.

10. Replace covers, reconnect power and test operation.

LUBRICATION PROCEDURE

Lubricate the following parts every three months to insure smooth operation and reduce wear.



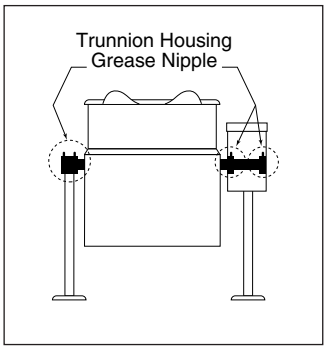
TRUNNION HOUSING, WORM SCREW AND TILT GEAR

These parts are accessed through the top cover of the console.

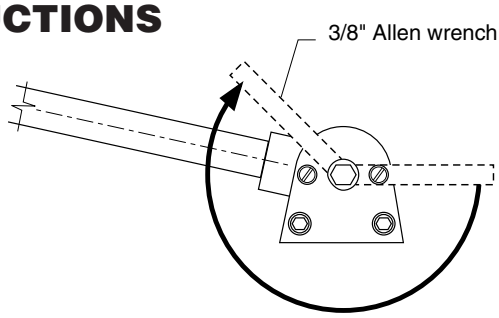
Apply grease to gear teeth. Check for excessive play and adjust with adjusting screw located on top of cross bar.

KETTLE TRUNNIONS

On the left hand side of the kettle there are two grease nipples on the top back portion of the trunnion housing. On the right hand side of the kettle you must remove the console cover to access the two grease nipples.



HINGE ADJUSTMENT INSTRUCTIONS



1. Insert 3/8" Allen wrench.

2. Turn clockwise to relieve tension on spring.

3. While tension is released remove one of the two slotted screws.

4. To prevent Allen wrench from springing back abruptly while the second slotted screw is removed, insert a pin (approximately 1/8") in the hole where the first slotted screw was removed from.

5. Remove second slotted screw.

6. While holding Allen wrench remove pin.

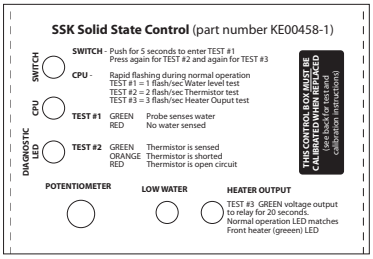
7. Turn Allen wrench clockwise to tighten or counter-clockwise to loosen tension to produce desired effect.

8. Re-insert pin in one of the two holes.

9. Tighten one slotted screw in the other hole (it may be necessary to turn Allen wrench slightly to align holes).

10. Remove pin and repeat step number 9 for other slotted screw.

SSK SOLID STATE CONTROL TEST INSTRUCTIONS



1. If required remove board from holding bracket for better access.
2. Turn unit on and set to 10 (maximum).
3. Push and hold the SWITCH button for approximately 5 seconds until the CPU starts to flash 1 flash/second. You are now in TEST #1. Output to 12v relay is disabled. With kettle upright the DIAGNOSTIC LED should be green, with kettle tilted it should be red.
4. Push SWITCH button. The CPU starts to flash 2 flash/second. You are now in TEST #2. Check the DIAGNOSTIC LED for indication of the temperature probe status.
5. Push SWITCH button. The CPU starts to flash 3 flash/second. You are now in TEST #3. The HEATER OUTPUT LED should light for 20 seconds and power to the relay should energize the 12v relay for the heat source.

After 20 seconds test mode is exited and unit reverts to normal operation.

FREE AIR CALCULATION

Insert drager pump tube 4" down the center of the flue and take one sample each of Carbon Dioxide (CO2) and Carbon Monoxide (CO) and record results.

_____ % CO (PPM) _____ % CO2

With results obtained for CO2 use chart to determine dilution factor for gas type used.

_____ Dilution Factor

Enter these numbers in the following formula to determine the concentration of carbon monoxide in an air free sample of flue gas.

$$\text{Dilution Factor} \times \frac{\text{CO (PPM)}}{10{,}000} = \underline{\qquad}\ \%\ \text{Carbon Monoxide}$$

Result must not exceed 0.08% carbon monoxide.

Carbon Dioxide in Sample (percent)	Factor Propane Gas	Factor Natural Gas
4.0	3.50	3.05
4.2	3.33	2.90
4.4	3.18	2.77
4.6	3.04	2.65
4.8	2.92	2.54
5.0	2.80	2.44
5.2	2.69	2.34
5.4	2.59	2.26
5.6	2.50	2.18
5.8	2.41	2.10
6.0	2.33	2.03
6.2	2.26	1.97
6.4	2.19	1.91
6.6	2.12	1.85
6.8	2.06	1.80

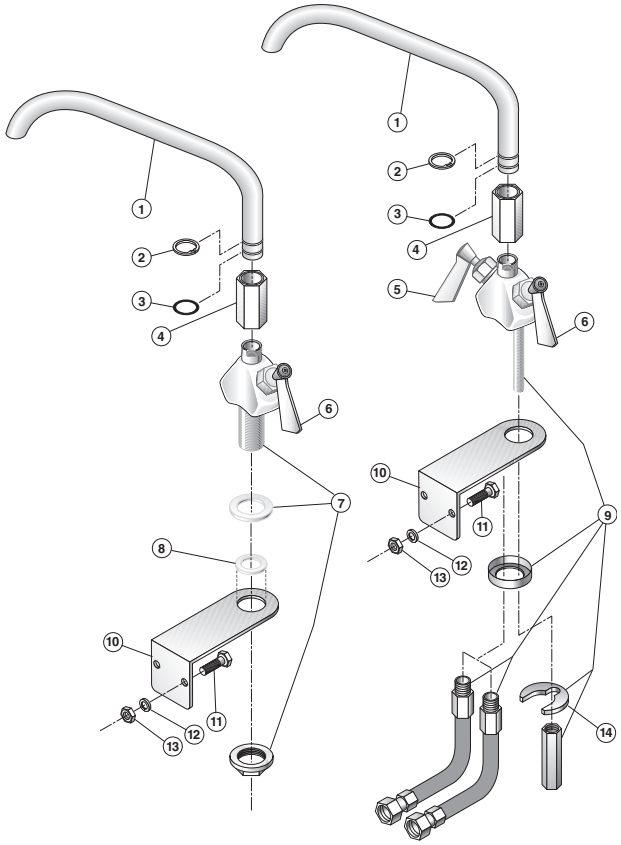
Carbon Dioxide in Sample (percent)	Factor Propane Gas	Factor Natural Gas
7.0	2.00	1.74
7.2	1.94	1.70
7.4	1.89	1.65
7.6	1.84	1.61
7.8	1.79	1.56
8.0	1.75	1.53
8.2	1.71	1.49
8.4	1.67	1.45
8.6	1.63	1.42
8.8	1.59	1.39
9.0	1.56	1.36
9.2	1.52	1.33
9.4	1.49	1.30
9.6	1.46	1.27
9.8	1.43	1.24
10.0	1.40	1.22

