



southbend

A MIDDLEBY COMPANY

OWNER'S MANUAL

INSTALLATION

USER'S GUIDE

SERVICE

PARTS

STATIONARY GAS — SELF CONTAINED STEAM KETTLES

**MODELS: KSLG-20, KSLG-20E
KSLG-40, KSLG-40E
KSLG-60, KSLG-60E**

These instructions should be read thoroughly before attempting installation. Set up, installation and Performance Check should be performed by a qualified service technician. The Manufacturer, Southbend (1100 Old Honeycutt Rd., Fuquay-Varina, North Carolina 27526), informs you that unless the installation instructions for the above described Southbend product are followed and performed by a qualified service technician, (a person experienced in and knowledgeable concerning the installation of commercial gas and/or electrical cooking equipment) then the terms and conditions of the Manufacturer's Limited Warranty will be rendered void and no warranty of any kind shall apply.

If the equipment has been changed, altered, modified or repaired by other than a qualified service technician during or after the 12-month limited warranty period, then the manufacturer shall not be liable for any incidental or consequential damages to any person or to any property which may result from the use of the equipment thereafter. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion thereto may not apply to you.

In the event you have any question concerning the installation, use, care, or service of the product, write Customer Service Department, Southbend Corporation, 1100 Old Honeycutt Rd., Fuquay-Varina, North Carolina 27526.

**STATIONARY GAS
SELF CONTAINED STEAM KETTLE
(Manual Section SK)**

Congratulations! You have just purchased one of the finest pieces of heavy-duty, commercial cooking equipment on the market today.

You will find that your new equipment, like all Southbend equipment, has been designed and manufactured to some of the toughest standards in the industry — those of Southbend Corporation. Each piece of Southbend equipment has been carefully engineered and designs have been verified through laboratory tests and field installations in some of the more strenuous commercial cooking applications. With proper care and field maintenance, you will experience years of reliable, trouble-free operation from your Southbend equipment. To get the best results, it's important that you read this manual carefully.

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This manual applies to Stationary Gas Kettles with a standing pilot or electronic ignition. You can determine if your unit is equipped with electronic ignition by examining the Model No. on the serial plate. The serial plate is located on the lower right side of the unit. An "E" suffix at the end of the Model No. indicates the unit is equipped with electronic ignition.

CAUTION: *POST IN PROMINENT LOCATION INSTRUCTIONS TO BE FOLLOWED
IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION SHALL BE OBTAINED FROM LOCAL
GAS SUPPLIER.*

Retain this manual for future reference.

INTENDED FOR COMMERCIAL USE ONLY. NOT FOR HOUSEHOLD USE.

WARNING - WARRANTY WILL BE VOID IF

- A. SERVICE WORK IS PERFORMED BY OTHER THAN A QUALIFIED TECHNICIAN.**
- B. OTHER THAN GENUINE SOUTHBEND REPLACEMENT PARTS ARE INSTALLED.**

FOR YOUR SAFETY

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

KEEP AREA AROUND APPLIANCES FREE AND CLEAR FROM COMBUSTIBLES.

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN EQUIP-MENT AT THE MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.



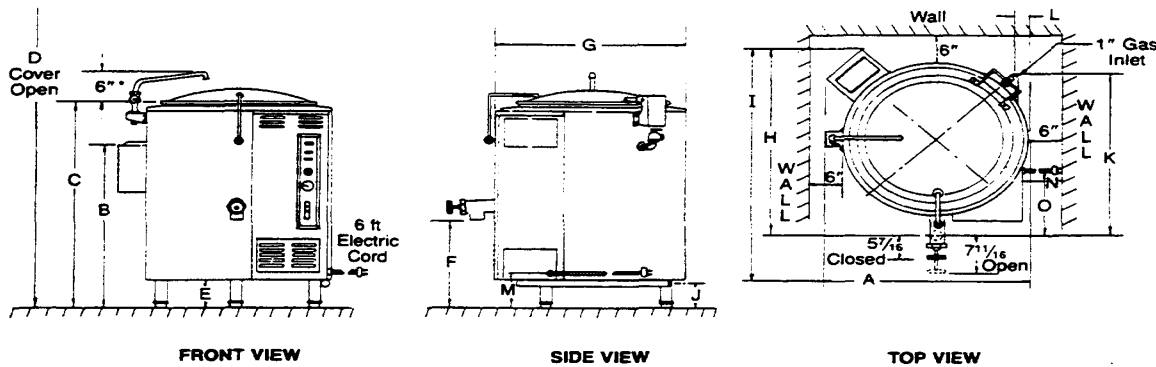
southbend

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STATIONARY GAS SELF CONTAINED STEAM KETTLES INSTALLATION

SPECIFICATIONS



Not For Scale
For Dimensional Purposes Only

DIMENSIONS:

() = Millimeters

MODEL	Width A	HEIGHT			E	F	DEPTH			GAS CONN.			ELECTRIC CONN.			CRATE SIZE			CUBIC VOLUME	CRATED WEIGHT
		B	C	D			G	H	I	J	K	L	M	N	O	Width	Depth	Height		
? KSLG-20	32" (813)	32" (813)	40" (1016)	63.3125" (1610)	6" (152)	19" (483)	26" (660)	35.5" (902)	43.1875" (1097)	5.5" (140)	28" (711)	1.25" (32)	8" (203)	6" (1524)	10" (254)	37" (940)	40" (1016)	49" (1244)	42 cu. ft. 1.26 cu. m.	55016s. 249.5 kg.
? KSLG-40	40" (1016)	35" (889)	43.5" (1105)	73.3125" (1862)	6" (152)	19" (483)	32" (813)	40.5" (1029)	48.1875" (1224)	5.5" (140)	35" (889)	2.5" (64)	8" (203)	6.75" (171)	11" (279)	42" (1067)	47" (1194)	54" (1372)	61.7 cu. ft. 1.85 cu. m.	700 lbs. 317.5 kg.
? KSLG-60	44" (1118)	39" (991)	49" (1245)	82.3125" (2091)	8" (203)	21" (533)	36" (914)	44" (1118)	51.6875" (1313)	7.5" (191)	35" (889)	3.5" (89)	10" (254)	7.5" (184)	13.5" (343)	45" (1143)	54" (1372)	60" (1524)	84.4 cu. ft. 2.53 cu. m.	850 lbs. 385.5kg.

UTILITY INFORMATION:

GAS — KSLG-20 — Total 100,000 BTU. One 1" male connection (for location. see drawing above). ? NATURAL ? PROPANE
 Required operating pressure: Natural Gas 4" W.C.; Propane Gas 10" W.C.

GAS — KSLG-40 — Total 100,000 BTU. One 1" male connection (for location. see drawing above). ? NATURAL ? PROPANE
 Required operating pressure: Natural Gas 4" W.C.; Propane Gas 10" W.C.

GAS — KSLG-60 — Total 130,000 BTU. One 1" male connection (for location. see drawing above). ? NATURAL ? PROPANE
 Required operating pressure: Natural Gas 4" W.C.; Propane Gas 10" W.C.

ELECTRIC — KSLG-20, KSLG-40, KSLG-60

- ? STANDARD: 115/60/1 — furnished with 6-ft cord w/3-prong plug. Total maximum amps 2.0.
- ? OPTIONAL: 208/60/1 or for use on 3 (190 to 219 volts) — supply must be wired to unit— see drawing above. Total maximum amps 1.0.
- ? OPTIONAL: 236/60/1 or for use on 3 (220 to 240 vote) — supply must be wired to unit— see drawing above. Total maximum amps 1.0.

NOTE: If this equipment is being installed over 2,000 ft. altitude and was not so specified on order, contact Southbend Service Department. Failure to install with proper orifice sizing may void the warranty.

APPROVALS:





INSTALLATION

GENERAL:

THE UNIT WHEN INSTALLED MUST CONFORM WITH LOCAL CODES, OR IN THE ABSENCE OF LOCAL CODES, WITH THE NATIONAL FUEL GAS CODE ANSI 2223.1-1984.

THE UNIT WHEN INSTALLED MUST BE ELECTRICALLY GROUNDED AND COMPLY WITH LOCAL CODES, OR IN THE ABSENCE OF LOCAL CODES, WITH THE NATIONAL ELECTRICAL CODE ANSI NFPA 70-1981.

CANADIAN INSTALLATION MUST COMPLY WITH CAN1-B149 INSTALLATION CODE FOR GAS BURNING APPLIANCES AND EQUIPMENT AND CSA STANDARD C22.1-CANADIAN ELECTRICAL CODE PART 1.

EXHAUST FANS AND CANOPIES: Canopies are set over ranges, ovens, kettles, etc., for ventilation purposes. It is recommended that a canopy extend 6" past appliance and be located 6' 6" from the floor. Filters should be installed at an angle of 45° or more with the horizontal. This position prevents dripping of grease and facilitates collecting the run-off grease in a drip pan, usually installed with the filter. A strong exhaust fan tends to create a vacuum in the room and may interfere with burner performance or may extinguish pilot flames. Makeup air openings approximately equal to the fan area will relieve such vacuum. In case of unsatisfactory performance on any appliance, check with the exhaust fan in the "OFF" position.

