



# Operators Manual

## Installation & Operation

# Gas 25 Gallon Kettle

### MODELS:

KGL-25

KGL-25-T



For a complete Service Manual  
refer to [www.clevelandrange.com](http://www.clevelandrange.com)



Enodis

1333 East 179th St., Cleveland, Ohio, U.S.A. 44110

Phone: (216) 481-4900 Fax: (216) 481-3782  
Visit our web site at [www.clevelandrange.com](http://www.clevelandrange.com)

# FOR THE USER

**IMPORTANT!**  
**PRIOR TO REMOVING ANY FITTINGS ENSURE KETTLE  
IS AT ROOM TEMPERATURE AND  
PRESSURE GAUGE IS SHOWING ZERO OR LESS PRESSURE.**

**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 and operating  
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.

KEEP APPLIANCE AREA FREE AND CLEAR FROM COMBUSTIBLES.

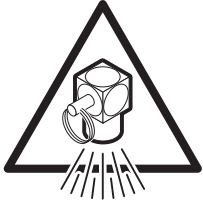
DO NOT OBSTRUCT THE FLOW OF COMBUSTION AND VENTILATION AIR.

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

**RETAIN THIS MANUAL FOR YOUR REFERENCE.**

# For your safety

## DANGER

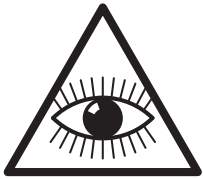


Keep clear of pressure relief discharge.

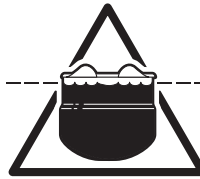


Keep hands away from moving parts and pinch points.

## IMPORTANT



Inspect unit daily for proper operation.



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

## CAUTION



Surfaces may be extremely hot! Use protective equipment.



Wear protective equipment when discharging hot product.

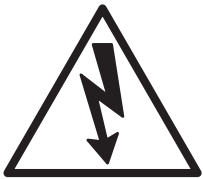


Do not lean on or place objects on kettle lip.



Stand clear of product discharge path when discharging hot product.

## SERVICING

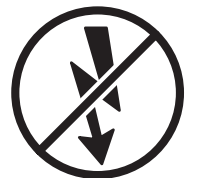


Shut off power at main fuse disconnect prior to servicing.



Ensure kettle is at room temperature and pressure gauge is showing zero or less prior to removing any fittings.

## GAS APPLIANCES



Do not attempt to operate this appliance during a power failure.



Keep appliance and area free and clear of combustibles.

# 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.

## CLEARANCE REQUIREMENTS

This unit must be installed in accordance with the clearances shown on the rating label which is adhered to the unit.

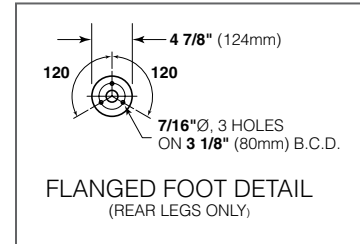
**FOR YOUR SAFETY.** Keep the appliance area free and clear of combustible materials.

## INSTALLATION

**Note:** For clearance requirements, suggested drain location and assembly details refer to SPECIFICATION DRAWING.

1. Position the unit in its permanent location, and level the unit by turning the adjustable feet.

2. Once positioned and leveled, permanently secure the unit's flanged feet to the floor using 5/16" lag bolts and floor anchors



(supplied by the installer). Three bolts are required to secure each of the flanged feet.

3. Seal joints of flanged feet with a silicone sealant.

## 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.

**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.** 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.
- 2.** Supply power to the kettle by placing the fused disconnect switch to the "ON" position.
- 3.** Unit has been thoroughly checked for gas leaks at the factory however the installer should check all connections using soap bubble or gas detector for any leaks which may have resulted from shipping or installation.
- 4.** Turn on main gas supply to unit. Open the kettle's shut-off valve (located at back of console).
- 5.** Turn the temperature control knob to "**1**" (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.
- 6.** Tilt the kettle forward. After a few seconds 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.
- 7.** Raise the kettle to the upright position. The red "LOW WATER" light should go out when the kettle is upright.
- 8.** Turn the temperature control knob to "**10**" (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.