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.

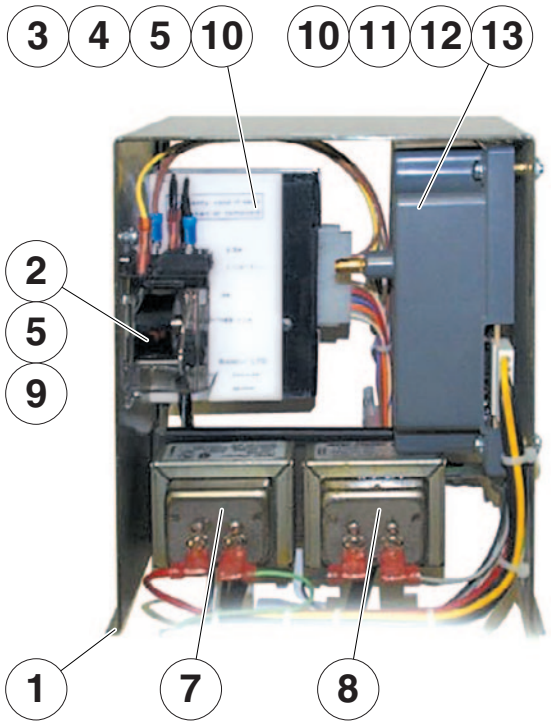
FAUCET ASSEMBLY (optional)



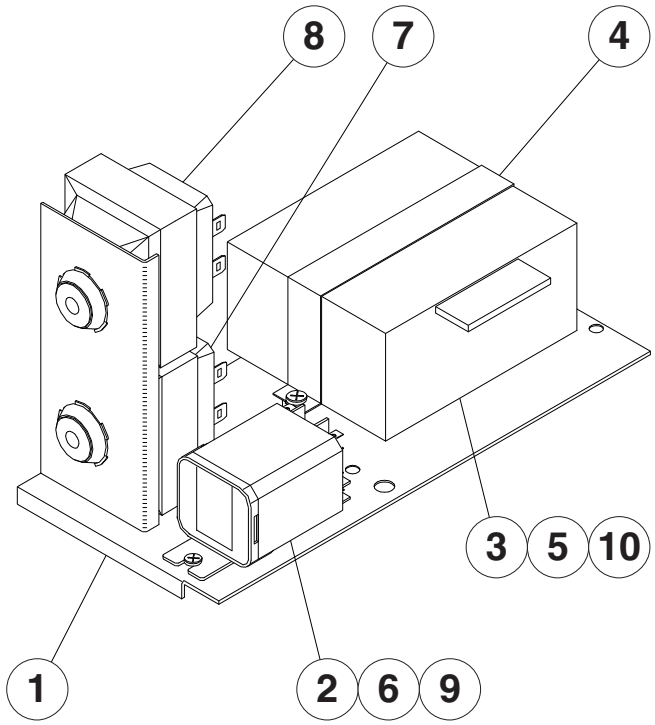
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.		*3/4" SPOUT*	
	KE50825-7	FOR STATIONARY KETTLES	1
	KE50825-2	FOR TILTING KETTLES	1
2.	FA95022	RETAINING RING	1
3.	FA05002-19	"O" RING	1
4.	KE51736	LONG FAUCET NUT	1
5.	SE50020	HOT WATER STEM ASSEMBLY (DOUBLE PANTRY ONLY)	1
6.	SE50021	COLD WATER STEM ASSEMBLY	1
7.	KE51401	SINGLE PANTRY BODY (C/W ITEM NO. 6)	1
8.	KE50335	ADAPTER WASHER (SINGLE PANTRY ONLY)	1
9.	KE51403	DOUBLE PANTRY BODY (C/W ITEM NO. 5&6)	1
10.	SK00395-1	FAUCET MOUNTING BRACKET	1
11.	FA11258	HEX CAP SCREW	2
12.	FA30505-1	WASHER	2
13.	FA21008	HEX NUT	2
14.	SE50447	WASHER HORSESHOE	1

