

**IMPORTANT FOR FUTURE REFERENCE**  
 Please complete this information and retain this manual for the life of the equipment:

Model #: \_\_\_\_\_  
 Serial #: \_\_\_\_\_  
 Date Purchased: \_\_\_\_\_

# OWNER'S MANUAL

## Heavy Duty Counterline

Griddle Models		Charbroiler Models		Open Top Models		
HDG-24		HDG-24-M	HDC-24	HDCL-24	HDO-12	HDO-24SU
HDG-36	HDG-36-RE	HDG-36-M	HDC-36	HDCL-36	HDO-24	HDO-36SU
HDG-48	HDG-48-RE	HDG-48-M	HDC-48	HDCL-48	HDO-36	
HDG-60	HDG-60-RE	HDG-60-M				
HDG-72	HDG-72-RE	HDG-72-M				



**! WARNING**

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

1100 Old Honeycutt Road, Fuquay-Varina, NC 27526  
[www.southbendnc.com](http://www.southbendnc.com)

MANUAL 1192662  
 \$21.00



HEAVY DUTY COUNTERLINE  
 MANUAL SECTION HD

# SAFETY PRECAUTIONS

Before installing and operating this equipment, be sure everyone involved in its operation is fully trained and aware of precautions. Accidents and problems can be caused by failure to follow fundamental rules and precautions.

The following symbols, found throughout this manual, alert you to potentially dangerous conditions to the operator, service personnel, or to the equipment.



**DANGER**

This symbol warns of immediate hazards that will result in severe injury or death.



**WARNING**

This symbol refers to a potential hazard or unsafe practice that could result in injury or death.



**CAUTION**

This symbol refers to a potential hazard or unsafe practice that could result in injury, product damage, or property damage.

**NOTICE**

This symbol refers to information that needs special attention or must be fully understood, even though not dangerous.

 **WARNING**  
**FIRE HAZARD**  
**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 of combustibles.

Purchaser of equipment must post in a prominent location, detailed instructions to be followed in the event the operator smells gas. Obtain the instructions from the local gas supplier.

 **WARNING**

Asphyxiation can result from improper ventilation. Do not obstruct the flow of combustion and ventilation air to and from your cooking equipment.

**NOTICE**

Be sure this Operator's Manual and important papers are given to the proper authority to retain for future reference.

**NOTICE**

This product is intended for commercial use only. NOT FOR HOUSEHOLD USE.

Congratulations! You have purchased one of the finest pieces of commercial cooking equipment on the market.

You will find that your new equipment, like all Southbend equipment, has been designed and manufactured to meet the toughest standards in the industry. Each piece of Southbend equipment is carefully engineered and designs are verified through laboratory tests and field installations. With proper care and field maintenance, you will experience years of reliable, trouble-free operation. **For best results, read this manual carefully.**

RETAIN THIS MANUAL FOR FUTURE REFERENCE.

## Table of Contents

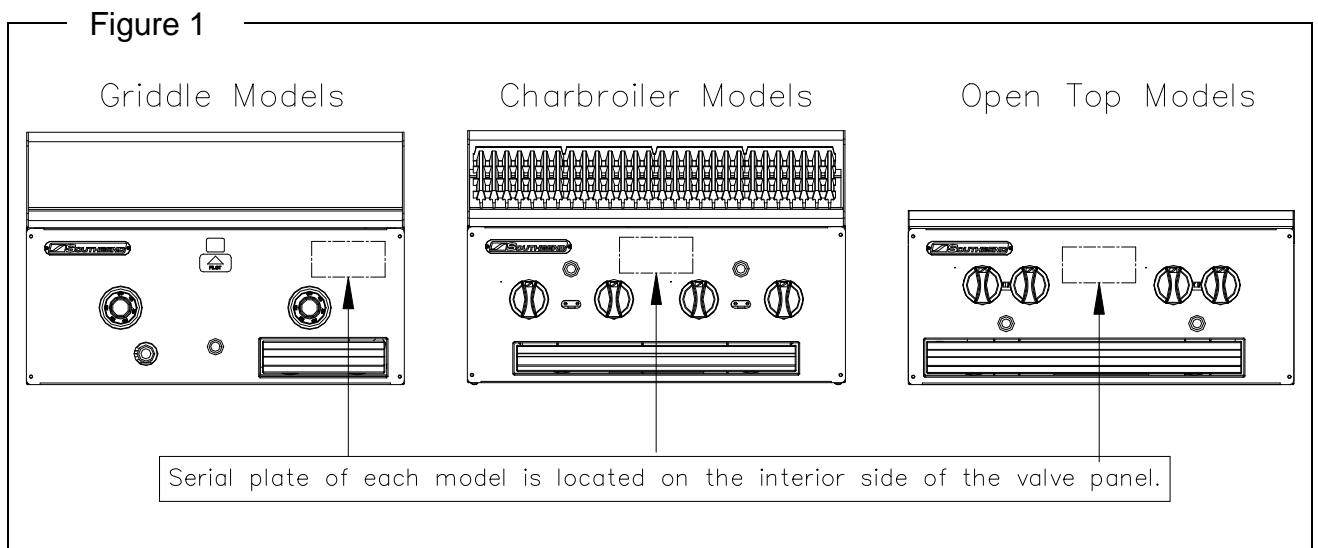
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Read these instructions carefully before attempting installation. Installation and initial startup should be performed by a qualified installer. Unless the installation instructions for this product are followed by a qualified service technician (a person experienced in and knowledgeable with the installation of commercial gas an/or electric cooking equipment) then the terms and conditions on the Manufacturer's Limited Warranty will be rendered void and no warranty of any kind shall apply.

In the event you have questions concerning the installation, use, care, or service of the product, write to:

Southbend  
1100 Old Honeycutt Road  
Fuquay-Varina, North Carolina 27526 USA  
www.southbendnc.com

The serial plate is located on the interior side of the valve panel, as shown below:





# SPECIFICATIONS

## NOTICE

Installation must comply with *National Fuel Gas Code, ANSI Z223.1, Natural Gas Installation Code, CAN/CGA-B149.1*, or the *Propane Installation Code, CAN/CGA-B149.2*, as applicable.

Local codes regarding installation vary greatly from one area to another. The National Fire Protection Association, Inc. states in its NFPA 96 latest edition that local codes are the “authority having jurisdiction” when it comes to installation requirements for equipment. Therefore, installations should comply with all local codes.

Southbend reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, additions, or replacements for previously purchased equipment.

This product is intended for commercial use only, not for household use.

## GAS SUPPLY

The serial plate is located on the interior side of the valve panel (see Figure 1 on page 3). It indicates the type of gas the unit is equipped to burn. All Southbend equipment is adjusted at the factory. Check type of gas on serial plate.