WALL EXHAUST FAN: The exhaust fan should be installed at least 2 feet above the vent opening at the top of the unit.

CLEARANCES: Adequate clearance must be provided in aisle and at the side and back. Adequate clearances for air openings into the combustion chamber must be provided, as well as for serviceability.

Minimum clearances from combustible construction:

SIDES - 6 INCHES

BACK- 2 INCHES AT FLUE BOX

FLOORS - 6 INCH LEGS

All units must be installed in such a manner that the flow of combustion and ventilation air are not obstructed. Provisions for an adequate air supply must also be provided. Do not obstruct the lower front or right side of the unit, as combustion air enters through these areas. The bottom of the control area must also remain unobstructed.

WARNING:

THESE PROCEDURES MUST BE FOLLOWED BY QUALIFIED PERSONNEL OR WARRANTY WILL BE VOIDED-

TO INSTALL:

1. Uncrate carefully. Report any hidden freight damage to the freight company immediately.
2. Set the unit in place. Be certain to maintain the following minimum clearances to combustible construction:
 - Sides — 6 inches
 - Back — 2 inches (at the flue box)
 - Floor — 6 inches
3. To level the unit use a spirit level in all directions on the top of kettle (lid up).
 - A. Units with legs — adjust the bottom foot on each leg to overcome an uneven floor.
 - B. Units with casters — loosen the locking nuts, turn casters in or out as required and tighten locking nuts.
4. Be certain to leave adequate clearances for cleaning, maintenance and service.

INSTALLATION



5. The pressure relief valve is located at the right rear of the unit. This area should be kept clear and should not be in an area where operators will normally stand. The elbow on the relief valve should be turned toward the floor. A maximum 3 foot, 3/4" diameter pipe may be used to extend to the floor, but must not be piped directly to a drain. It must vent to the atmosphere.
6. Check the pressure gauge on the front panel before operating. If the pressure gauge does not indicate 20 to 30 inches of mercury column vacuum, see "Re-establishing Vacuum" section under SERVICE, after completing installation instructions.

GAS CONNECTION:

The A.G.A. serial plate on the lower right side of the unit indicates the type of gas your unit is equipped to burn. *Do Not* connect to any other gas type.

A 1" NPT line is provided at the rear for the connection. Each unit is equipped with an internal pressure regulator which is set for 4" W.C. manifold pressure for natural gas and 10" W.C. for propane gas. Use 1/8" pipe tap on the burner manifold for checking pressure.

An adequate gas supply is imperative. Undersized or low pressure lines will restrict the volume of gas required for satisfactory performance. A steady supply pressure, between 7" W.C. and 8" W.C. for natural gas and 11" W.C. and 12" W.C. for propane gas, is recommended. With all units operating simultaneously, the manifold pressure on all units should not show any appreciable drop. Fluctuations of more than 25% on natural gas, and 10% on propane gas, will create pilot problems and affect burner operating characteristics. Contact your gas company for correct supply line sizes.

Purge the supply line to clean out any dust, dirt, or other foreign matter before connecting the line to the unit. It is recommended that an individual manual shutoff valve be installed in the gas supply line to the unit. Use pipe joint compound which is suitable for use with LP gas on all threaded connections. Test pipe connections thoroughly for gas leaks. **USE SOAPY WATER ONLY FOR TESTING ON ALL GASES. NEVER USE AN OPEN FLAME TO CHECK FOR GAS LEAKS. ALL CONNECTIONS MUST BE CHECKED FOR LEAKS, AFTER THE UNIT HAS BEEN PUT IN OPERATION.**

CAUTION: *THIS APPLIANCE AND ITS INDIVIDUAL SHUTOFF 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 PSIG (3.45 kPa) (13.84 IN. W.C.).*

THIS APPLIANCE MUST BE ISOLATED FROM THE GAS SUPPLY PIPING SYSTEM BY CLOSING ITS INDIVIDUAL MANUAL SHUTOFF VALVE DURING ANY PRESSURE TESTING OF THE GAS SUPPLY PIPING SYSTEM AT TEST PRESSURES EQUAL TO OR LESS THAN 112 PSIG (3.45 kPa) (13.84 IN. W.C.).

NOTE: If this equipment is being installed at over 2,000 feet altitude and was not so specified on order, contact Southbend Service Department. Failure to install with proper orifice sizing may void the warranty.

WATER CONNECTION:

On units equipped with an optional water fill valve connect a water line (minimum 1/4") to the valve with a 1/4" NPT female fitting. Units with dual (hot & cold) valves must have the hot water line connected to the side with the hot water valve (Red) and cold water line to the cold water valve (Blue). Plastic or rubber hose is not recommended, as it may melt against the hot kettle side.

WARNING:

FOR AN APPLIANCE EQUIPPED WITH CASTERS, THE INSTALLATION SHALL BE MADE WITH A CONNECTOR THAT COMPLIES WITH THE STANDARD FOR CONNECTORS FOR MOVABLE GAS APPLIANCES, ANSI Z21.69-1983. ADEQUATE MEANS MUST BE PROVIDED TO LIMIT THE MOVEMENT OF THE APPLIANCE WITHOUT DEPENDING ON THE CONNECTOR AND ANY QUICK-DISCONNECT DEVICE OR ITS ASSOCIATED PIPING TO LIMIT THE APPLIANCE MOVEMENT.



INSTALLATION

If the unit is also equipped with an optional water fill valve it too must be installed with a flexible water supply tube, a quick disconnect and strain relief.

ELECTRICAL CONNECTION:

I. 120 VAC - 60 Hz - Single Phase.

Units with this electrical rating are factory supplied with a three-wire cord and three-prong plug which fits any standard 120V, three-prong grounded receptacle. A separate 15 amp supply is needed for each unit.

WARNING: ELECTRICAL GROUNDING INSTRUCTIONS

THIS APPLIANCE 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. (120V UNITS ONLY.)

II. 208/236 VAC - 60 Hz - Single & Three Phase.

Units with this electrical rating are factory equipped with a transformer. To connect supply wires remove cover from transformer box at right rear of unit. Route supply wires and ground wire through the hole in the cover with a strain relief fitting. Connect wires to the primary transformer terminals as required by your power supply voltage. See wiring diagram at the rear of the service section in this manual. Connect ground wire to ground lug. Replace cover. Three-phase units are wired as above, using only two supply wires. The third supply wire is not connected and must be properly terminated.

III. 220 VAC - 50 Hz - Single Phase.

Units equipped with this voltage rating should be wired exactly as in (II.) above.

PERFORMANCE CHECK:

The following items should be checked before or within the first 30 days of operation by a qualified service technician.

1. Verify correct gas type.
2. Verify correct voltage, cycle and phase.
3. Gas pressure.
4. Internal gas connections.
5. Internal electrical connections.
6. Pilots — adjustment and ignition.
7. Burners — adjustment and ignition.
8. Thermostat — cycle for operation check.
9. Supply valve — check for operation.
10. Check hinge and lid assembly.
11. Draw-off valve — check operation.
12. Advise user on cleaning procedures.

STATIONARY GAS SELF CONTAINED STEAM KETTLES

USER'S GUIDE

LIMITED WARRANTY

Southbend warrants that the equipment, as supplied by the factory to the original purchasers, is free from defects in materials and workmanship. Should any part thereof become defective as a result of normal use within the period and limits defined below. then at the option of Southbend such parts will be repaired or replaced by Southbend or its Authorized Service Agency. This warranty is subject to the following conditions:

If upon inspection by Southbend or its Authorized Service Agency it is determined that this equipment has not been used in an appropriate manner, has been modified, has not been properly maintained, or has been subject to misuse or misapplication. neglect, abuse, accident, damage during transit or delivery, fire. flood, riot or Act of God. then this warranty shall be void.

Specifically excluded under this warranty are claims relating to installation; examples are improper utility connections and improper utilities supply. Claims relating to normal care and maintenance are also excluded: examples are calibration of controls. and adjustments to pilots and burners.

Equipment failure caused by inadequate water quality is not covered under the warranty. WATER QUALITY must not exceed the following limits; Total Dissolved Solids (TDS) - 60 PPM (Parts Per Million), Hardness - 2 Grains or 35 PPM. PH Factor - 7.0 to 7.5. Water pressure 30 PSI minimum. 60 PSI Maximum. Boiler maintenance is the responsibility of the owner and is not covered by warranty.

This equipment is intended for commercial use only. Warranty is void if equipment is installed in other than commercial application.

Repairs under this warranty are to be performed only by a Southbend Authorized Service Agency. Southbend can not be responsible for charges incurred from other than Authorized Southbend Agencies.