COMPONENT MOUNTING PLATES

STATIONARY MODELS



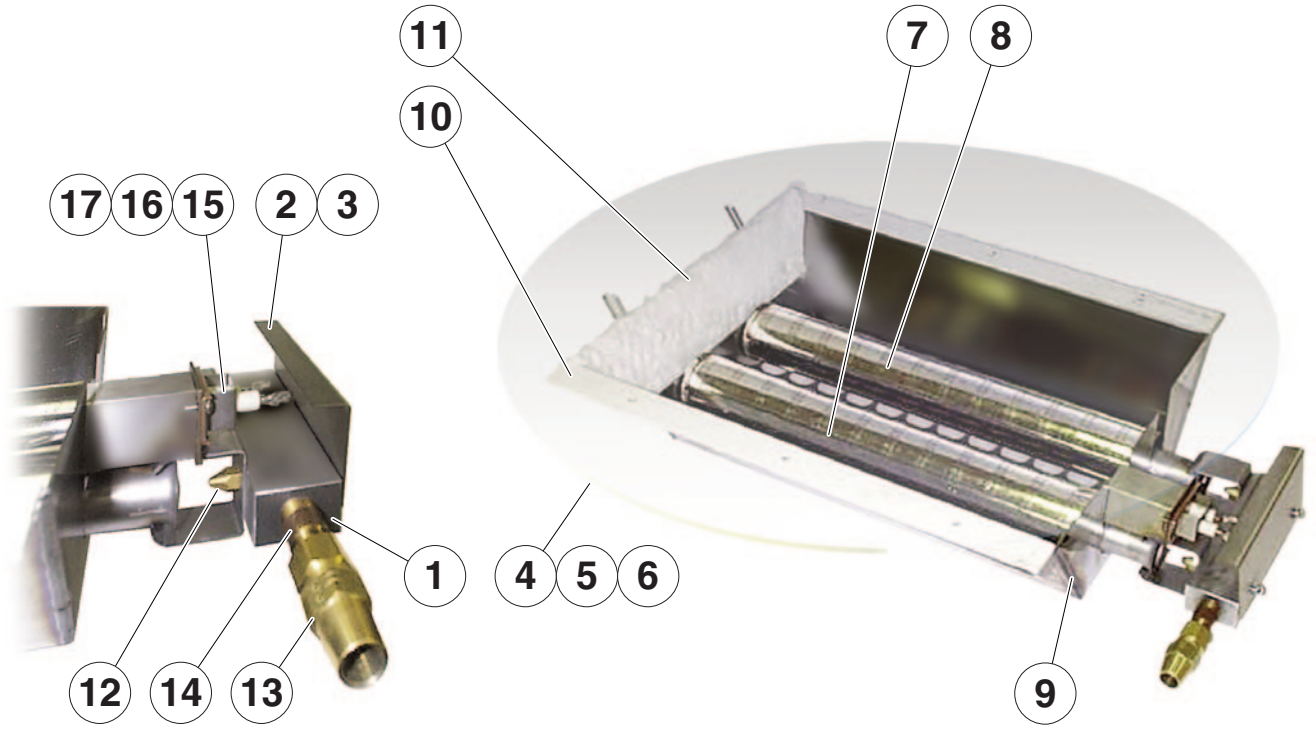
TILTING MODELS



ITEM NO.	*PART NO.*	*DESCRIPTION*	*QTY.*
1.	KE01927-1	COMPONENT MOUNTING PLATE (STATIONARY MODELS)	1
	KE01927	COMPONENT MOUNTING PLATE (TILTING MODELS)	1
2.	KE50753-7	RELAY	1
3.	KE00458	SSK CONTROL BOX	1
4.	KE50303	ELECTRONIC BOX HOLDER (STATIONARY MODELS)	1
	KE52548	ELECTRONIC BOX HOLDER (TILTING MODELS)	1
5.	FA11089	SCREWS	2
6.	FA11052	SCREWS	2
9.	FA32004	TOOTH LOCKWASHER	2
10.	FA32005	TOOTH LOCKWASHER	6
11.*	KE53469-2	IGNITION CONTROL	1
	KE54308-3	HIGH VOLTAGE LEAD ASSEMBLY	1
12.*	FA10245	SCREW (8-32)	4
13.*	FA20004	HEX NUT	4
		FOR 120V OPTION	
7.	KE53838-20	TRANSFORMER	1
8.	KE53838-27	TRANSFORMER	1
		FOR 240V OPTION	
7.	KE53838-18	TRANSFORMER	1
8.	KE53838-21	TRANSFORMER	1

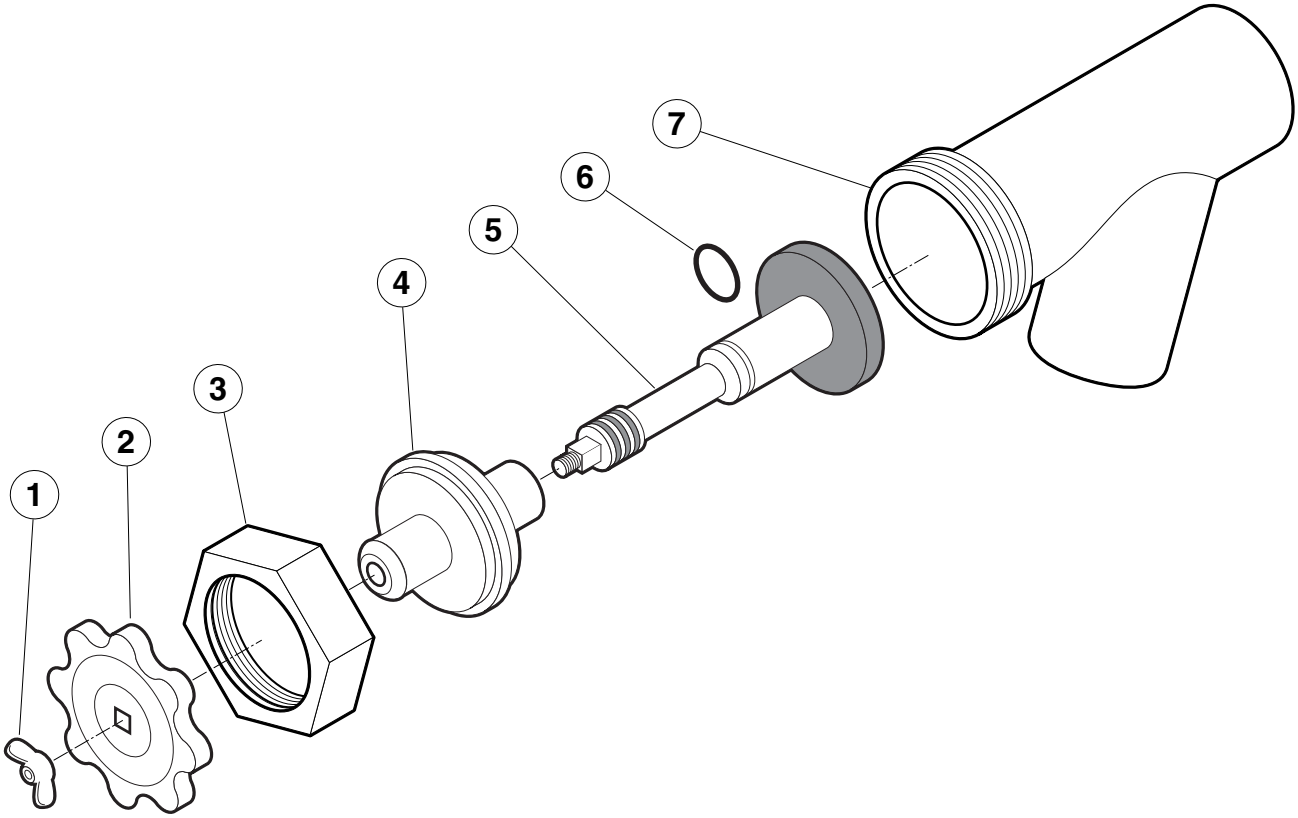
* FOR TILTING MODELS SEE “GENERAL ASSEMBLY - TILTING MODELS”