# OPERATING INSTRUCTIONS



General Parts Drawing

| ITEM # | DESCRIPTION                                       | FUNCTION  |
|--------|---|---|
| 1.     | Tilt Wheel (tilting models only)                  | 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. This will also light when the kettle is tilted.                               |
| 5.     | On-Off Switch/<br>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.).  |
| 6.     | Heat Indicator Light (Green)                      | When lit, indicates that the kettle's burner is on. Cycles ON-OFF with burner.  |
| 7.     | Water Level Sight Glass                           | Displays water level in steam jacket.   |
| 8.     | Ignition Failure Indicator Light (Amber)          | Indicates failure of heating system to ignite.  |
| 9.     | Tangent Draw-Off Valve                            | Used for draining product or wash water from kettle. It is supplied as standard equipment on stationary kettles and is optional on tilting kettles.                       |

# 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.**

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

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

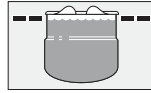
**NOTE:** Certain combinations of ingredients will result in temperature variations

Temperature Range Chart

- 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.

- 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 when kettle is in upright position during kettle operation. This light indicates that the burners have been automatically shut off by the kettle's safety circuit. It is, however, normal for the red light to come on when the kettle is in a tilted position.

- 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.

- 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.

## 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 |
|-----------------|---------|
| 25 gallon       | 37      |

Approximate Boiling Times






# 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

- ⇒  Do not use detergents or cleansers that are chloride based or contain quaternary salt.  
**Chloride Cleaners**
- ⇒  Do not use a metal bristle brush or scraper.  
**Wire Brush &**
- ⇒  Steel wool should never be used for cleaning the stainless steel.  
**Steel Pads**
- ⇒  Unit should never be cleaned with a high pressure spray hose.  
**High Pressure Spray Hose**
- ⇒  Do not leave water sitting in unit when not in use.  
**Stagnant Water**

## 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. 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 the Nafem Stainless Steel Equipment Care and Cleaning manual (supplied with unit).



# STAINLESS STEEL EQUIPMENT CARE AND CLEANING

(Supplied courtesy of Nafem. For more information visit their web site at [www.nafem.org](http://www.nafem.org))

## Contrary to popular belief, stainless steels ARE susceptible to rusting.

Corrosion on metals is everywhere. It is recognized quickly on iron and steel as unsightly yellow/orange rust. Such metals are called "active" because they actively corrode in a natural environment when their atoms combine with oxygen to form rust.

Stainless steels are passive metals because they contain other metals, like chromium, nickel and manganese that stabilize the atoms. 400 series stainless steels are called ferritic, contain chromium, and are magnetic; 300 series stainless steels are called austenitic, contain chromium and nickel; and 200 series stainless, also austenitic, contains manganese, nitrogen and carbon. Austenitic types of stainless are not magnetic, and generally provide greater resistance to corrosion than ferritic types.

With 12-30 percent chromium, an invisible passive film covers the steel's surface acting as a shield against corrosion. As long as the film is intact and not broken or contaminated, the metal is passive and stain-less. If the passive film of stainless steel has been broken, equipment starts to corrode. At its end, it rusts.

## Enemies of Stainless Steel

There are three basic things which can break down stainless steel's passivity layer and allow corrosion to occur.

1. Mechanical abrasion
2. Deposits and water
3. Chlorides

**Mechanical abrasion** means those things that will scratch a steel surface. Steel pads, wire brushes and scrapers are prime examples.

**Water** comes out of the faucet in varying degrees of hardness. Depending on what part of the country you live in, you may have hard or soft water. Hard water may leave spots, and when heated leave deposits behind that if left to sit, will break down the passive layer and rust stainless steel. Other deposits from food preparation and service must be properly removed.

**Chlorides** are found nearly everywhere. They are in water, food and table salt. One of the worst chloride perpetrators can come from household and industrial cleaners.

## So what does all this mean? Don't Despair!

Here are a few steps that can help prevent stainless steel rust.

### 1. Use the proper tools.

When cleaning stainless steel products, use non-abrasive tools. Soft cloths and plastic scouring pads will not harm steel's passive layer. Stainless steel pads also can be used but the scrubbing motion must be in the direction of the manufacturers' polishing marks.

### 2. Clean with the polish lines.

Some stainless steel comes with visible polishing lines or "grain." When visible lines are present, always scrub in a motion parallel to the lines. When the grain cannot be seen, play it safe and use a soft cloth or plastic scouring pad.