THIS WARRANTY MUST BE SHOWN TO AN AUTHORIZED SERVICE AGENCY WHEN REQUESTING IN-WARRANTY SERVICE WORK. THE AUTHORIZED SERVICE AGENCY MAY AT HIS OPTION REQUIRE PROOF OF PURCHASE DATE.

This warranty does not cover services performed at overtime or premium labor rates nor does Southbend assume any liability for extended delays in replacing or repairing any items in the equipment beyond the control of Southbend. "Southbend shall not be liable for consequential or special damages of any nature that may arise in connection with such product or part." Should service be required at times which normally involve overtime or premium labor rates, the owner shall be charged for the difference between normal service rates and such premium rates.

In all circumstances, a maximum of one hundred miles in travel and two and one half hours (2.5) travel time shall be allowable. In all cases the closest Southbend Authorized Agency must be used.

The actual warranty time periods and exceptions are as follows:

This warranty only covers product shipped into the 48 Contiguous United States and Hawaii, one year labor, one year parts effective from the date of original purchase. There will be no labor coverage for equipment located on any island not connected by roadway to the mainland.

Exceptions to standard warranty, effective within above limitations:

Glass Windows, Door Gaskets, Rubber Seals, Light Bulbs, Ceramic Bricks,

Sight Glasses, Catnodic Descalers or Anodes 90 days material and labor.

Stainless Steel Fry Pot 4 years extended material warranty on fry pot only - No labor.

Stainless Steel Open Top Burners 4 years extended material warranty on burners only - No labor.

Pressure Steam Boiler Shell Prorated 4 years extended warranty on boiler shell only - No labor.

(Boiler shells which have not been properly maintained will not be covered by warranty.)

In all cases parts covered by a five year warranty will be shipped FOB the factory after the first year.

Our warranty on all replacement parts which are replaced in the field by our Authorized Service Agencies will be limited to three months on labor, six months on materials (parts) effective from the date of installation. See LIMITED WARRANTY - REPLACEMENT PARTS for conditions and limitations.

If the equipment has been changed, altered, modified, or repaired by other than a qualified service technician during or after the one year limited warranty period, then the manufacturer shall not be liable for any damages to any person or to any property which may result from the use of the equipment thereafter.

"THE FOREGOING WARRANTY IS IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS, AND CONSTITUTES THE ENTIRE LIABILITY OF SOUTHBEND. IN NO EVENT DOES THE LIMITED WARRANTY EXTEND BEYOND THE DURATION OF ONE YEAR FROM THE EFFECTIVE DATE OF SAID WARRANTY."

SOUTHBEND - Effective February 1, 1990



OPERATION

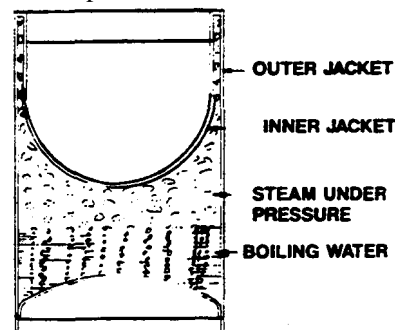
THEORY OF OPERATION:

One BTU (British Thermal Unit) is defined as the amount of heat required to raise one pound of water through one degree Fahrenheit. Therefore, for one pound of water at room temperature, it takes 212° minus 70° , or 142 BTUs, to bring water to 212°F , the boiling point of water. However, in order to change this same pound of water at 212°F to steam at 212°F requires another 970 BTUs. This 970 BTUs is called the "heat of vaporization."

Upon contact with a cooler surface, this "heat of vaporization" is immediately given up.

Since a large amount of heat is given up at such a low temperature, 212°F , food is cooked quickly with relatively less shrinkage and the foods valuable nutrients are retained.

An additional advantage of this low temperature is that most foods won't stick to the sides. This transmits into reduced labor costs since most foods do not require constant stirring.



GAS CONTROL INSTRUCTIONS: (Non-Electronic Ignition Units Only)

A. Lighting

1. Turn thermostat to lowest position and power switch to "off" position.
2. Open control panel access door.
3. Turn dial on combination control to "pilot" position. (NOTE: Any gas service valves exterior to the unit should be open.)
4. Remove shield which fits over the burners for access to the pilot, which is located on the right side of the left burner, approximately 6" into the combustion chamber. Depress dial on the combination control while lighting pilot burner. Hold dial for 30-45 seconds, until pilot remains lit when dial is released. A lit taper is recommended for easy access in lighting the pilot burner.

On units recently installed, the pilot line will require "bleeding." Consequently, the pilot may not ignite immediately and it may be necessary to keep the combination control dial depressed until sufficient gas reaches the pilot to keep it burning. After "bleeding" wait 5 minutes before attempting ignition.

5. Turn combination control dial to "on" position.

B. Shut Down

1. Standby
 - a. Turn combination control to "pilot" position.
2. Complete
 - a. Depress lightly and turn combination control dial to "off" position.
 - b. Turn thermostat to lowest position.
 - c. Turn power switch to "off."
 - d. Turn any gas service valves supplying gas to "off."

C. Relighting

1. Shut off all gas (turn combination control to "off" position).
2. Wait 5 minutes.
3. Repeat "lighting" instructions in Section A.

CAUTION: IF YOU SMELL GAS DURING THE LIGHTING PROCEDURE, IMMEDIATELY SHUT OFF THE GAS SUPPLY UNTIL THE LEAK HAS BEEN CORRECTED.

**GAS CONTROL INSTRUCTIONS: (Electronic Ignition Units Only - Prefix E)**

Units equipped with electronic ignition do not require "lighting" the pilot with a match.

A. Lighting

1. Turn thermostat to lowest position and power switch to "off" position.
2. Open control panel access door.
3. Turn dial on combination control to "on" position by rotating control knob counterclockwise to "stop" on black line. Depress control knob completely and release, then continue to rotate to the "on" position.
(NOTE: Any gas service valves exterior to the unit should be open.)
4. Turn power on switch to "on" position.

After Step 4 there will be a 2 minute and 10 second delay before the kettle will attempt ignition. At this time the spark igniter will begin sparking at the pilot until the pilot is ignited, or for 50 seconds (an audible clicking sound will be evident).

After a total of 3 minutes the unit will lockout, shutting off all gas although the spark igniter will continue to spark. When the pilot is ignited the spark igniter will automatically stop and within 30 to 60 seconds main burner gas will come on if the thermostat is turned on. New installations (where there may be a considerable amount of air in the gas line) may require the unit to be turned off and immediately back on numerous times after each 3 minute lockout period until the air is purged from the gas line.

B. Shut Down

1. **Standby**
 - a. Place power on switch in "off" position.
2. **Complete**
 - a. Place power on switch in "off" position.
 - b. Turn dial on combination control from "on" position to black line, depress knob slightly and continue rotating to "off" position.
 - c. Place thermostat on lowest setting.
 - d. Turn any main gas service valves supplying gas to "off" position.

C. Relighting

1. Turn power switch to "on" position.

It should be noted that the pilot and electronic ignition do not cycle with the thermostat. A standing pilot is automatically established and monitored each time the power switch is turned "on." If the pilot is ever extinguished by a momentary external interruption, the spark igniter will automatically relight it after a 2 minute and 10 second purge period without disturbing the cooking cycle, unless lockout occurs.

CAUTION: *IF YOU SMELL GAS DURING THE LIGHTING PROCEDURE, IMMEDIATELY SHUT OFF THE GAS SUPPLY UNTIL THE LEAK HAS BEEN CORRECTED.*

SPARK IGNITER FAILURE:

In the event the spark igniter module (P/N 1164809) fails the unit may still be operated by carefully following these instructions:

1. Turn thermostat(s) to lowest position (off); completely counterclockwise.
2. Turn power switch to "off" position.
3. WAIT A MINIMUM OF 5 MINUTES BEFORE PROCEEDING.
4. Turn dial on combination control to "on" position (if not already on).



OPERATION

5. Turn power switch to "on" position.
6. Wait 2 minutes and 10 seconds and then immediately light pilot with long match or taper.
7. After 30-60 seconds flame switch will allow main burner gas to flow when thermostats) is turned on.

The pilot will now stay ignited as long as the power switch remains "on." If power switch is turned "off," repeat the above instructions. It is intended that the unit be operated in this manner only in emergency situations and only while it is attended (do not leave pilot lit overnight; shut off power switch). A qualified serviceman must be called promptly.

WARNING:

IN THE EVENT OF MAIN BURNER IGNITION FAILURE, A 5 MINUTE PURGE PERIOD MUST BE OBSERVED PRIOR TO RE-ESTABLISHING IGNITION SOURCE.