BURNER ASSEMBLY



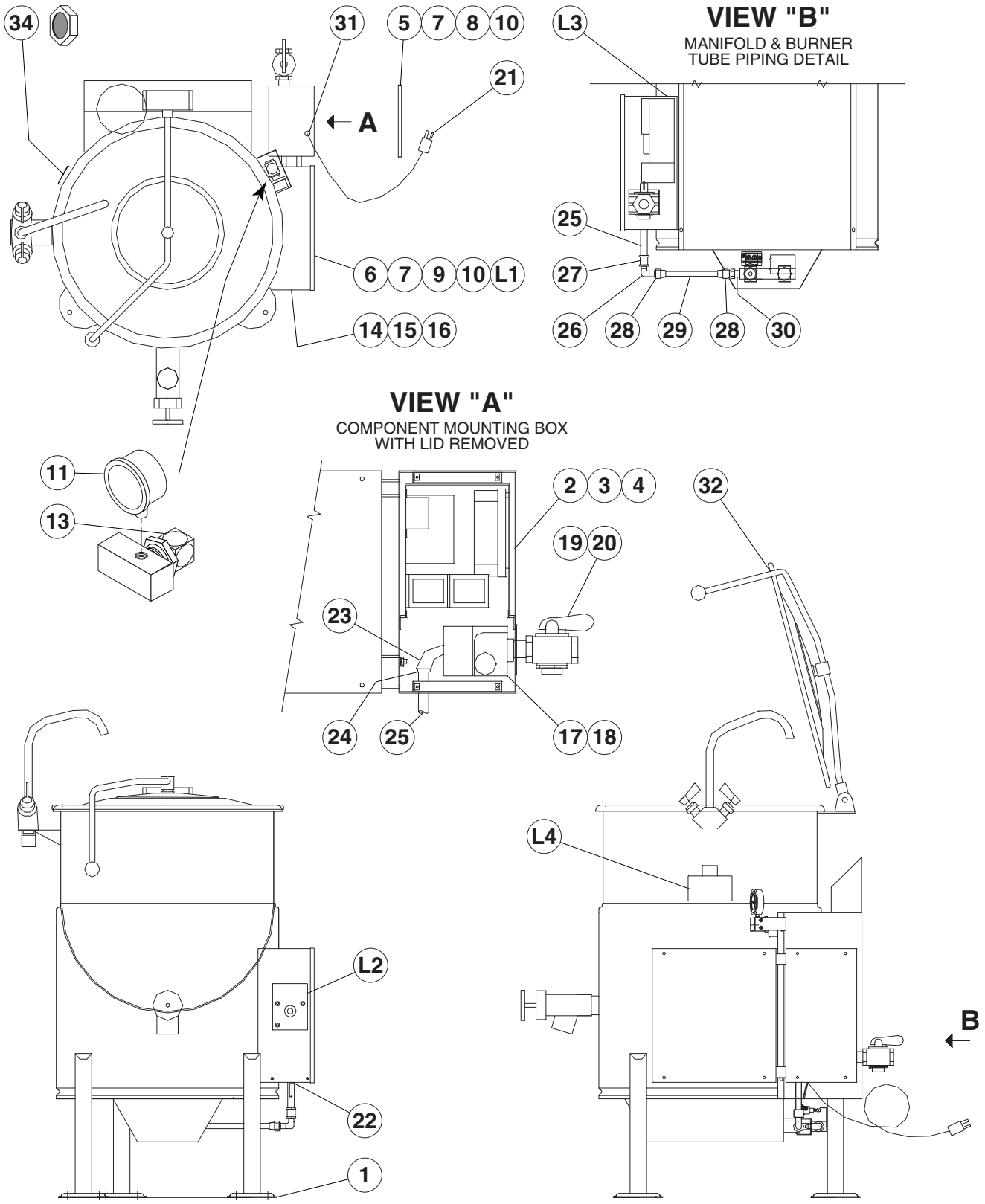
ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.	KE54897-1	MANIFOLD	1
2.	KE54890-1	IGNITION GUARD	1
3.	FA11144	SCREW	2
4.	KE54881-1	BOTTOM COVER	1
5.	KE54894-1	HOLDER, BOTTOM COVER	1
6.	KE54895-3	INSULATION ON TOP OF COVER	1
7.	KE01500-2	BURNER ASSEMBLY	1
8.	KE01500-4	BURNER WITHOUT IGNITOR	1
9.	KE02195-1	BURNER PAN ASSEMBLY	1
10.	KE54895-2	INSULATION BETWEEN BOTTOM COVER & BURNER ASSEMBLY	2
11.	KE54895-4	INSULATION	1
12.	KE53406-21	GAS ORIFICE, NATURAL GAS	2
	KE53406-18	GAS ORIFICE, LP.	2
13.	FI05134-1	COMPRESSION FITTING	2
14.	FI00565-6	NIPPLE 3/8 NPT	1
15.	KE53437-1	IGNITOR	1
16.	FA11145	SCREW	2
17.	KE54775	IGNITOR POSITION HOLDING BRACKET	1