These models are design-certified for operation on natural or propane gases. The unit is shipped configured for the type of gas specified by the purchaser. A kit for conversion to a different type of gas may be purchased from Southbend (see page 22 for conversion instructions).

This appliance should be connected **ONLY** to the type of gas for which it is configured.

An adequate gas supply is imperative. Undersized or low pressure lines will restrict the volume of gas required for satisfactory performance. Fluctuations of more than 25% on natural gas or 10% on propane gas will create problems and affect burner operating characteristics. A 1/8" pressure tap is located on the manifold to measure the manifold pressure.

An adequate gas supply line to the unit should be no smaller than the inside diameter of the pipe from the unit to which it is connected.

Purge the supply line to clean out dust, dirt, or other foreign matter before connecting the line to the unit.

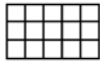
All pipe joints and connections must be tested thoroughly for gas leaks. Use only soapy water for testing on all gases. **NEVER** use an open flame to check for gas leaks. All connections must be checked for leaks after the unit has been put into operation. Test pressure should not exceed 14" W.C.



## 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).*

*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 1/2 PSIG (3.45 kPa).*



CLEARANCES

**! WARNING**

There must be adequate clearance between units and adjacent construction. Clearance must also be provided for servicing and for operation. Measure back clearance from rear of 2" stand-off brackets.

Minimum Clearances from COMBUSTABLE construction:

	Griddle Models	Open Top Models
Sides	12"	10"
Back	8"	7"

Minimum Clearances from NON-COMBUSTABLE construction:

	Griddle Models	Charbroiler Models	Open Top Models
Sides	0"	0"	0"
Back	0"	0"	0"

VENTILATION

**! WARNING**

Improper ventilation can result in personal injury or death. Ventilation which fails to properly remove flue products can cause headaches, drowsiness, nausea, or could result in death.

All units must be installed in such a manner that the flow of combustion and ventilation air are not obstructed. Provisions for adequate air supply must be provided. Do not obstruct the front of the unit at the top by the control panel as combustion air enters through these areas.

**NOTICE**

Proper ventilation is the owner's responsibility. Any problem due to improper ventilation will not be covered by the warranty.

Air for combustion enters the rear of the appliance. An exhaust flue runs along the top rear edge of griddle and charbroiler models.

Southbend recommends that a ventilation canopy extend 6" past the edges of the appliance and be located 6'6" above the floor.

If a wall exhaust fan is installed in the wall behind the appliance, it should be at least two feet above the top of the appliance.

To avoid a negative pressure condition, return air must be brought into the room to replenish the air being removed by the ventilation exhaust fan. RETURN-AIR FANS MUST NOT BLOW DOWN ONTO THE APPLIANCE.

Ventilation filters should be installed at an angle of 45° or more from the horizontal. This prevents dripping grease and facilitates collecting the run-off grease in a drip pan, usually installed with a filter.

Be sure to inspect and clean the ventilation system according to the ventilation equipment manufacturer's instructions.

In case of unsatisfactory performance on any appliance, check the appliance with the ventilation exhaust fan in the "OFF" position. Do this only long enough to check equipment performance. Then turn the fan back on and let it run to remove any exhaust that may have accumulated during the test.



# INSTALLATION

INSTALLATION

## NOTICE

Installation must comply with *National Fuel Gas Code, ANSI Z223.1, Natural Gas Installation Code, CAN/CGA-B149.1*, or the *Propane Installation Code, CAN/CGA-B149.2*, as applicable.

These installation procedures must be followed by qualified personnel or warranty will be void.

Local codes regarding installation vary greatly from one area to another. The National Fire Protection Association, Inc. states in its NFPA 96 latest edition that local codes are the “authority having jurisdiction” when it comes to installation requirements for equipment. Therefore, installations should comply with all local codes.

### Step 1: Unpack

#### IMMEDIATELY INSPECT FOR SHIPPING DAMAGE

All containers should be examined for damage before and during unloading. The freight carrier has assumed responsibility for its safe transit and delivery. If damaged equipment is received, either apparent or concealed, a claim must be made with the delivering carrier.

Apparent damage or loss must be noted on the freight bill at the time of delivery. The freight bill must then be signed by the carrier representative (Driver). If the bill is not signed, the carrier may refuse the claim. The carrier can supply the necessary forms.

A request for inspection must be made to the carrier within 15 days if there is concealed damage or loss that is not apparent until after the equipment is uncrated. The carrier should arrange an inspection. Be certain to hold all contents plus all packing material.

1. Uncrate carefully. Report any hidden damage to the freight carrier IMMEDIATELY.
2. Do not remove any tags or labels until unit is installed and working properly.

### Step 2: Attach Countertop Legs

The appliance can be mounted in several ways:

Mount it on short, countertop legs.

Mount it on a stand that rests on the floor.



### Step 2a: Installation on Countertop Legs

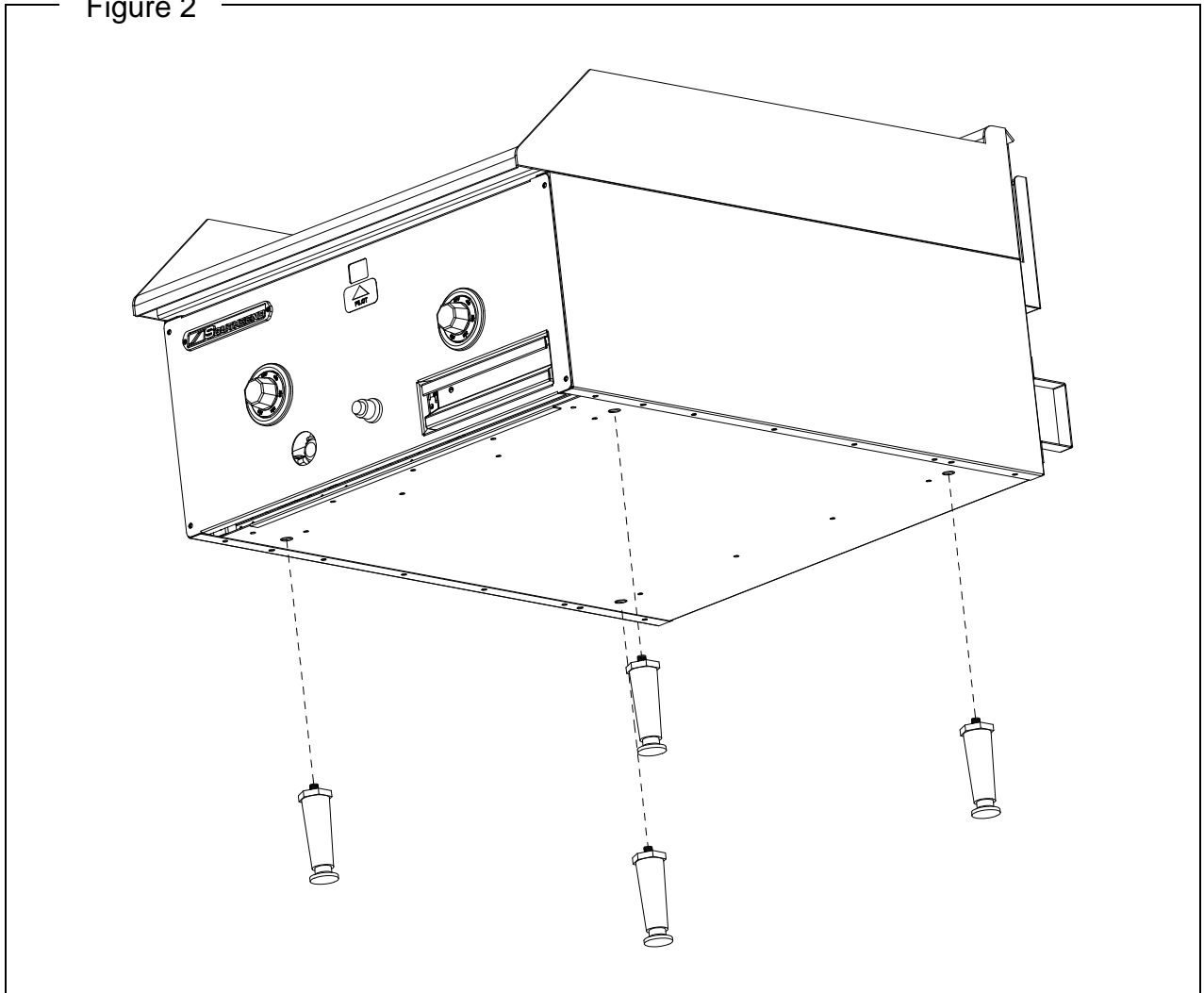
To install the appliance using countertop legs, do the following:

1. Locate the box of four legs shipped with the appliance (if countertop legs were ordered).
2. Raise the appliance about 6" so that the legs can be screwed into the bottom near the corners. Lift the appliance only from the ends, never from the middle! Support the lifted appliance so that it will not fall while you are attaching the legs.
3. Screw the four legs into the threaded holes located on the bottom of the appliance near each corner (as shown in Figure 2 below).

Gently lower the appliance onto the counter. Level the appliance surface by screwing one or more of the legs in or out.

4. Step 4 on page 10.

Figure 2





## Step 3: Attach Restraint for Appliances Mounted on Casters

### NOTICE

For an appliance equipped with casters, (1) the installation shall be made with a connector that complies with the *Standard for Connectors for Movable Gas Appliances, ANSI Z21.69* or *Connectors for Moveable Gas Appliances, CAN/CGA-6.16*, and a quick-disconnect device that complies with the *Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41*, or *Quick Disconnect Devices for Use with Gas Fuel, CAN1-6.9*, (2) adequate means must be provided to limit the movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit the appliance movement and (3) the restraining means should be attached to a frame member on the back of the unit.

### WARNING

To avoid accidental gas disconnection and potential explosion:

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.

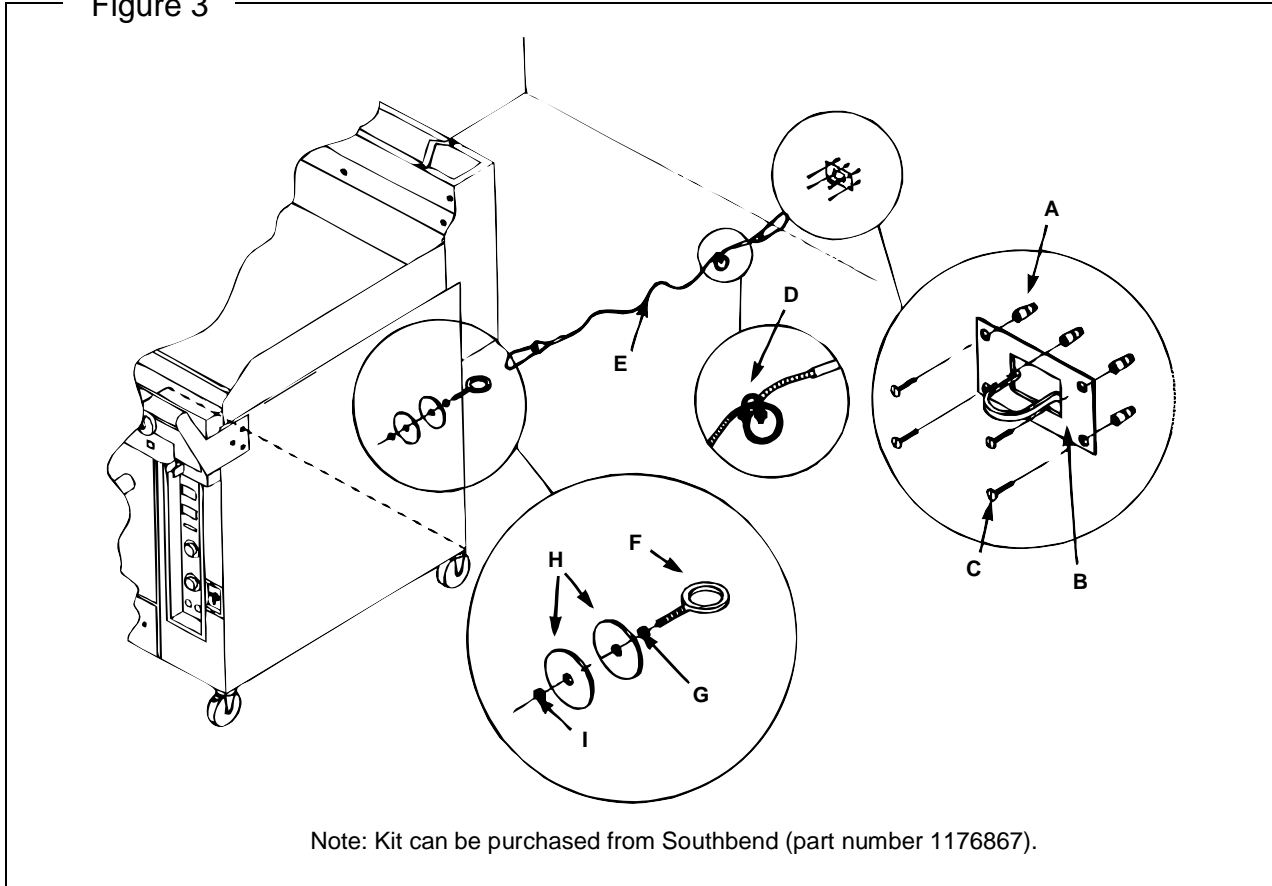




Appliances mounted on a stand with casters or other movable surface must be equipped with a restraining means to prevent accidental stress on the flexible gas connection.