WARNING:

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN EQUIPMENT AT THE MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

FRONT PANEL CONTROLS:

1. **Power Switch**
This switch turns the main power to the unit on and off. It must be turned on to heat the kettle. It should be turned off when the kettle will not be in use for long periods.
2. **(Red) Cooking Light**
This light is on whenever the main burner gas is on. On units with standing pilots this light may be on without the burners being on if the pilot is extinguished. See lighting instructions.
3. **(Amber) Low Water Light**
All kettles are supplied with sufficient distilled water in the pressurized jacket. If at any time the water level falls below that required for proper operation, the kettle will not heat and this light will come on. See "Adding Water" section of service instructions.
4. **Thermostat**
The thermostat selects the desired internal kettle operating temperature.
5. **Pressure Gauge**
The pressure gauge indicates the internal operating pressure of the kettle. When cold, the gauge should indicate 25 to 30 inches mercury column vacuum. If it does not, refer to "Re-establishing Vacuum" section of service instructions. Under normal operation with the kettle empty (thermostat set to 285° F) the pressure shall reach 38 psi. When loaded the pressure may be considerably less.
6. **Sight Glass**
The sight glass indicates the minimum and maximum water level within the kettle. If water level falls below minimum level more distilled water should be added. See "Adding Water" section of service instructions.
7. **Pressure Relief Valve**
The pressure relief valve is a safety device which prevents the internal kettle pressure from ever exceeding 50 psi. It should never be tampered with.



DAILY OPERATION:

Daily operation should consist of turning on the power switch and setting the thermostat for the desired temperature.

It is recommended the kettle be preheated empty prior to use. Milk or egg based products should be placed in the kettle before heating, however, to prevent sticking. The kettle is preheated when the cooking light goes off the first time.

At the end of each day, or if the kettle will not be used for some time, shut the unit down by turning the power switch to "off."

Clean as required or on a daily basis. See "Cleaning" section under MAINTENANCE.

Appliances equipped with casters have been installed with a restraint to limit their movement to prevent damage to the gas supply connecting system. If disconnection of this restraint is necessary to move the appliance for cleaning, etc., reconnect it when the appliance is moved to its originally installed position.

During a power failure do no attempt to operate the kettle.

On standing pilot units the burner will ignite as soon as both the power switch and thermostat are turned on.

On electronic ignition units turning on the power switch initiates a pilot lighting sequence. For the first 2 minutes and 10 seconds nothing will happen. After two minutes and 10 seconds the spark igniter will begin sparking. The spark igniter will spark until the pilot is ignited. After 3 minutes (50 seconds after the spark igniter begins) lockout will occur. Lockout shuts down all pilot (and main burner) gas flow although the spark igniter will continue to spark. The power switch must be turned off and back on to restart the pilot lighting sequence once lockout has occurred.

If the pilot blows out during operation, the unit will go through the same sequence to re-ignite itself.

Once the pilot is ignited, another 15 to 45 seconds are required to heat the flame switch before main burner gas will flow if the thermostat is turned on.

WARNING:

ADJUSTMENTS AND SERVICE WORK MAY BE PERFORMED ONLY BY A QUALIFIED TECHNICIAN WHO IS EXPERIENCED IN, AND KNOWLEDGEABLE WITH, THE OPERATION OF COMMERCIAL GAS COOKING EQUIPMENT. HOWEVER, TO ASSURE YOUR CONFIDENCE, CONTACT YOUR AUTHORIZED SERVICE AGENCY FOR RELIABLE SERVICE, DEPENDABLE ADVICE OR OTHER ASSISTANCES. AND FOR GENUINE FACTORY PARTS.

END USER TIPS:

For easier cleaning add cold water to the kettle immediately after removing contents.

When preparing foods containing vinegar or tomatoes, or those which have a high salt content, clean the kettle immediately after using to prevent pitting.

Do not use salt to clean the kettle. This will scratch the surface.

If using saltwater to cook shellfish, be sure to rinse and wash the kettle thoroughly.

Bring milk and egg products slowly up to temperature in a cold kettle to prevent product adhering to the sides.

When planning actual cooking capacity, allow room at top for stirring without spilling.

When preparing milk-based products do not preheat the kettle. This will prevent the milk from sticking to the sides.

When preparing puddings from a mix, place the powder in a cold kettle, add a small amount of the liquid, and stir to form a thin paste. Turn on the kettle and add the remainder of the liquid. Continue as per recipe instructions.

When browning meat bring the kettle up to temperature before adding. This seals the juices in the meat.



MAINTENANCE

Daily:

- A. Wash exposed cleanable areas.

Monthly:

- A. Clean around burner air mixers, louvered panels and pilots if grease or lint have accumulated.

Following daily and period maintenance procedures will enhance long-life for your equipment. Climatic conditions — salt air — may require more thorough and frequent cleaning or the life of the equipment could be adversely affected.

STAINLESS STEEL: To remove normal dirt, grease or product residue from stainless steel, use ordinary soap and water (with or without detergent) applied with a sponge or cloth. Dry thoroughly with a clean cloth. Never use vinegar or any corrosive cleaner.

To remove grease and food splatter or condensed vapors that have baked on the equipment, apply cleanser to a damp cloth or sponge and rub cleanser on the metal in the direction of the polishing lines on the metal. Rubbing cleanser as gently as possible in the direction of the polished lines will not mar the finish of the stainless steel. NEVER RUB WITH A CIRCULAR MOTION. Soil and burnt deposits which do not respond to the above procedure can usually be removed by rubbing the surface with SCOTCH-BRITE scouring pads or STAINLESS scouring pads. DO NOT USE ORDINARY STEEL WOOL as any particles left on the surface will rust and further spoil the appearance of the finish. NEVER USE A WIRE BRUSH, STEEL SCOURING PADS (EXCEPT STAINLESS), SCRAPER, FILE OR OTHER STEEL TOOLS. Surfaces which are marred collect dirt more rapidly and become more difficult to clean. Marring also increases the possibility of corrosive attack. Refinish-ing may then be required.

TO REMOVE HEAT TINT: Darkened areas sometimes appear on stainless steel surfaces where the area has been subjected to excessive heat. These darkened areas are caused by a thickening of the protective surface of the stainless steel and are not harmful. Heat tint can normally be removed by the foregoing, but tint which does not respond to this procedure calls for a vigorous scouring in the direction of the polish lines using SCOTCH-BRITE scouring pads or a STAINLESS scouring pad in combination with a powdered cleanser. Heat tint action may be lessened by not applying or by reducing heat to equipment during slack periods.

All food contact surfaces must be thoroughly drained and flushed prior to cooking in the kettle.

CONTROL PANEL: The textured control panel should be cleaned with warm water and mild soap. Never use an abrasive cloth or steel wool. Never use cleaning solvents with a hydrocarbon base.

VENT SYSTEM: At least twice a year the unit venting system should be examined and cleaned.

GAS SAVING TIPS:

Use these reminders to help develop new energy-saving procedures and habits. Using less natural or propane gas saves energy and money too.

1. Turn off when not in use.
2. Limit preheat times.
3. Use lid when possible.
4. Maintain equipment.

PERFORMANCE CHECK:

To bring 12 gallons of water from 60° F to 212° F, starting the kettle from a cold start, should take approximately 28 to 32 minutes.

STATIONARY GAS SELF CONTAINED STEAM KETTLES SERVICE

ADJUSTMENTS



WARNING:

ADJUSTMENTS AND SERVICE WORK MAY BE PERFORMED ONLY BY A QUALIFIED TECHNICIAN WHO IS EXPERIENCED IN, AND KNOWLEDGEABLE WITH, THE OPERATION OF COMMERCIAL GAS COOKING EQUIPMENT. HOWEVER, TO ASSURE YOUR CONFIDENCE, CONTACT YOUR AUTHORIZED SERVICE AGENCY FOR RELIABLE SERVICE, DEPENDABLE ADVICE OR OTHER ASSISTANCES, AND FOR GENUINE FACTORY PARTS.

PILOTS:

A. Units With Standing Pilots

The pilot adjustment is part of the combination control valve located just behind the lower front access door. It is located just to the left of the pilot tube on the inlet (top) side of the gas valve. (See wiring diagram or pictures.) Remove the large screw on the left side of the pilot tube outlet. Below this screw is a slotted adjustment screw.

The front burner shield should be removed to see the pilot. The pilot should be adjusted to a blue flame with a slightly yellow tip capable of keeping the safety control open.

Replace the burner shield and screw after adjustment.

B. Units With Electronic Ignition

The pilot adjustment is part of the combination control valve located just behind the lower front access door. It is located on the center left side of the control (see wiring diagram or pictures), just below the large slotted screw head. Remove the large slotted screw; below this is a second slotted adjustment screw.

The front burner shield should be removed to see the pilot. The pilot should be adjusted to a blue flame with a slightly yellow tip capable of keeping the flame switch sufficiently heated. Replace the burner shield and large slotted screw after adjustment.

PILOT ORIFICE SIZES

Model	Natural	Propane
KSLG-20, 40, 60	.018 IN.	.010 IN.
KSLG-20E, 40E, 60E	.016 IN.	.009 IN.