TANGENT DRAW-OFF VALVE



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1. - 7.	KE50973	2” DRAW-OFF ASSEMBLY	1
	KE50972-B	3” DRAW-OFF ASSEMBLY	1
1.	FA95049	WING NUT, TD-2	1
	FA21050	ACCORN NUT, TD-2	1
	FA21501-1	ACCORN NUT, TD-3	1
2.	KE52755	KNOB, TD-2	1
	SE50018	KNOB, TD-3	1
3.	FI05180-1	HEX NUT, TD-2	1
	FI05180-2	HEX NUT, TD-3	1
4.	KE52753	RETAINER, TD-2	1
	SE50013	RETAINER, TD-3	1
5.	KE52752	PISTON, TD-2	1
	SE50010	PISTON, TD-3	1
6.	FA05002-24	"O" RING, TD-2	1
	FA05002-38	"O" RING, TD-3	1
7.	KE50972-B	VALVE BODY, TD-2	1
	KE50973	VALVE BODY, TD-3	1

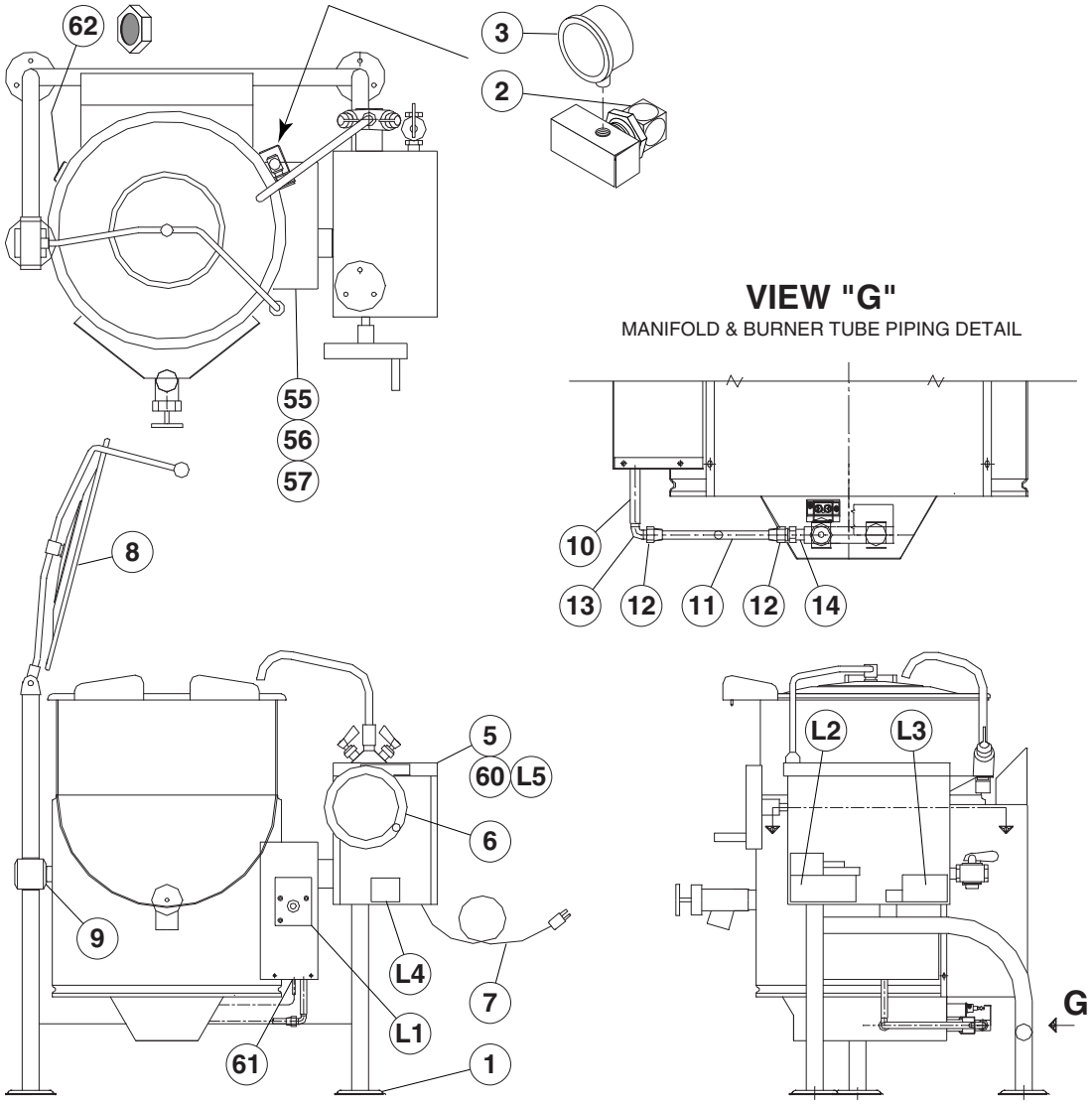
GENERAL ASSEMBLY - *STATIONARY MODELS (pg. 1 of 2)*