1. Secure the restraining-device bracket (item "B" in the following illustration) to a wall stud located as close as possible to the appliance connector inlet and outlet connections. Use four #12 screws (items "C") and plastic anchors (items "A") if necessary.

Figure 3



2. Install eye-bolt (item "F") to a frame member on the rear of the appliance. After checking carefully behind the frame member for adequate clearance, drill a 1/4" hole through the frame member.
3. Thread hex nut (item "G") and slide the washer (item "H") onto the eye-bolt. Insert the eye-bolt through the 1/4" drilled hole and secure with a washer (item "H") and nylon lock nut (item "I").
4. Using the spring-loaded snap hooks, attach the restraining device to the bracket and the eye-bolt.
5. Using the cable clamp (item "D"), adjust the restraining device extended length to prevent over-bending or kinking of the appliance connector.

**Note: For units not equipped with flame safety devices, be sure all valves are turned off prior to disconnecting. After reconnecting, be sure all valves are turned off and all pilots are lit.**



## Step 4: Connect Gas Supply

The serial plate is located interior side of the control panel (see Figure 1 on page 3). It indicates the type of gas the appliance is equipped to burn. All Southbend equipment is adjusted at the factory. Check type of gas on serial plate. This appliance should be connected **ONLY** to the type of gas for which it is equipped.

If the appliance is being installed at over 2,000 feet altitude and that information was not specified when ordered, contact the appropriate authorized Southbend Service Representative or the Southbend Service Department. Failure to install with proper orifice sizing will result in poor performance and may void the warranty.

These models are design-certified for operation on natural or propane gases. For natural gas, the convertible regulator shipped with the appliance is set to deliver a 4" W.C. pressure to the manifold. For propane gas, it is set to deliver 10" W.C.

An adequate gas supply is imperative. Undersized or low pressure lines will restrict the volume of gas required for satisfactory performance. Fluctuations of more than 25% on natural gas or 10% on propane gas will create problems and affect burner operating characteristics. A 1/8" pressure tap is located on the manifold to measure pressure.

Purge the supply line to clean out dust, dirt, or other foreign matter before connecting the line to the appliance.

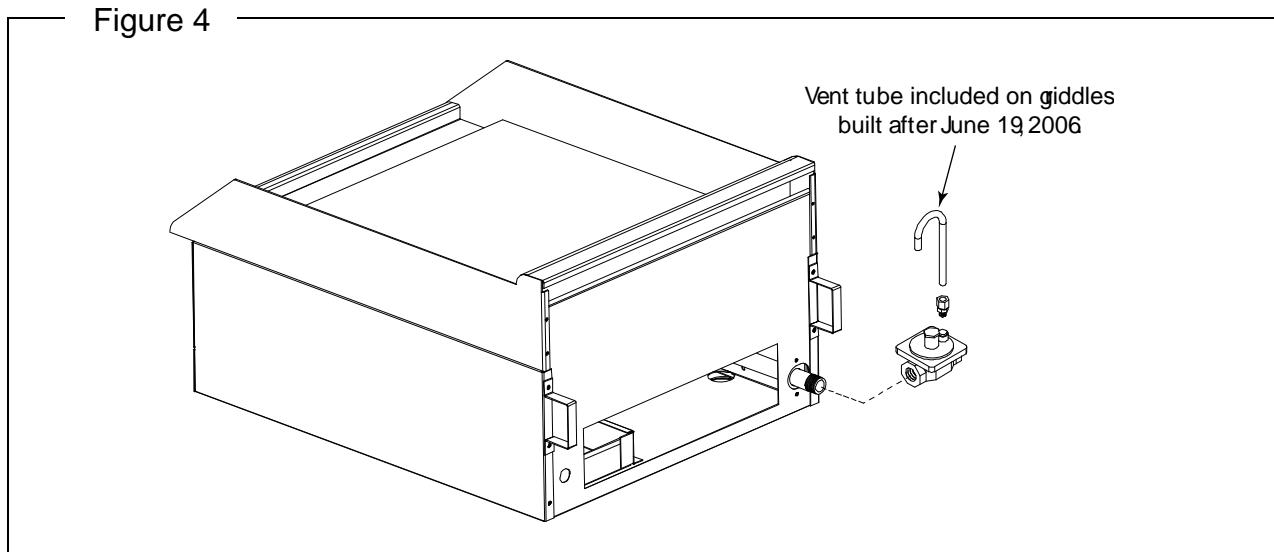
Use pipe joint compound that is suitable for use with LP gas on all threaded connections.

### CAUTION

ALL PIPE JOINTS AND CONNECTIONS MUST BE TESTED THOROUGHLY FOR GAS LEAKS. USE ONLY SOAPY WATER FOR TESTING ON ALL GASES. NEVER USE AN OPEN FLAME TO CHECK FOR GAS LEAKS. ALL CONNECTIONS MUST BE CHECKED FOR LEAKS AFTER THE APPLIANCE HAS BEEN PUT INTO OPERATION. TEST PRESSURE SHOULD NOT EXCEED 14" W.C.

To connect the gas supply, do the following:

1. Check that the gas supply to the piping that will be connected to the appliance is shut off.
2. Check that the manual shut-off valve inside the front panel door of the appliance is closed (60" and 72" models have two shut-off valves).
3. Check that all control knobs on the appliance are turned "OFF."
4. Attach the pressure regulator shipped with the appliance to the 3/4" NPT gas inlet connector located on the rear of the appliance (see Figure 4 below). Be sure that the regulator is connected so that the gas flow is in the same direction as the arrow on the bottom of the regulator.
5. Connect the vent line from the pressure regulator to the outdoors in accordance with local codes or, in the absence of local codes, with the *National Fuel Gas Code, ANSI Z223.1, Natural Gas Installation Code, CAN/CGA-B149.1, or the Propane Installation Code, CAN/CGA-B149.2*, as applicable.
6. Connect the gas inlet of the pressure regulator to the building's supply system. No segment of the gas supply connection to the appliance should be smaller than 3/4" NPT. Standard pipe fittings are required.
7. Turn on gas supply.
8. Check for leaks using soapy water.



### Step 5: Final Positioning, Clearance Check, and Ventilation Check

1. Position the appliance where it will be operated.
2. Check that the appliance surface is level. The length of each leg is adjustable by screwing the bottom portion of the leg in or out. The appliance must be level for proper operation!
3. Check for adequate clearances around the appliance (see page 5).
4. Check for adequate ventilation (see page 5).

### NOTICE

In the Commonwealth of Massachusetts all gas appliances vented by either mechanical systems or ventilation hoods shall comply with 248 CMR interlocking requirements.