ALL PILOTS ARE ADJUSTABLE

THERMOSTAT:

The thermostat adjustment should not be changed. Check the following before changing the thermostat:

1. With kettle cold, the pressure on the pressure gauge should read 25 to 30 inches mercury column vacuum. If not, see "Re-establishing Vacuum" section.
2. The pressure switch is not set too high or too low and causing the out of adjustment condition. A voltmeter should be used by a properly trained serviceman to determine if the pressure switch or thermostat is actually cycling the burners. If the pressure switch is found to be the problem, see "Pressure Switch" section.



ADJUSTMENTS

PRESSURE SWITCH:

The pressure switch should not be adjusted until it is determined to be the cause of an operating pressure difficulty. See "Thermostat" section to determine if the source of difficulty is the pressure switch or thermostat.

The major difficulties caused by pressure switch misadjustment are:

1. Pressure relief valve opening, especially on preheat from a cold start to 285° F (pressure switch set too high).
2. Pressure in kettle is too low and burners are being shut down by pressure switch (not thermostat).

The pressure switch is preset for proper operation from the factory. It is adjusted to the maximum pressure which will prevent the pressure relief valve from opening. This setting will be slightly different on different kettles due to variations in the pressure relief valves. During preheat to the maximum thermostat setting (285° F), from either a cold condition or a lower temperature setting, the temperature may overshoot the thermostat setting and be shut down by the pressure switch. This is normal, however, after the kettle has cycled several times (empty) the thermostat will begin cycling the unit.

TO ADJUST PRESSURE SWITCH:

1. With the kettle empty and completely cold, turn kettle on and set thermostat to maximum setting (285° F).
2. Pressure in kettle (read pressure gauge on front panel) should reach a maximum pressure of 40 psi and pressure relief valve should not open. Kettle pressure may rise 3 or 4 psi even after burners shut down.
3. Relief valve should not open when kettle pressure is 40 psi; pressure switch setting is satisfactory.
4. If relief valve opens, reduce setting on pressure switch, cool kettle completely by running cold water through it and repeat this procedure.
5. If pressure in kettle is below 40 psi increase setting of pressure switch, cool kettle completely by running cold water through it and repeat this procedure.
6. To obtain access to the pressure switch the front panel must be removed. Remove the screws on either side of the panel. Be sure to support the panel to avoid excessive strain on the wiring.
7. To increase the pressure switch setting turn the white ribbed knob clockwise; to decrease turn it counterclockwise. Use the center of the black ring as an indicator.
8. Replace the front panel when adjustment is complete.

GAS PRESSURE REGULATOR:

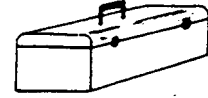
For both the standing pilot and electronic ignition units the gas pressure regulator is an integral part of the combination gas control located just behind the lower front access door. The pressure regulator adjustment is on the lower right side of the gas control (see pictures or wiring diagram). The large slotted cap must be removed to access the adjustment screw. (See wiring diagram or pictures.)

To check the manifold pressure a pressure gauge (manometer) must be connected to the 1/8" NPT pressure tap on the gas manifold. With the gas off, connect your pressure indicating instrument to the manifold with a fitting appropriate for your instrument.

Turn the unit on; with main burners on read the manifold pressure. The pressure should be 4 inches water column (W.C.) (\pm 2 inches W.C.) for natural gas or 10 inches W.C. for propane gas. Adjust the pressure regulator to obtain the appropriate pressure. Check serial plate on lower right side of unit to determine exact gas type and manifold pressure for your unit.

When pressure has been correctly adjusted turn unit off. Remove pressure indicating instrument and be certain to replace 1/8" NPT plug in manifold. Replace regulator cap and close access door.

SERVICE



GENERAL:

When any difficulty arises it is always a good idea to check that the unit has been connected to the gas supply type and voltage for which it was supplied. This can be done by examining the serial plate on the lower right side of the unit. It will list the gas type and voltage for which the unit was manufactured.

Wiring diagrams for the unit are located at the rear of the "Service" section in this manual and in a small brown envelope affixed to the rear side of the front control panel.

Unit	No. of Burners	Total Input	Orifice Size	
			Natural	Propane
KSLG-20, KSLG-20E } KSLG-40, KSLG-40E }	2 } 2 }	100,000 BTU/HR	29	44
KSLG-60, KSLG-60E	2	130,000 BTU/HR	21	39

MANIFOLD PRESSURE:

Natural Gas — 4 inches W.C. LP Gas — 10 inches W.C.

ADDING WATER:

1. Unit should be completely cold and off.
2. Lift handle of pressure relief valve to release vacuum in kettle (relief valve is at right rear of kettle).
3. Remove pressure relief valve and attach a 3/4" NPT elbow pointing upward.
4. Using pure distilled water only, pour the water into the open end of the elbow (a funnel will be helpful). Water will enter the kettle slowly, as air must escape through the same hole. Water should be added until the water level at the sight glass is half way between the minimum and maximum levels.
5. When sufficient water has been added, remove elbow and replace pressure relief valve. Be sure to seal threads with a pipe joint compound suitable for steam at 50 psi.
6. The vacuum must now be re-established. See following section.

For reference, the total amount of distilled water contained in each unit is listed below:

KSLG-20 & KSLG-20E	6 Gallons
KSLG-40 & KSLG-40E	9 Gallons
KSLG-60 & KSLG-60E	12 Gallons

RE-ESTABLISHING VACUUM:

With the kettle completely cold a vacuum of 25 to 30 inches mercury column (M.C.) should be maintained as indicated by the pressure gauge on the front control panel. If at any time the vacuum is less than 25 inches M.C. the vacuum should be re-established.

With the kettle empty, turn the thermostat knob to the highest temperature. When the pressure gauge reaches 20 psi, turn thermostat off, open the pressure relief valve until manometer reads 1 psi, then sharply release it. This should remove the air and any loss in performance should return.

Should the kettle fail to maintain a vacuum after repeated attempts to establish it, further checks should be made to see if the pressure relief valve is leaking or if there are any leaks in the pressure relief valve piping, copper lines going to the pressure switch, pressure gauge or thermostat fitting.

CONTROL CIRCUIT FUSES:

The control circuit is protected by a 15 amp. fuse which is located inside the lower access door to the upper right side. Those units equipped with a 208,220, or 240 VAC control circuit require two fuses.

Should the unit fail to turn on, check these fuses by removing them and either replacing them or testing them with a continuity tester. If the fuses are good, check the main power circuit breaker, which should be external to the oven. When replacing the fuses, the fuse should be inserted into the fuse holder cap first and then into the fuse holder by gripping the plastic top of the cap only. These steps should be done with caution and by a qualified serviceman, as the danger of severe electrical shock exists if the unit is not disconnected from the power source.

When performing service work, the appropriate wiring diagram for your kettle can be found at the rear of this section.



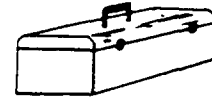
SERVICE

TROUBLE SHOOTING:

STANDING PILOT UNITS:

Problem:	Look For:
Unit will not come on	<ul style="list-style-type: none">- Power switch and/or thermostat is off.- Unit not plugged in.- Main power supply off.- Fuse in unit blown.
Unit will turn on electrically but will not heat	<ul style="list-style-type: none">- Thermostat not on.- Gas valve in unit off.- Bad main gas solenoid.- Main gas supply off.- Bad pressure switch.- Pilot out.- Bad thermostat.- Low water.
Excessive flame rollout on ignition, carboning	<ul style="list-style-type: none">- Natural gas unit on propane.- Excessive gas pressure.- Incorrect orifice size.
Unit slow to preheat and slow to recover	<ul style="list-style-type: none">- Propane gas on natural.- Low gas pressure.- Incorrect orifice size.- Faulty regulator in gas control.- Loss of vacuum.
Pilot continuously blows out	<ul style="list-style-type: none">- Pilot gas adjusted too low.- Excessive draft condition.- Excessive steam around bottom of unit during operation or cleaning.- Bad thermocouple.- Bad gas control.- Loose thermocouple connection.- Thermocouple not mounted to pilot correctly.
Pilot will not light	<ul style="list-style-type: none">- Gas control valve not on pilot position.- Bad thermocouple.- Bad main gas control.