GENERAL ASSEMBLY - *STATIONARY MODELS (pg. 2 of 2)*

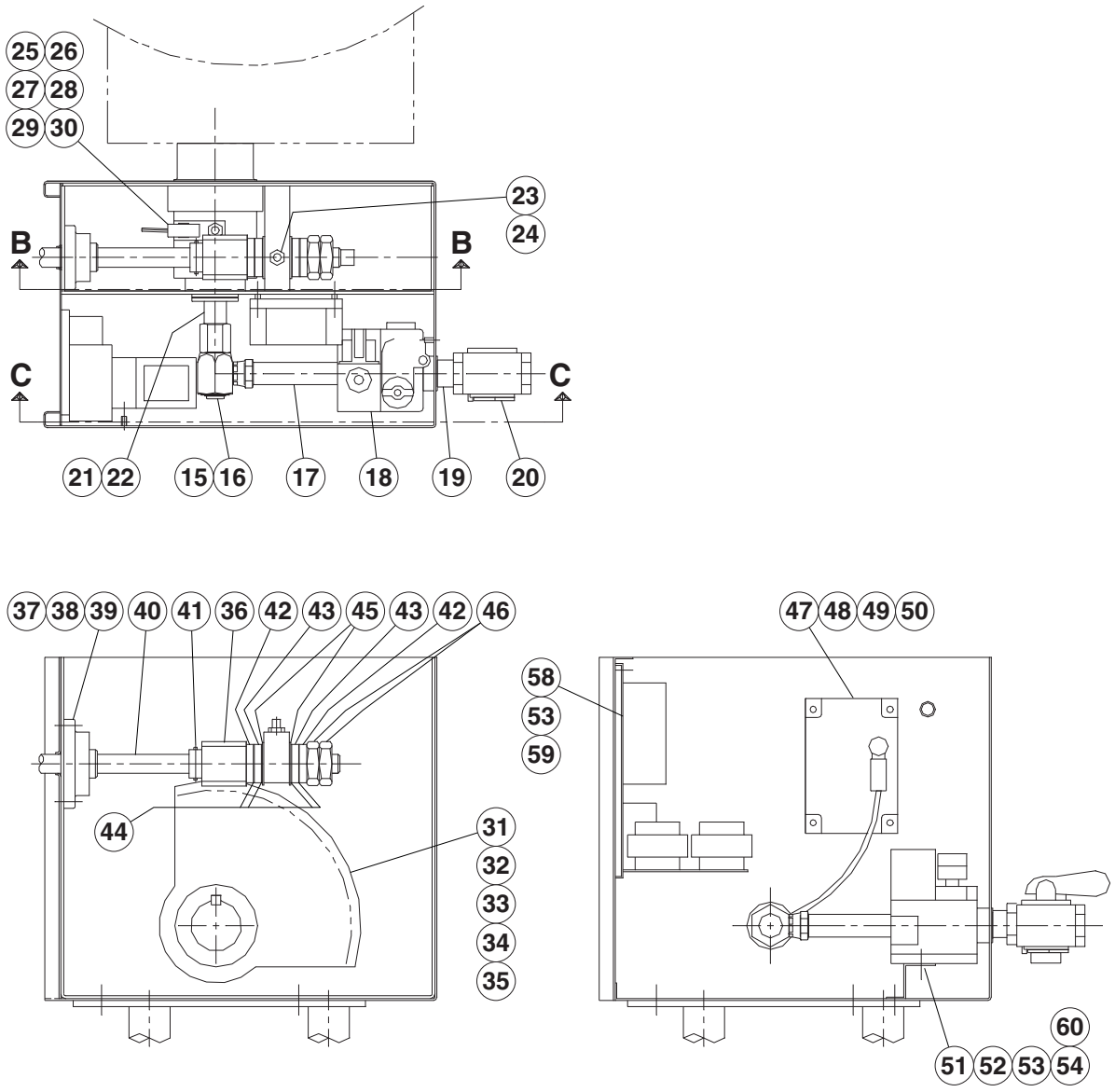
ITEM NO.	***PART NO.***	***DESCRIPTION***	***QTY.***
1.	KE00099	ADJUSTABLE FOOT	3
2.	KE01928-2	COMPONENT MOUNTING PLATE ASSEMBLY (see COMPONENT MOUNTING PLATES)	1
3.	FA20006	MACHINE SCREW NUT (10-24)	1
4.	FA32006	TOOTH LOCK WASHER	1
5.	KE54991-1	LID (COMPONENT BOX)	1
6.	KE54991-2	LID (SIDE BOX)	1
7.	FA95074	ANCHOR NUT	8
8.	KE54846-4	GASKET (COMPONENT BOX LID)	1
9.	KE54846-5	GASKET (SIDEBOX LID)	1
10.	FA95031	PAN HEAD PHILLIPS DRIVE SCREW	8
11.		PRESSURE GAUGE	
	KE000714-4	FOR UNITS BUILT PRIOR TO FEBRUARY 2005	1
	KE50429-5	FOR UNITS BUILT AFTER JANUARY 2005	1
13.	KE54941-6	SAFETY VALVE (50 PSI)	1
14.	KE55069-6	SAFETY THERMOSTAT	1
15.	KE00515	THERMISTOR ASSEMBLY	1
16.	KE50556-1	LOW WATER PROBE	1
17.	KE02053	GAS VALVE ASSEMBLY	1
18.	FA10360	SCREW PAN HEAD PHILLIPS (10-32)	2
19.	F01518-1	GAS SHUT OFF VALVE (OPTION)	1
		GAS OPTIONS:	
	KE54618-1	PRESSURE REGULATOR (PROPANE)	1
	KE54618-2	PRESSURE REGULATOR (NATURAL GAS)	1
20.	FI00607	CLOSE NIPPLE	1
21.	KE54821-8	SUPPLY CORD (OPTION)	1
22.	KE54833-2	SNAP IN BUSHING	1
23.	FA00152	STREET ELBOW (3/4)	1
24.	FI00355	BUSHING (3/4 X 3/8)	1
25.	FI00565-3	NIPPLE (3/8)	1
26.	FI05198-5	COMPRESSION ELBOW	1
27.	FI00265	COUPLING (3/8)	1
28.	FI05134-1	COMPRESSION FITTING	2
29.	KE54667-4	BURNER TUBE	1
30.	FI00565-6	NIPPLE (3/8 NPT)	1
31.	KE51238	CORD CONNECTOR	1
32.	CHS-25	SPRING HINGE COVER	1
34.	KE54468	WATER LEVEL SIGHT GLASS	1
LABELS			
L1.	KE90424	WIRING DIAGRAM	1
L2.	KE95555-5	OPERATING INSTRUCTION LABEL	1
L3.	KE95552	RATING PLATE	1
L4.	KE95551	LABEL SHEET	1