### Step 6: Check Pilot and Burner Operation

All appliances are adjusted at the factory. However, pilot heights, burner air shutters, and thermostatic valves should be checked at installation and adjusted if necessary. Do the following:

1. Turn main gas supply "ON".
2. Check the manifold gas pressure using the procedure on page 20.
3. Light the pilots as described in the Operation section of this manual.
4. Check (and, if necessary, adjust) the pilot flame heights using the procedure on page 21.
5. Light the burners. Set the control knobs to only low temperatures for now.
6. Check (and, if necessary, adjust) the burner air shutters using the procedure on page 21.

### Step 7: Final Installation Steps for Griddle Models

This step applies only to the installation of griddle models. New griddles should be carefully tempered and cared for in order to avoid possible damage. To break in a new griddle, do the following:

1. Wipe the griddle surface clean.



2. Light all the griddle burners. For griddles with thermostatic controls, turn all knobs to 200°F for one hour. For griddles with manual controls, turn all knobs to “LOW” for one hour. Then gradually bring each griddle up to frying temperature.
3. Spread three or four ounces of beef suet, or as a substitute, baking soda, to season it. Never allow water on a hot griddle and never wash it with soap and water.
4. For griddles with thermostatic controls, check (and, if necessary, adjust) the thermostatic valves that control the griddle’s surface temperature. Follow the procedure on page 23.

INSTALLATION

## Step 8: Final Installation Steps for Lava-Rock Charbroilers

This step applies only to the installation of lava-rock charbroiler models. Such models are shipped with the lava-rock briquettes in bags located between the lava-rock grates and the top cooking grids.

1. Lift out the cooking grids to reach the bags of lava-rock briquettes.
2. For each section, open the bag of lava-rock briquettes and spread them evenly on the lava-rock grate. The briquettes must be spread evenly to avoid “hot spots.” Discard the empty bags.
3. Reposition the cooking grids above the briquettes.



# OPERATION

 **DANGER**  
**EXPLOSION HAZARD**

Purchaser of equipment must post in a prominent location, detailed instructions to be followed in the event the operator smells gas. Obtain the instructions from the local gas supplier.

 **CAUTION**

To eliminate gas build up which could result in an explosion, in the event of main burner ignition failure a five minute purge period must be observed prior to re-establishing ignition source.

 **CAUTION**

Top section pilots, when out, do not interrupt the flow of gas to the burners. Consequently, it is the responsibility of the operator to check the ignition of the burners, immediately after burner valve has been turned "ON." Should ignition fail after 10 seconds, turn off burners, wait 5 minutes, and then try again.

 **WARNING**

UNDER NO CIRCUMSTANCES IS A GRIDDLE TO BE USED FOR HEATING STOCK POTS. SUCH USE AUTOMATICALLY VOIDS THE WARRANTY.

NEVER COOL A GRIDDLE BY APPLYING ICE OR WATER TO THE GRIDDLE SURFACE. DAMAGE DUE TO MISUSE IS NOT COVERED BY THE WARRANTY.

DO NOT STRIKE A GRIDDLE SURFACE WITH THE EDGE OF COOKING IMPLEMENTS TO CLEAN THE IMPLEMENTS. SUCH ACTION WILL CUT AND PIT THE GRIDDLE PLATE, LEAVING IT ROUGH AND HARD TO CLEAN.

ALWAYS HEAT A GRIDDLE SLOWLY. DO NOT HEAT A GRIDDLE ABOVE 550°F.

OPERATION

## LIGHTING AFTER GAS HAS BEEN SHUT OFF

When turning the main gas supply on after the gas supply has been shut off, do the following:

1. Make sure all of the control valves are in the "OFF" position.
2. Turn on the gas supply.
3. Light the pilots as described in each section below.



## OPERATION OF THERMOSTATIC GRIDDLE MODELS

Each 12"-wide griddle section has a thermostatic-control knob on the front panel that directly controls the flow of gas, and so the heat. Turn the knob clockwise to increase the heat; turn it counterclockwise to reduce the heat.

The griddle requires approximately 13 minutes of preheating to reach 350°F, and 45 minutes to even out.

Do not waste gas or abuse equipment by leaving control knobs set at a high temperature if not required. During idle periods, set control knobs to low temperature settings to keep griddle warm.

After each period of use, allow the griddle surface to cool normally. At the end of each day's use, turn all control knobs to the "OFF" position. After the griddle has cooled, coat the griddle surface with a light film of cooking oil to protect the surface from moisture.

To shut down the appliance for an extended period (or before disconnecting the gas supply), turn all the burner control gas knobs "OFF," then turn the main gas supply valve(s) to "OFF."

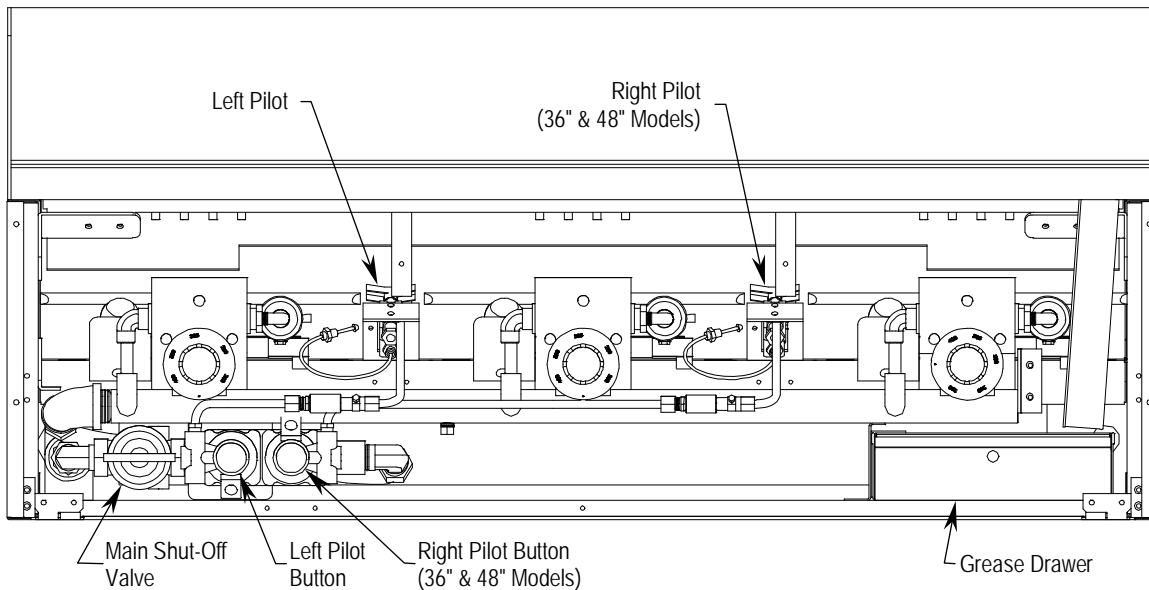
**To light the pilots of a thermostatic griddle section, do the following:**

1. Turn all griddle controls to the "OFF" position.
2. Open the grease/control door at the bottom of the front of the griddle.
3. Turn the main shut-off valve to the "ON" position (if it is not already ON). (Note that 60" and 72" models have two shut-off valves, one in each burner compartment.)
4. **Note that the left pilot must be lit before the right pilot can be lit.** For each pilot, press and hold the red pilot button and light the pilot by pressing the electronic ignition button on the front panel to generate a spark. Continue to hold the pilot button for 45 seconds, or until the pilot remains lit. Note that 24" models have one pilot, 36" & 48" models have two pilots, 60" models have three pilots, and 72" models have four pilots.
5. If a pilot is extinguished or the gas supply is interrupted, wait five minutes and repeat the above steps.
6. Allow the pilots to warm-up for 1 minute, then turn all griddle thermostat controls to the "ON" position to check that the pilots will ignite the burners.