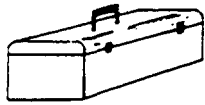
SERVICE



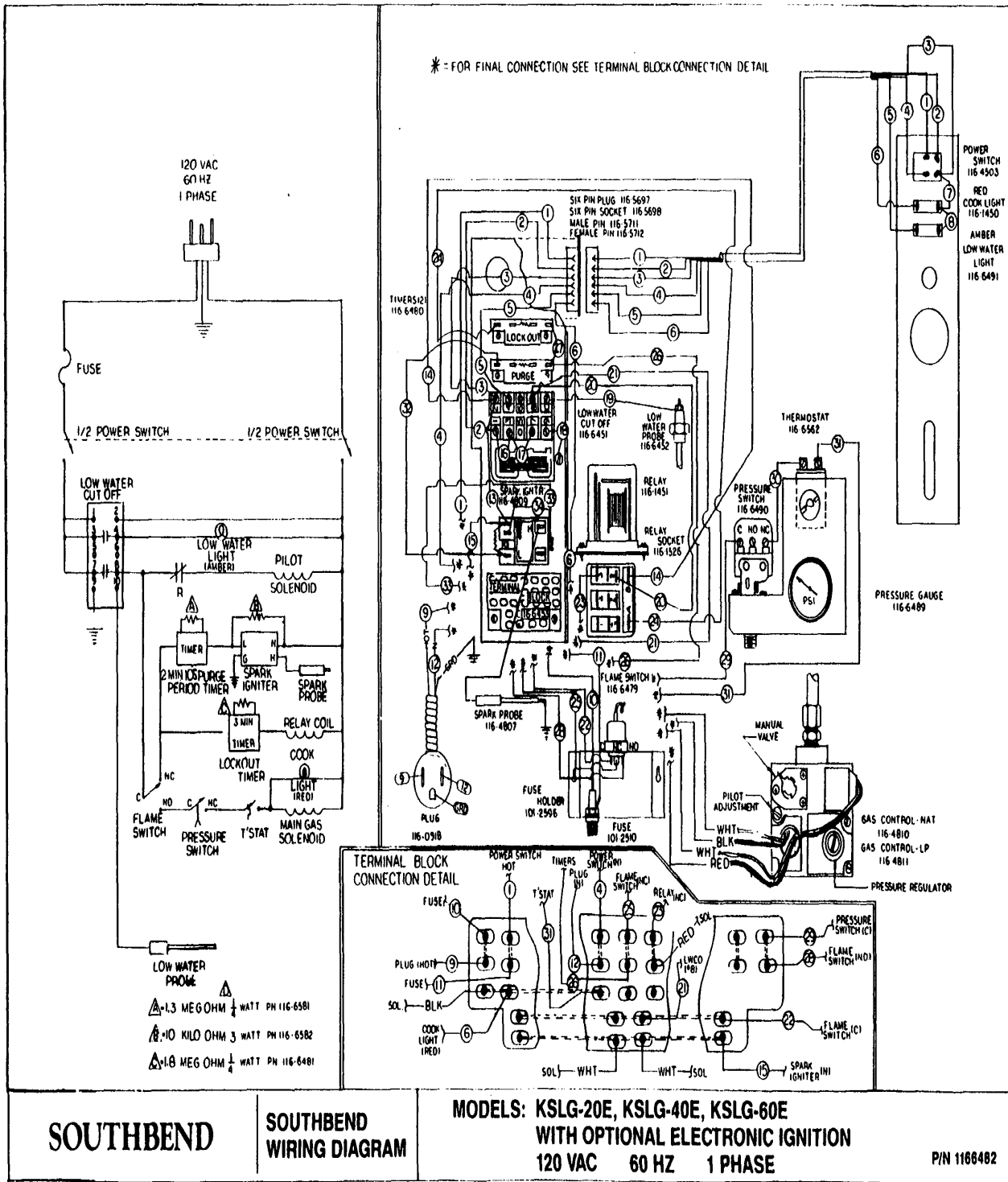
TROUBLE SHOOTING:

ELECTRONIC IGNITION UNITS:

Problem:	Look For:
Unit will not come on	<ul style="list-style-type: none">- Power switch is off.- Unit not plugged in.- Main power supply off.- Fuse in unit blown.- Bad purge timer.- Bad spark igniter.
Unit will turn on electrically but will not heat	<ul style="list-style-type: none">- Lockout has occurred.- Thermostat not on.- Gas control valve off.- Main gas supply off.- Low water.- Bad thermostat.- Bad pressure switch.- Bad gas control valve.- Bad flame switch.- Flame switch bulb not in pilot.- Relay unplugged or faulty.- Faulty pilot solenoid in gas control.
Excessive flame rollout on ignition, carboning	<ul style="list-style-type: none">- Natural gas unit on propane.- Excessive gas pressure.- Incorrect orifice size.- Faulty regulator in gas control.
Unit slow to preheat and slow to recover	<ul style="list-style-type: none">- Propane gas on natural.- Low gas pressure.- Incorrect orifice sizes.- Loss of vacuum.- Faulty regulator in gas control.
Unit continuously locks out	<ul style="list-style-type: none">- Pilot gas adjusted too low.- Excessive draft condition.- Excessive steam around bottom of unit during operation or cleaning.- Faulty flame switch.- Flame switch bulb not mounted to pilot correctly.- Faulty lockout time.- Faulty purge timer.- Faulty spark igniter.- Faulty pilot solenoid in gas control.



SERVICE



STATIONARY GAS SELF CONTAINED STEAM KETTLES PARTS



WARNING:

INSTALLATION OF OTHER THAN GENUINE SOUTHBEND PARTS WILL VOID THE WARRANTY ON THIS EQUIPMENT.

The serial plate is located on the lower right side of the unit. An "E" suffix at the end of the Model Number indicates the unit is equipped with electronic ignition.

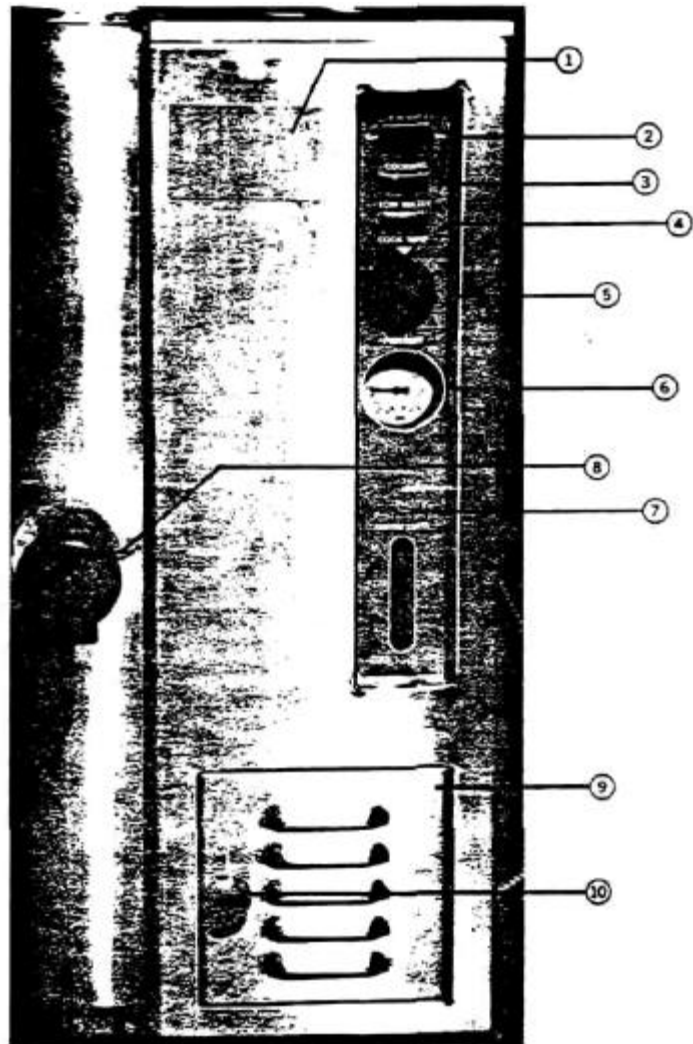
Replacement parts may be ordered either through a Southbend Authorized Parts Distributor or a Southbend Authorized Service Agency.

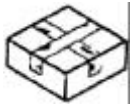
When ordering parts please supply the Model Number, Serial Number, Part Number, Description, plus Finish, Type of Gas and Electrical Characteristics, as applicable.

For parts not listed consult a Southbend Authorized Parts Distributor or Southbend Authorized Service Agency. If necessary, please consult Southbend Parts Department for assistance.