GENERAL ASSEMBLY - *TILTING MODELS (pg. 1 of 3)*



ITEM NO.	*PART NO.*	*DESCRIPTION*	*QTY.*
1.	KE00099	ADJUSTABLE FOOT	1
2.	KE51723-1	SAFETY VALVE (50 PSI)	1
3.		PRESSURE GAUGE	
	KE000714-4	FOR UNITS BUILT PRIOR TO FEBRUARY 2005	1
	KE50429-5	FOR UNITS BUILT AFTER JANUARY 2005	1
5.	KE529773	LID FOR GEAR BOX	1
6.	KE00508	HANDWHEEL	1
7.	KE54821-8	SUPPLY CORD	1
8.	CHS-KGL-25-T	SPRING HINGE COVER	1
9.	KE00351	TRUNNION BEARING	1
10.	FI05321-1	NIPPLE	1
11.	KE54667-3	BURNER TUBE	1

GENERAL ASSEMBLY - *TILTING MODELS (pg. 2 of 3)*

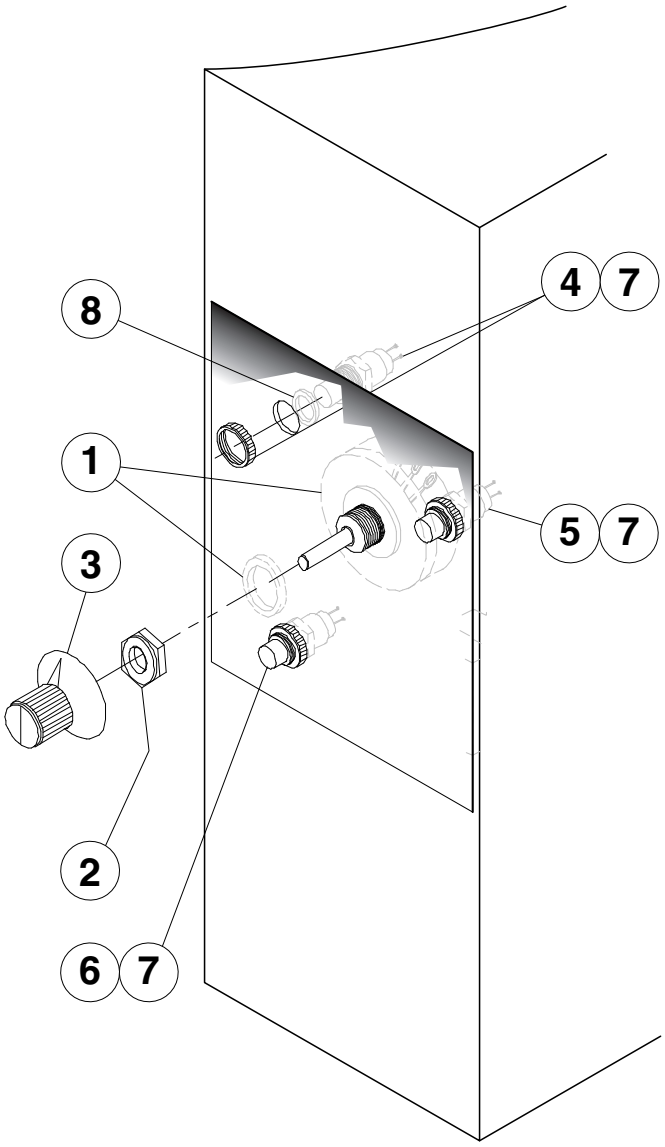


12.	FI05134-1	COMPRESSION FITTING	2
13.	FI05198-5	COMPRESSION ELBOW	1
14.	FI00565-6	NIPPLE 3/8 NPT	1
15.	FI05222	SWIVEL ELBOW	1
16.	FI05231	FLUSH BUSHING	1
17.	FI05223	SPECIAL NIPPLE	1
18.	KE02053	GAS VALVE ASSEMBLY	1
19.	FI00607	CLOSE NIPPLE	1
20.	F01518-1	GAS SHUT OFF VALVE	
	GAS OPTIONS:		
	KE54618-1	PRESSURE REGULATOR (PROPANE)	1
	KE54618-2	PRESSURE REGULATOR (NATURAL GAS)	1
21.	F105226-12	NIPPLE	1