### 3. Use alkaline, alkaline chlorinated or non-chloride containing cleaners.

While many traditional cleaners are loaded with chlorides, the industry is providing an ever-increasing choice of non-chloride cleaners. If you are not sure of chloride content in the cleaner used, contact your cleaner supplier. If your present cleaner contains chlorides, ask your supplier if they have an alternative. Avoid cleaners containing quaternary salts; it also can attack stainless steel and cause pitting and rusting.

### 4. Treat your water.

Though this is not always practical, softening hard water can do much to reduce deposits. There are certain filters that can be installed to remove distasteful and corrosive elements. To insure proper water treatment, call a treatment specialist.

### 5. Keep your food equipment clean.

Use alkaline, alkaline chlorinated or non-chloride cleaners at recommended strength. Clean frequently to avoid build-up of hard, stubborn stains. If you boil water in stainless steel equipment, remember the single most likely cause of damage is chlorides in the water. Heating cleaners that contain chlorides have a similar effect.

### 6. Rinse, rinse, rinse.

If chlorinated cleaners are used, rinse and wipe equipment and supplies dry immediately. The sooner you wipe off standing water, especially when it contains cleaning agents, the better. After wiping equipment down, allow it to air dry; oxygen helps maintain the stainless steel's passivity film.

### 7. Never use hydrochloric acid (muriatic acid) on stainless steel.

### 8. Regularly restore/passivate stainless steel.

## 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 & discoloration             | 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                |                                   |

## Review

1. Stainless steels rust when passivity (film-shield) breaks down as a result of scrapes, scratches, deposits and chlorides.
2. Stainless steel rust starts with pits and cracks.
3. Use the proper tools. Do not use steel pads, wire brushes or scrapers to clean stainless steel.
4. Use non-chlorinated cleaners at recommended concentrations. Use only chloride-free cleaners.
5. Soften your water. Use filters and softeners whenever possible.
6. Wipe off cleaning agent(s) and standing water as soon as possible. Prolonged contact causes eventual problems.

To learn more about chloride-stress corrosion and how to prevent it, contact the equipment manufacturer or cleaning materials supplier.

Developed by Packer Engineering, Naperville, Ill., an independent testing laboratory.

# MAINTENANCE

ALL SERVICE MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN.

**IMPORTANT!**  
**ENSURE KETTLE IS AT ROOM TEMPERATURE AND PRESSURE GAUGE IS SHOWING ZERO OR LESS PRESSURE PRIOR TO REMOVING ANY FITTINGS.**

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 CHECKLIST

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   |
|---|---|
| <b>HAND WHEEL</b> (tilting models only)       | Check hand wheel for tightness. If loose tighten allen screw.   |
| <b>LUBRICATION</b> (tilting models only)      | Check that kettle tilts smoothly. Grease trunnion housings and gear/worm assembly every three months as recommended in LUBRICATION PROCEDURE.   |
| <b>GEAR/WORM</b>                              | Inspect for play. Tighten Allen screws if required.   |
| <b>PRESSURE GAUGE</b>                         | Check that the gauge does not have moisture on its inside face. Replace if moisture is present.<br><br>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. |
| <b>PRESSURE RELIEF VALVE</b>                  | Check pressure relief valve as described in PRESSURE RELIEF VALVE TESTING PROCEDURE.  |
| <b>TEMPERATURE CHECK</b>                      | Following the CALIBRATING PROCEDURE, check the inner kettle surface temperature with a digital surface thermometer and adjust if required.  |
| <b>ON/OFF SWITCH/<br/>TEMPERATURE CONTROL</b> | Check for damage. Replace if necessary.   |
| <b>SPRING ASSIST COVER</b>                    | Check cover is tightly secured to handle and insure spring is holding cover up - adjust if required. Refer to HINGE ADJUSTMENT INSTRUCTIONS.  |