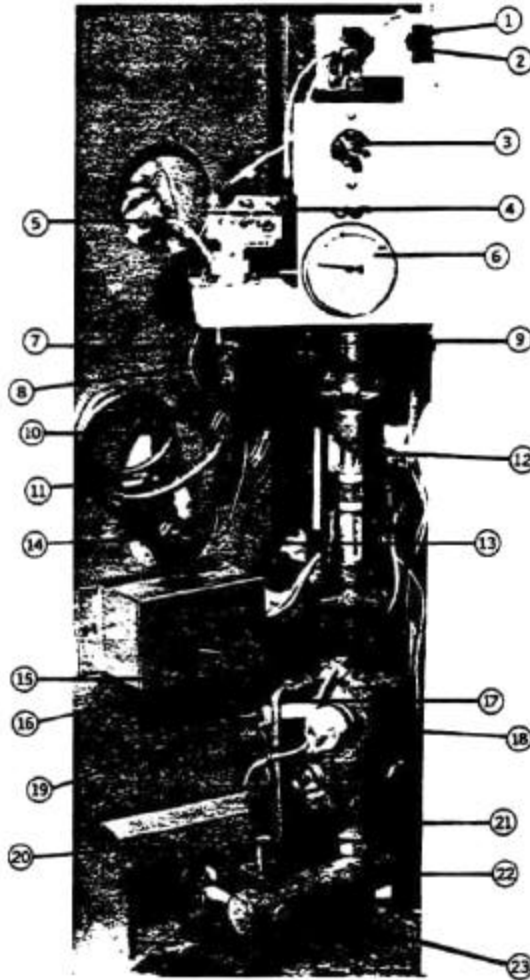
EXTERIOR FRONT VIEW CONTROL PANEL

KEY NO.	PART NO.	DESCRIPTION
1	1-0540	NAMEPLATE-LOGO (1165559)
2	PE-135	POWER SWITCH (1164503)
3	PE-139	COOKING LIGHT (Red) (1161450)
4	PE-168	LOW WATER LIGHT (Amber)
5	PE 126	THERMOSTAT KNOB (1166493)
6	PP-637	PRESSURE GAUGE (1166489)
7	1-0483	POLYPANEL (1166459)
8	PP.700	KNOB FOR 3" OPTIONAL
8	PP-645	KNOB FOR 2" STANDARD
9	1166534	ACCESS DOOR - 20 GALLON
9	1166535	ACCESS DOOR - 40 GALLON
9	1166536	ACCESS DOOR - 60 GALLON
10	PH-418	KNOB w/SCREW (1167793)



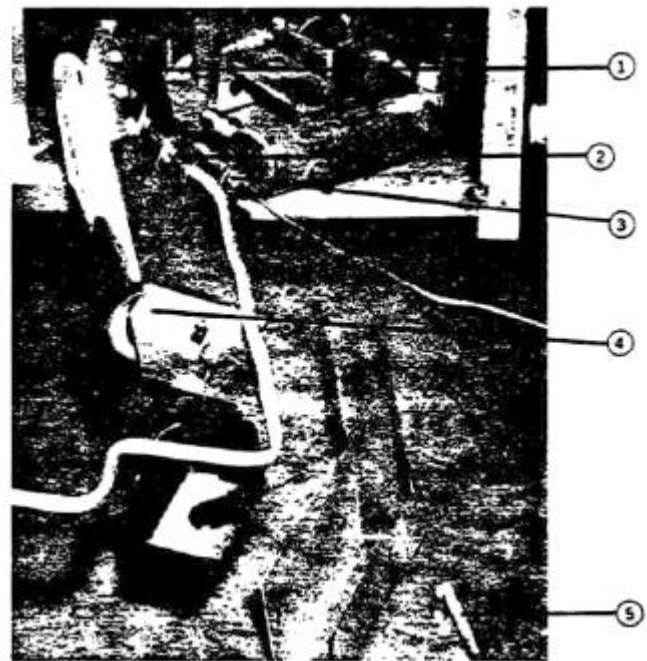


PARTS STANDING PILOT UNITS ONLY



KEY NO.	PART NO.	DESCRIPTION
1	PE-141	6-PIN SOCKET (1165698)
2	PE-143	FEMALE PIN CONNECTOR (1165712)
3	1166562	THERMOSTAT
4	PP-688	PRESSURE SWITCH (1166490)
5	1-0522-1	LOW WATER PROBE FOR 20 GALLON (1167618)
5	1-0522-2	LOW WATER PROBE FOR 40 GALLON (1167619)
5	1-0522-3	LOW WATER PROBE FOR 60 GALLON (1167620)
6	PP-637	PRESSURE GAUGE (1166489)
7	1167910	COPPER TUBE
8	PP-251	TEE (1166471)
9	PP-252	ELBOW (1166472)
10	1167909	COPPER TUBES
11	PP-250	FITTING (1166470)
12	1167894	COMPLETE SIGHT GLASS ASSEMBLY FOR 20 GALLON
12	118-079	COMPLETE SIGHT GLASS ASSEMBLY FOR 40 GALLON
12	1167896	COMPLETE SIGHT GLASS ASSEMBLY FOR 60 GALLON <i>(Assembly includes all fittings & tubes)</i>
13	1167911	GLASS & RUBBER WASHER FOR SERVICE ONLY
14	PP-427	3/8" PIPE TEE (1166469)
15	PE-131	FUSE HOLDER (1012596)
16	PE-132	FUSE (1012510)
17	1167912	STANDING PILOT TUBES FOR 20 GALLON
17	1167914	STANDING PILOT TUBES FOR 40 GALLON
17	1167916	STANDING PILOT TUBES FOR 60 GALLON
18	PE-137	COMBINATION GAS CONTROL (UNITROL) NATURAL GAS
	1053900	PLATE & SPRING ONLY - NAT. GAS - FOR CONTROL
18	PE-138	COMBINATION GAS CONTROL (UNITROL) PROPANE GAS
	1053906	PLATE & SPRING ONLY - LP GAS - FOR CONTROL
19	PE-145	THERMOCOUPLE (1161521)
20	1166492	FRONT SHIELD FOR 20 OR 40 GALLON
20	1166561	FRONT SHIELD FOR 60 GALLON
21	PP-430	1/2" NPT UNION - COMPLETE (1166476)
22	1166527	MANIFOLD WELD ASSEMBLY
23	PP-431	PLUG (1166477)

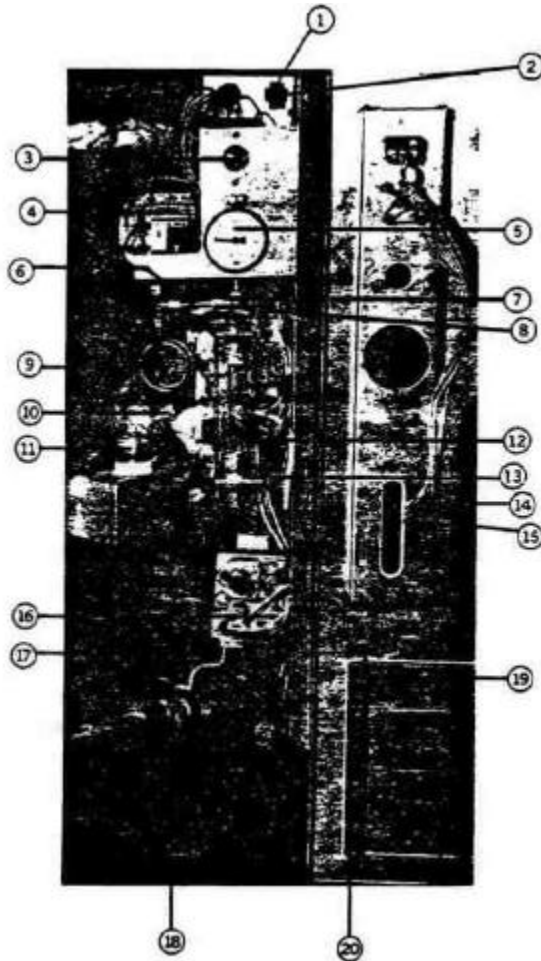
KEY NO.	PART NO.	DESCRIPTION
1	1166416	BURNERS FOR 20 GALLON
1	1166417	BURNERS FOR 40 GALLON
1	1166418	BURNERS FOR 60 GALLON
2	PA-005	STANDING PILOT - NATURAL GAS
2	PA-004	STANDING PILOT - PROPANE GAS
3	PE-145	THERMOCOUPLE (1161521)
4	PA-011	NATURAL GAS ORIFICE - 20 & 40 GAL.
4	PA-012	PROPANE GAS ORIFICE - 20 & 40 GAL.
4	PA-013	NATURAL GAS ORIFICE - 60 GAL. #21
4	PA-014	PROPANE GAS ORIFICE - 60 GALLON
5	PH-075	MFG. BOLT (1167908)
6	PE-151	29-PIN TERMINAL BLOCK (1166453)