OPERATION

Figure 5

This drawing shows a Model HDG-36 with the front panels removed to show the interior parts.



**Note:** 24" models have one pilot, 36" and 48" models have two pilots, 60" models have three pilots, and 72" models have four pilots. 60" and 72" models have two shut-off valves, one in each burner compartment.



## OPERATION OF MANUAL GRIDDLE MODELS

Each 12"-wide griddle section has a knob on the front panel that directly controls the flow of gas, and so the heat. Turn the knob clockwise to increase the heat; turn it counterclockwise to reduce the heat.

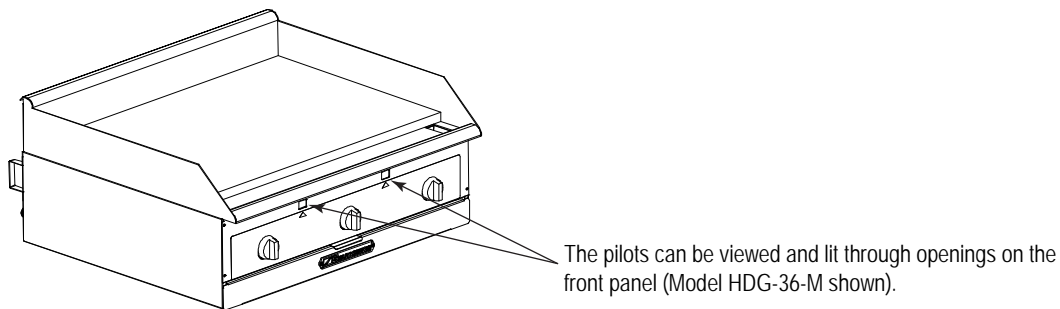
After each period of use, allow the griddle surface to cool normally. At the end of each day's use, turn all control knobs to the "OFF" position. After the griddle has cooled, coat the griddle surface with a light film of cooking oil to protect the surface from moisture.

To shut down the appliance for an extended period (or before disconnecting the gas supply), turn all the burner control gas knobs "OFF," then turn the main gas supply valve(s) to "OFF."

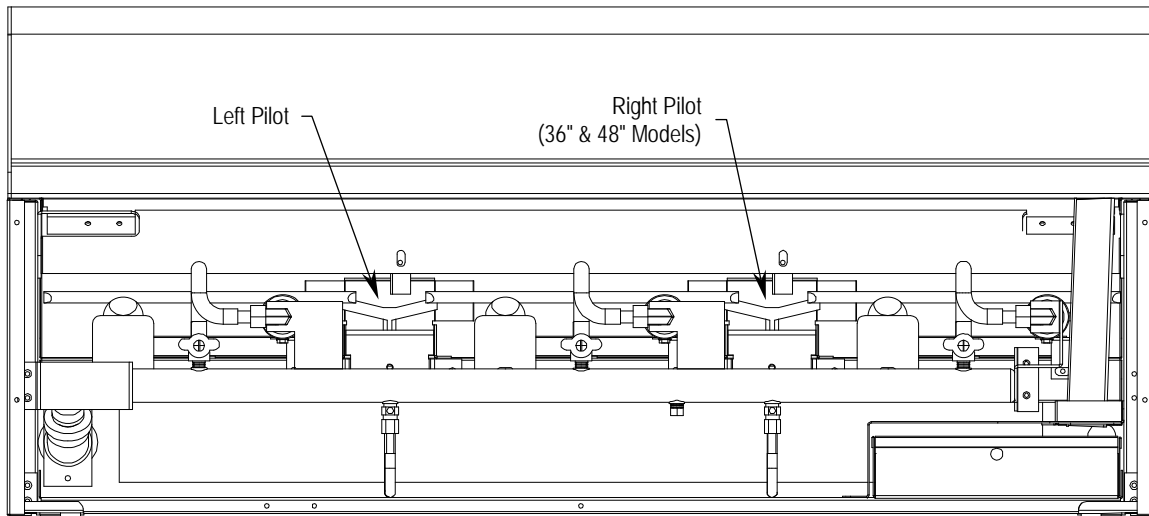
**To light the pilots of a manual griddle section, do the following:**

1. Turn all griddle controls to the "OFF" position.
2. Light the pilot tube located next to each burner. The pilot flame can be adjusted by turning the screw on the end of the pilot fitting.
3. Turn burner knobs to "HI" position. The burners should have a 1/2" to 5/8" steady blue flame. Adjust if necessary.
4. To turn burners off, turn knob to "OFF" position.

Figure 6



The drawing below shows a Model HDG-36-M with the front panels removed to show the interior parts.



**Note:** 24" models have one pilot, 36" and 48" models have two pilots, 60" models have three pilots, and 72" models have four pilots.



## OPERATION OF CHARBROILER MODELS

Each 6"-wide charbroiler section has a knob on the front panel that directly controls the flow of gas, and so the heat. Turn the knob counterclockwise to increase the heat; turn it clockwise to reduce the heat.

To use the charbroiler, turn all the control knobs to the full "ON" position. (If any burners do not light, check the pilots and, if necessary, light the pilots as described later in this section.) After 15 to 20 minutes turn back the flame to maintain enough heat to keep the bottom of the radiants or lava-rock grates hot. The radiants or grates will be at broiling temperature throughout, providing the radiant heat that is essential to provide fast broiling.

By design, the rear two-thirds of the broiler grid is much hotter than the front third. Use the rear of the charbroiler to quickly sear both sides of meat to retain maximum juices. This fast cooking is one of the secrets of successful meat broiling, and gives the meat that special "outdoor" flavor. Cook rare meats at the back quickly; cook medium and well-done meats closer to the front more slowly. Adjust the cooking time according to the thickness of the meat and amount of doneness desired. If desired, move meat cooked rare to the very front to keep it warm while medium and well-done meats are still cooking. Remember that to cook meat properly you must keep in mind both *heat* and *time*.