# SAFETY INSPECTION CHECKLIST-

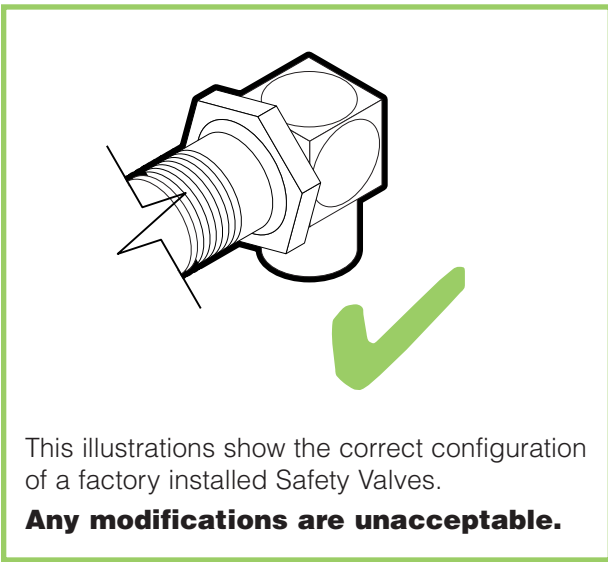
TILTING MODELS (pg. 1 of 2)

Regular inspection and maintenance of units is essential to obtain trouble free and safe operation of equipment. Inspections must include testing of the pressure relief valve and checks of the operating system to insure that it has not been altered.

**No safety features designed into the equipment should ever be tampered with.**

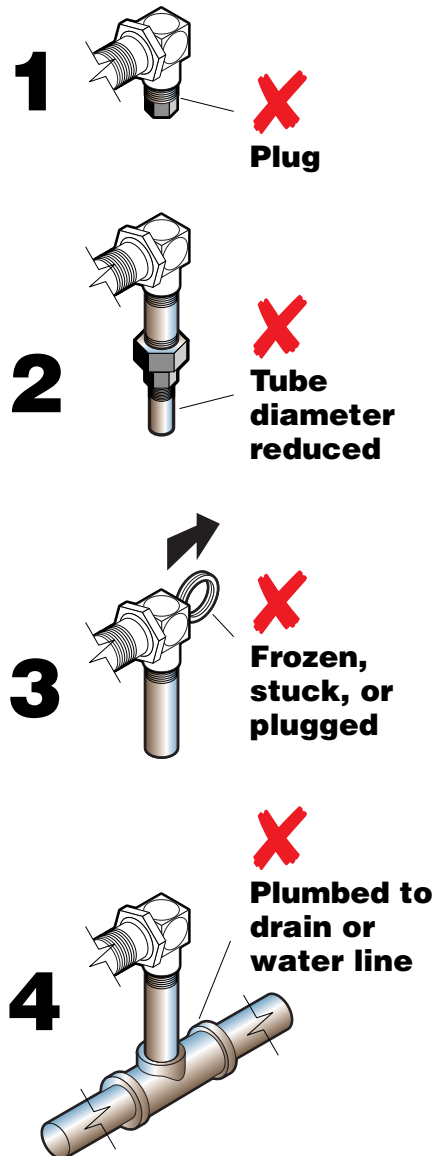
Tampering with or bypassing controls is a very dangerous practice and unfortunately we have seen several cases of this. Following is a short list of the most common and the most dangerous alterations performed on kettles.

## SAFETY VALVE:



### Incorrect Installations

- 1** Safety valve has plug threaded into the discharge opening preventing any steam from escaping.
- 2** Safety valve's tube diameter has been reduced.
- 3** Safety valve is sticking, frozen shut or plugged. To test, refer to PRESSURE RELIEF VALVE PERIODIC TESTING PROCEDURE.
- 4** Safety valve is plumbed to a drain or water line creating back pressure and reducing flow.



This illustrations show the correct configuration of a factory installed Safety Valves.

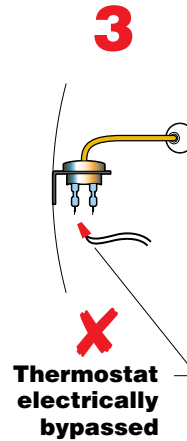
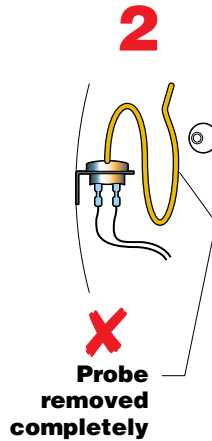
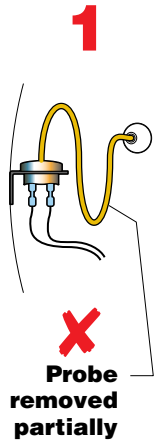
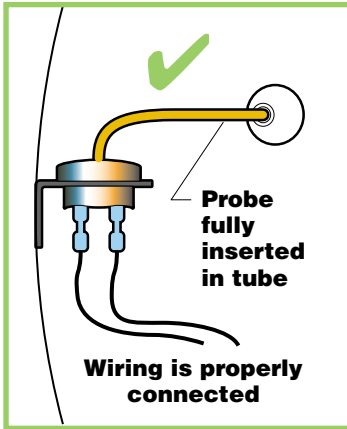
**Any modifications are unacceptable.**