GENERAL ASSEMBLY - *TILTING MODELS (pg. 3 of 3)*

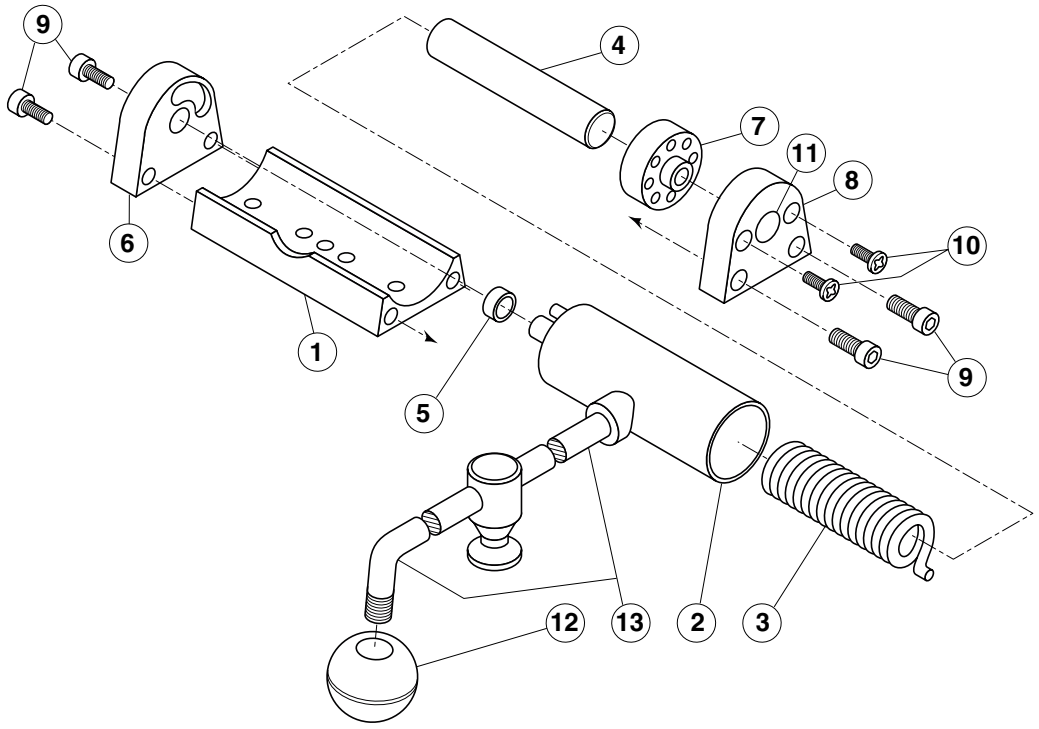
22.	FI00040	ELBOW	1
23.	FA19177	HEX SOCKET SET SCREW	1
24.	FA20047	JAM NUT	1
25.	KE50294-1	MERCURY SWITCH	1
26.	KE54456-1	MERCURY SWITCH BRACKET	1
27.	KE50295-1	CLIP FOR MERCURY SWITCH	
28.	FA11396	HEX HEAD BOLT (3/8-24)	1
29.	FA31031	SPLIT LOCK WASHER	1
30.	FA15018-7	SCREW 6-32	1
31.	KE52833	WORM GEAR	1
32.	FA10772	SOCKET HEAD CAP SCREW	2
33.	FA20030	JAM NUT	2
34.	FA95007-4	RETAINING RING	1
35.	FA95055-1	SQUARE KEY	1
36.	KE50315	WORM	1
37.	KE51730	TILT SHAFT BEARING	1
38.	FA31010	SPLIT LOCK WASHER	2
39.	FA20030	HEX NUT	2
40.	KE503752	TILT SHAFT	1
41.	FA95005	TENSION PIN	1
42.	KE52193	THRUST BEARING SPACER	2
43.	KE52191	ROLLER BEARING	2
44.	KE52192	THRUST WASHER	4
45.	FA30088	WASHER	2
46.	FA95008	JAM NUT	2
47.	KE53469-2	IGNITION CONTROL	1
	KE54308-4	IGNITION CONTROL	1
48.	FA10245	SCREW (8-32)	4
49.	FA20004	HEX NUT	4
50.	FA32005	TOOTH LOCKWASHER	4
51.	KE53390	GAS VALVE MOUNTING BRACKET	1
52.	FA10367	BINDING HEAD SCREW (10-32)	2
53.	FA32006	TOOTH LOCKWASHER (J10)	2
54.	FA20007	MACHINE SCREW NUT (10-32)	2
55.	KE55069-6	SAFETY THERMOSTAT	1
56.	KE00515	THERMISTOR ASSEMBLY	1
57.	KE50556-1	LOW WATER PROBE	1
58.	KE01928-1	COMPONENT MOUNTING PLATE ASSEMBLY (see COMPONENT MOUNTING PLATES)	1
59.	FA20006	MACHINE SCREW NUT (10-24)	2
60.	FA11145	SCREWS	4
61.	KE54833-2	SNAP-IN BUSHING	1
62.	KE54468	WATER LEVEL SIGHT GLASS	1
LABELS			
L1.	KE95555-5	OPERATING INSTRUCTION LABEL	1
L2.	KE95552	RATING PLATE	1
L3.	KE95551	GAS KETTLE LABEL GENERAL	1
L4.	KE95040	DIRECTION OF TILT LABEL	1
L5.	KE90424	WIRING DIAGRAM	1

CONSOLE CONTROLS



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1.	SE00114	POTENTIOMETER WITH ON/OFF SWITCH, C/W ITEM #2	1
2.	KE51005	RUBBER BOOT	1
3.	KE50569-1	KNOB, POTENTIOMETER	1
4.	SE003013-1	L.E.D., RED, Replacement Kit., (includes LED & "O" Ring)	1
5.	SE003013-2	L.E.D., GREEN, Replacement Kit., (includes LED & "O" Ring)	1
6.	SE003013-3	L.E.D., AMBER, Replacement Kit., (includes LED & "O" Ring)	1
7.	FA05002-18	"O" RING	3

HINGE ASSEMBLY



ITEM NO.	PART NO.	DESCRIPTION	QTY.
		Hinge Assembly	
1. - 11	KE00597-1	25 - 40 Gallon, 20 Gallon Full Jacketed	1
	KE00597-2	60 - 80 Gallon, 30 - 40 Gallon Full Jacketed	1
	KE00597-3	100 - 150 Gallon, 60 - 100 Gallon Full Jacketed	1
	KE00597-4	KDM-60, KDM-60-T, Cook Tank	1
	KE00597-5	KDL-200, KDL-250, KDL-150-F, KDL-250-F	1
1.	KE50822	Hinge Base	1
2.	KE51217	Hinge Cylinder	1
3.	KE50121-2	**Hinge Spring Light** - for KE00597-2	1
	KE50121-1	**Hinge Spring Heavy** - for KE00597-1, KE00597-3, KE00597-4, KE00597-5,	1
4.	KE50823-1	Hinge Pin	1
5.	KE50824	Hinge Bearing	1
6.	KE50819-1	Hinge End Piece	1
7.	KE50820	Hinge Insert	1
8.	KE50819	Hinge End Piece	1
9.	FA11284	Screw, Socket Head	4
10.	FA11507	Cutting Screw,	2
11.	SK50418	Plug Button	1
12.	KE50151-2	Knob	1
13.		Cover Handle (specify model)	1

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