The tilt angle of the charbroiler grid is adjustable by pulling up on the back of the grid. The tilted position is normal and recommended. The tilt angle allows most fat rendered off meat during broiling to run into the grease trough, thus eliminating excess flaring of fats and accompanying smoke. Steaks and chops, being fattier than other meats, will still have some flaring up to give the desired broiling results while enough fat drains off to avoid severe flares. Use the flat position for heating on the top, or for continuous cooking of hot dogs and sausage. Fats dripping down into the fire will burn up on the meat to help give it that desirable special flavor.

The heavy cast iron grids can be turned over for different "branding" width. One side has wide-branding (1/4") and the other side has narrow branding (1/8" with grease channel). Chrome-plated grids can be ordered for cooking fish.

At the end of each day's use, turn all knobs to the "OFF" position.

To shut down the appliance for an extended period (or before disconnecting the gas supply), turn all the burner control gas knobs "OFF," then turn the main gas supply valve to "OFF."

**To light the pilot(s) of a charbroiler section, do the following:**

1. Turn all control knobs to the "OFF" position.
2. Light the pilot located next to each burner (accessed through front). If the pilot will not remain lit, have a service technician adjust the pilot by turning the screw on the pilot fitting.
3. Turn burner knobs to "HI" position. The burners should have a 1/2" to 5/8" steady blue flame. If they do not, have them adjusted by a service technician.
4. To turn burners off, turn knob to "OFF" position.





## OPERATION OF OPEN-TOP BURNER MODELS

Each 12"-wide open-top burner section has two knobs on the front panel that directly control the flow of gas to the section's two burners, and so control the heat. Turn a knob clockwise to increase the heat; turn it counterclockwise to reduce the heat.

If any burners do not light, check the pilots and, if necessary, light the pilots as described later in this section.

At the end of each day's use, turn all knobs to the "OFF" position.

To shut down the appliance for an extended period (or before disconnecting the gas supply), turn all the burner control gas knobs "OFF," then turn the main gas supply valve to "OFF."

**To light the pilots of an open-top burner section, do the following:**

1. Turn all gas valves to the "OFF" position.
2. Check to make sure pilots are in the correct position.
3. Light the pilots. If the pilots will not remain lit, have a service technician adjust them.
4. Turn burner knobs to "HI" position. Each burner flame should be steady blue and impinge on the underside of a pot placed on the support grate. If necessary, have a service technician adjust the burners.
5. To turn burners off, turn knob to "OFF" position.



# CLEANING

Southbend equipment is constructed with the best quality materials and is designed to provide durable service when properly maintained. To expect the best performance, your equipment must be maintained in good condition and cleaned daily. Naturally, the frequency and extent of cleaning depends on the amount and degree of usage.

**Daily:**

- Remove, empty, and clean grease drawers of griddles and charbroilers.
- Clean griddle drain chutes of griddles.

**Monthly:**

- Clean around burner air mixers and orifices if lint has accumulated.
- Visually assure proper pilot operation.

**CARE OF CARBON STEEL GRIDDLE SURFACE**

Never allow water on a hot griddle and never wash it with soap and water.

Use a Norton Alundum Griddle Brick to clean the griddle. Always remember to heat a griddle slowly because quick heat may cause costly damage. Griddle plates cannot be guaranteed against damage due to carelessness. Never place utensils on griddle. Do not overheat griddle above 550°F as this will cause warpage or breakage.

Do not use any type of steel wool. Small particles may be left on the surface and get into food products. Do not clean a spatula by hitting the edge on the griddle plate. Such action will only cut and pit the griddle plate, leaving it rough and hard to clean.

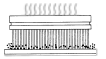
**CARE OF CHROME PLATED GRIDDLE SURFACE**

Allow griddle plate to cool down to approximately 200°F. Pour 8 ounces of water onto griddle surface. Apply a non-abrasive degreaser to water on griddle surface. Using a non-abrasive brush, evenly spread degreaser solution around entire griddle plate surface and use additional water if necessary to cover entire griddle plate. Allow time to soak until grease begins to separate. Using a non-metallic scraper, remove remaining grease particles from the griddle surface. Flush the entire griddle surface with clean water until all degreaser solution has been removed. Wipe the entire griddle surface, back and splash walls with a clean damp cloth.

**CARE OF STAINLESS STEEL SURFACES**

To remove normal dirt, grease and food residue from stainless steel that operates at LOW temperature, use ordinary soap and water (with or without detergent) applied with a sponge or cloth. Dry thoroughly with a clean cloth.

To remove grease, food splatter, or condensed vapors that have BAKED onto 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 that are marred collect dirt more rapidly and become more difficult to clean. Marring also increases the possibility of corrosive attack. Refinishing may then be required.

“Heat tint” is a darkened area that can appear on a stainless steel surface where the area has been subjected to excessive heat. These darkened areas are caused by 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 powered cleanser. Heat tint action may be lessened by not applying, or by reducing heat to equipment during slack periods.



# 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 COOKING EQUIPMENT. HOWEVER, TO ASSURE YOUR CONFIDENCE, CONTACT YOUR AUTHORIZED SERVICE AGENCY FOR RELIABLE SERVICE, DEPENDABLE ADVICE OR OTHER ASSISTANCE, AND FOR GENUINE FACTORY PARTS.

**NOTICE**

The warranty will be void and the manufacturer relieved of all responsibility if...  
(A) Service work is performed by other than a qualified technician, or  
(B) Other than genuine Southbend replacement parts are installed.

Before making any adjustment, make sure the appliance is connected to the type of gas for which it is equipped. That information is on the serial plate, which is located on the inside of the control panel (see Figure 1 on page 3).

## ADJUSTMENT OF MANIFOLD GAS PRESSURE

A pressure regulator is connected to the appliance's gas connection, outside the rear left corner of the appliance. The pressure regulator is factory set at 4" W.C. for natural gas and 10" W.C. for propane. To check the manifold pressure, do the following:

1. Turn all burner valves to "OFF" position.
2. Turn main gas valve to entire appliance off.
3. Remove front panel and locate 1/8" plug in manifold. (Note that 60" and 72" griddle models have two burner compartments, and so have two manifolds.)
4. Remove the plug and install a fitting appropriate to connect a manometer.
5. Turn on main gas to appliance and light pilots.
6. Turn all burners to full "ON" position and read manometer.
7. If manometer does not read 4" W.C. for natural gas (or 10" W.C. for propane gas), check the incoming gas line for proper pressure. The proper gas line pressure is 5-7" W.C. for natural gas and 11-14" W.C. for propane.
8. Remove manometer fitting and replace plug in manifold.
9. Replace front panel.
10. Turn on main gas to appliance and light pilots.