PARTS

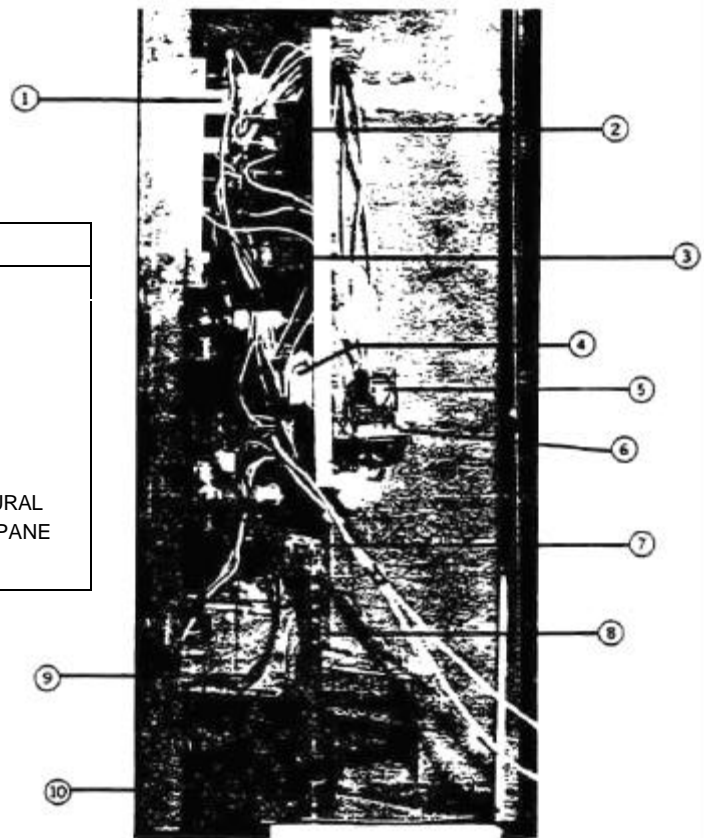


ELECTRONIC IGNITION UNITS ONLY



KEY NO.	PART NO.	DESCRIPTION
1	PE-141	6-PIN SOCKET (1165698)
2	PE-143	FEMALE PIN FOR 1165698 (1165712)
3	1166562	THERMOSTAT
4	PP-688	PRESSURE SWITCH (1166490)
5	PP-637	PRESSURE GAUGE (1166489)
6	1167910	COPPER TUBE
7	PP-252	ELBOW (1166472)
8	PP-251	TEE (1166471)
9	1167909	COPPER TUBE (Vessel To Pressure Switch)
10	PP-427	TEE
11	PA-016	FLAME SWITCH (1166479)
12	1167894	COMPLETE SIGHT GLASS ASSEMBLY
12	1167895	COMPLETE SIGHT GLASS ASSEMBLY
12	1167896	COMPLETE SIGHT GLASS ASSEMBLY FOR 60 GALLON <i>(Assembly Includes All Fittings & Tubes)</i>
13	1167911	GLASS & RUBBER WASHER FOR SERVICE ONLY
14	PE-140	6-PIN PLUG - FEMALE (1165687)
15	PE-142	MALE PIN FOR 1165697 (1165711)
16	PA-006	COMBINATION CONTROL - NATURAL GAS (1164810) <i>(Knob Not Separate)</i>
16	PA-007	COMBINATION CONTROL - PROPANE GAS (1164811) <i>(Knot) Not Separate)</i>
17	1166492	FRONT SHIELD FOR 20 OR 40 GALLON
17	1166561	FRONT SHIELD FOR 60 GALLON
18	1166527	MANIFOLD WELD ASSEMBLY
19	PM-099	SPRING FOR CONTROL (1160408)
20	1166574	DOOR HINGE ROD ASSEMBLY

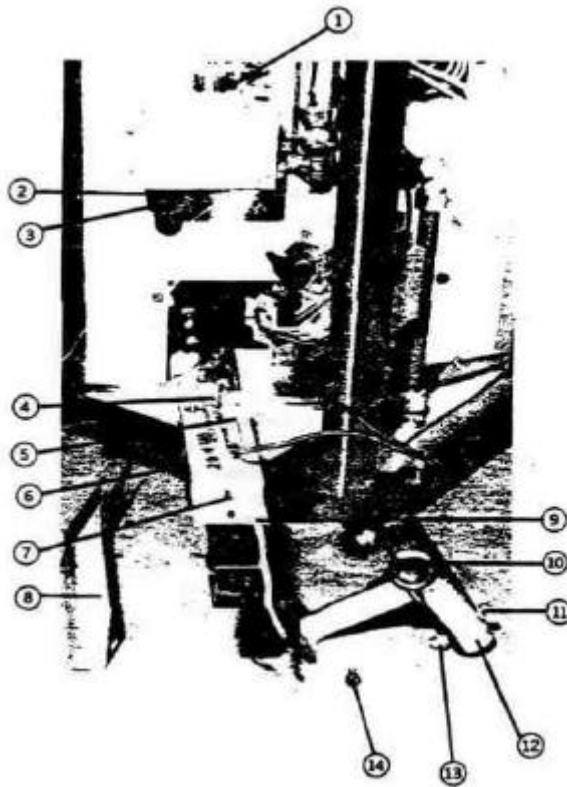
KEY NO.	PART NO.	DESCRIPTION
1	1166562	THERMOSTAT
2	PE-146	TIMERS (1166480)
3	PE-148	LOW WATER CUT OFF (1166454)
4	PA-001	SPARK IGNITER (1164809)
5	PE-133	RELAY WITHOUT COVER (1167003)
6	PE-134	RELAY SOCKET (1161526)
7	PP-254	FITTING (1166473)
8	1167797	TUBE
9	PA-006	GAS CONTROL (Elect. Ignition) - NATURAL
9	PA-007	GAS CONTROL (Elect. Ignition) - PROPANE
10	PP-253	FITTING (P-9158)





PARTS

ELECTRONIC IGNITION UNITS ONLY



KEY NO.	PART NO.	DESCRIPTION
1	PA-016	FLAME SWITCH (1166479)
2	PE-131	FUSE HOLDER (1012596)
3	PE-132	FUSE (1012510)
4	PA-034	PILOT - NATURAL GAS (1167221)
4	PA-002	PILOT - PROPANE GAS (1165138)
5	PE-136	ELECTRODE (1164807)
6	1166416	BURNERS FOR 20 GALLON
6	1166417	BURNERS FOR 40 GALLON
6	1166418	BURNERS FOR 60 GALLON
7	1166465	PILOT BRACKET FOR 20 OR 40 GALLON
7	1166542	PILOT BRACKET FOR 60 GALLON
8	1166492	FRONT SHIELD FOR 20 OR 40 GALLON
8	1166561	FRONT SHIELD FOR 60 GALLON
9	1167913	ELECTRONIC IGNITION PILOT TUBE FOR 20
9	1167915	ELECTRONIC IGNITION PILOT TUBE FOR 40
9	1167917	ELECTRONIC IGNITION PILOT TUBE FOR 60
10	PP-430	1/2" NPT UNION COMPLETE (1166476)
11	PP-431	PLUG (1166477)
12	1166527	MANIFOLD WELD ASSEMBLY
13	PA-011	NATURAL GAS - ORIFICE - 20 & 40 GALLON
13	PA-012	PROPANE GAS - ORIFICE - 20 & 40 GALLON
13	PA-013	NATURAL GAS - ORIFICE - 60 GALLON #21
13	PA-014	PROPANE GAS - ORIFICE - 60 GALLON #39
14	PH-075	MOUNTING BOLT (1167908)

MISCELLANEOUS PARTS NOT SHOWN IN PHOTOS

KSLG PART NO.	DESCRIPTION	20	20E	40	40E	60	60E
1166507	LID w/HANDLE & KNOB - 20 GALLON	1	1				
1166508	LID w/HANDLE & KNOB - 40 GALLON			1	1		
1166509	LID w/HANDLE & KNOB - 60 GALLON					1	1
PM-129	KNOB FOR LID (1166497)	1	1	1	1	1	1
PE-146	PURGE & LOCKOUT TIMER (1166480)		2		2		2
PE-147	LOCKOUT RESISTOR (1166481)		1		1		1
PE-166	PURGE RESISTOR (1166581)		1		1		1
PE-162	SPARK IGNITER RESISTOR (1166582)		1		1		1
PP-694	PRESSURE RELIEF VALVE (1166496)	1	1	1	1	1	1
PE-136	SPARK ELECTRODE (1164807)		1		1		1
1053900	*PRESSURE REGULATOR - NATURAL GAS	1		1		1	
1053906	*PRESSURE REGULATOR - PROPANE GAS	1		1		1	
1164812	*PRESSURE REGULATOR - NATURAL GAS		1		1		1
1164813	*PRESSURE REGULATOR - PROPANE GAS		1		1		1
PM-012	2" BULLET FOOT (1167508)	3	3	3	3	3	3
PM-118	CASTER (Non-Locking) (1167545)	1	1	1		1	1
PM-119	CASTER (Locking) (1167546)	2	2	2	2	2	2
1166464	OWNER'S MANUAL - One copy furnished tree. Extra copies are available thru your parts/service distributor at additional cost.						

*For service only.



southbend

* MIDDLEBY COMPANY

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Fuquay-Varina, NC 27526
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FAX (919) 552-9798
(800) 348-2558



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Under fired broilers
Salamander broilers
Cheese melters

STATIONARY GAS — SELF CONTAINED STEAM KETTLES

A product with the Southbend name incorporates the best in durability and low maintenance. We all recognize however, that replacement parts and occasional professional service may be necessary to extend the useful life of this unit. When service is needed, contact a Southbend Authorized Service Agency, or your dealer. To avoid confusion, always refer to the model number, serial number, and type of your unit.



STATIONARY GAS
SELF CONTAINED STEAM KETTLES
(Manual Section SK)



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