# SAFETY INSPECTION CHECKLIST-

TILTING MODELS (pg. 2 of 2)

## SAFETY THERMOSTAT:

### Incorrect Installations

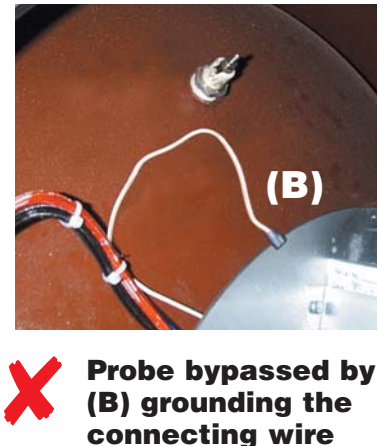
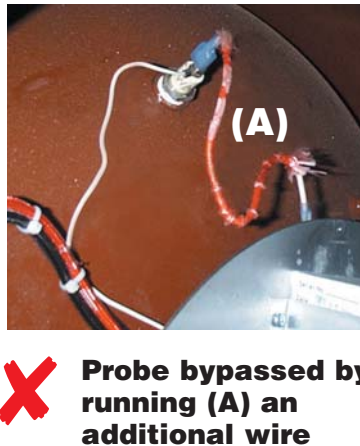
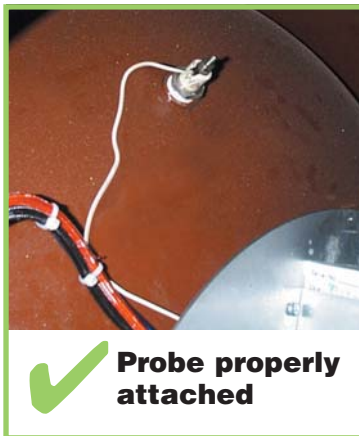


1 Safety thermostat probe is not completely inserted into tubing.

2 Safety thermostat probe is removed from tubing.

3 Safety thermostat electrical connection is bypassed.

## Low Water Level Probe:



## Operating Thermostat:

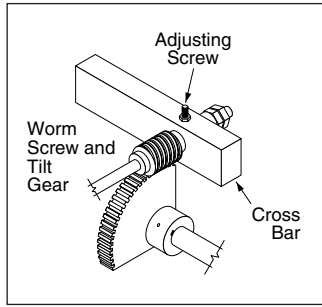
265°

260° - 270°  
MAXIMUM  
KETTLE  
TEMPERATURE

If maximum temperature is not in this range (on empty kettle), refer to the CALIBRATING PROCEDURE.

## LUBRICATION PROCEDURE

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

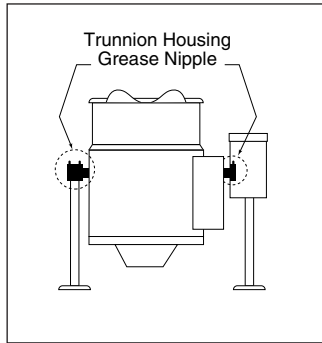


### TRUNNION HOUSING, WORM SCREW AND TILT GEAR

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

Apply grease to gear teeth. Check for

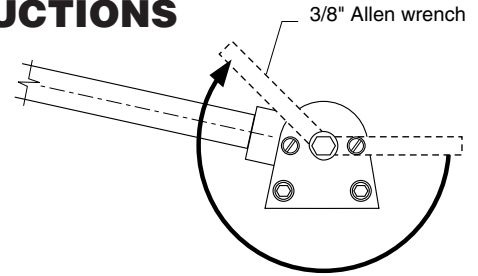
excessive play and adjust with adjusting screw located on top of cross bar.



### 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 grease nipple.

## 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.