ADJUSTMENTS

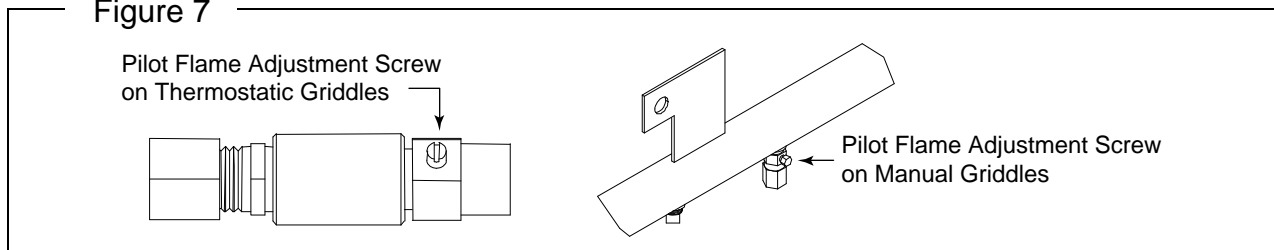


## ADJUSTMENT OF PILOT FLAME (GRIDDLE MODELS)

The pilots are adjusted at the factory. If later the pilots are over-adjusted to the point where the flame is leaving its port, or "blowing off," the result is an unstable condition in which the pilot may extinguish. If necessary, adjust each burner's pilot using the following procedure:

1. Open the door on the lower front of the appliance, remove the control knobs, and remove the control panel by removing the screws holding it in place.
2. If necessary, light the pilots.
3. Locate the adjustment valve of the pilot that needs adjustment (see Figure 7 below). On thermostatic griddles, the valve is in the pilot's supply line, while on manual griddles the valve connects the pilot's supply line to the front manifold. Turn the pilot adjustment screw to the left to increase the size of the pilot flame, or to the right to decrease the size of the pilot flame. The flame should be about 1/2" high with a slight yellow tip, and cover the thermocouple tip. The flame is too high if the yellow tip is producing black streaks of carbon.
4. Repeat Step 3 for each pilot.
5. Replace the control panel and knobs.

Figure 7

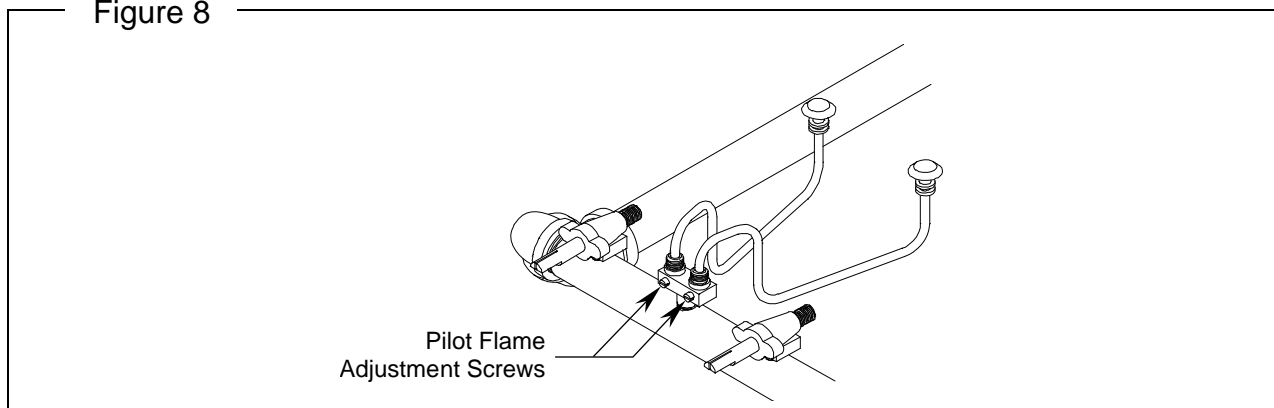


## ADJUSTMENT OF PILOT FLAME (CHARBROILER AND OPEN-TOP MODELS)

The pilots are adjusted at the factory. If later the pilots are over-adjusted to the point where the flame is leaving its port, or "blowing off," the result is an unstable condition in which the pilot may extinguish. If necessary, adjust each burner's pilot using the following procedure:

1. If necessary, light the pilots.
2. Locate the pilot adjustment valve (see Figure 8 below). Turn the pilot adjustment screw to the left to increase the size of the pilot flame, or to the right to decrease the size of the pilot flame. The flame should be about 1/2" high with a slight yellow tip. The maximum pilot flame height is 3/4". The flame is too high if the yellow tip is producing black streaks of carbon.
4. Repeat Step 3 for each pilot.
5. Replace the control panel and knobs.

Figure 8





## ADJUSTMENT OF BURNER FLAME

The burners are adjusted at the factory. If necessary to adjust the burner flames, do the following for each burner:

1. Turn the burner's control knob to the full ON position.
2. If the appliance was cold, wait 5 minutes before adjusting the burner flame.
3. Loosen the set screw that holds the sheet-metal air shutter in place.
4. If the burner flame is blowing or lifting off the burner ports, close the air shutter until a stable flame is obtained. If the flame is yellow-tipping, open the air shutter until a stable blue flame is obtained (a small amount of yellow-tipping is normal when using propane gas).
5. Tighten the set screw that holds the sheet-metal air shutter in place.
6. Repeat Steps 1 through 5 for each burner.

When adjusting the burners of griddle models, note that over-gassed burners DO NOT heat griddles as efficiently as those that are properly adjusted and also create "hot spots" on the griddle surface. Floating and unstable burner and pilot flames will result when solid tops are lowered into position because the rear openings of the burner compartment are not adequate to vent the enormous flue products generated by over-gassed burners. The "unburned" gas will ignite at the rear and burn in this section and even up inside the backguard or shelf venting system, causing structural members in this area to deteriorate. Also, some of these hot flue products will vent forward into the manifold compartment resulting in problems with valves and thermostats due to overheating. AGAIN, over-rated burners waste energy and cause service problems.

## CONVERSION FROM ONE TYPE OF GAS TO ANOTHER

Each appliance is shipped gas-specific either for use with natural gas or for use with LP gas (propane). To convert an appliance from one type of gas to another, do the following:

1. Remove the front panel by removing the knobs and screws on the front.
2. For each burner, replace the orifice with the type appropriate for the type of gas that will be used. For special gas mixtures, and for altitudes above 2,000 feet, consult factory for appropriate orifice sizes.
3. For griddle models only, replace all the pilot assemblies.
4. Re-install the front panel.
5. Remove the hex-threaded plug from the pressure regulator (on the rear of the appliance). Inside is a removable insert. Pull the insert out, turn it around, and put it back in so that the end facing out has the letters corresponding to the type of gas that will be used ("NAT" or "LP"). Re-attach the hex-threaded plug.
6. Check the manifold pressure (the procedure is on page 20).

Note: A kit for conversion to a different type of gas may be purchased from Southbend.

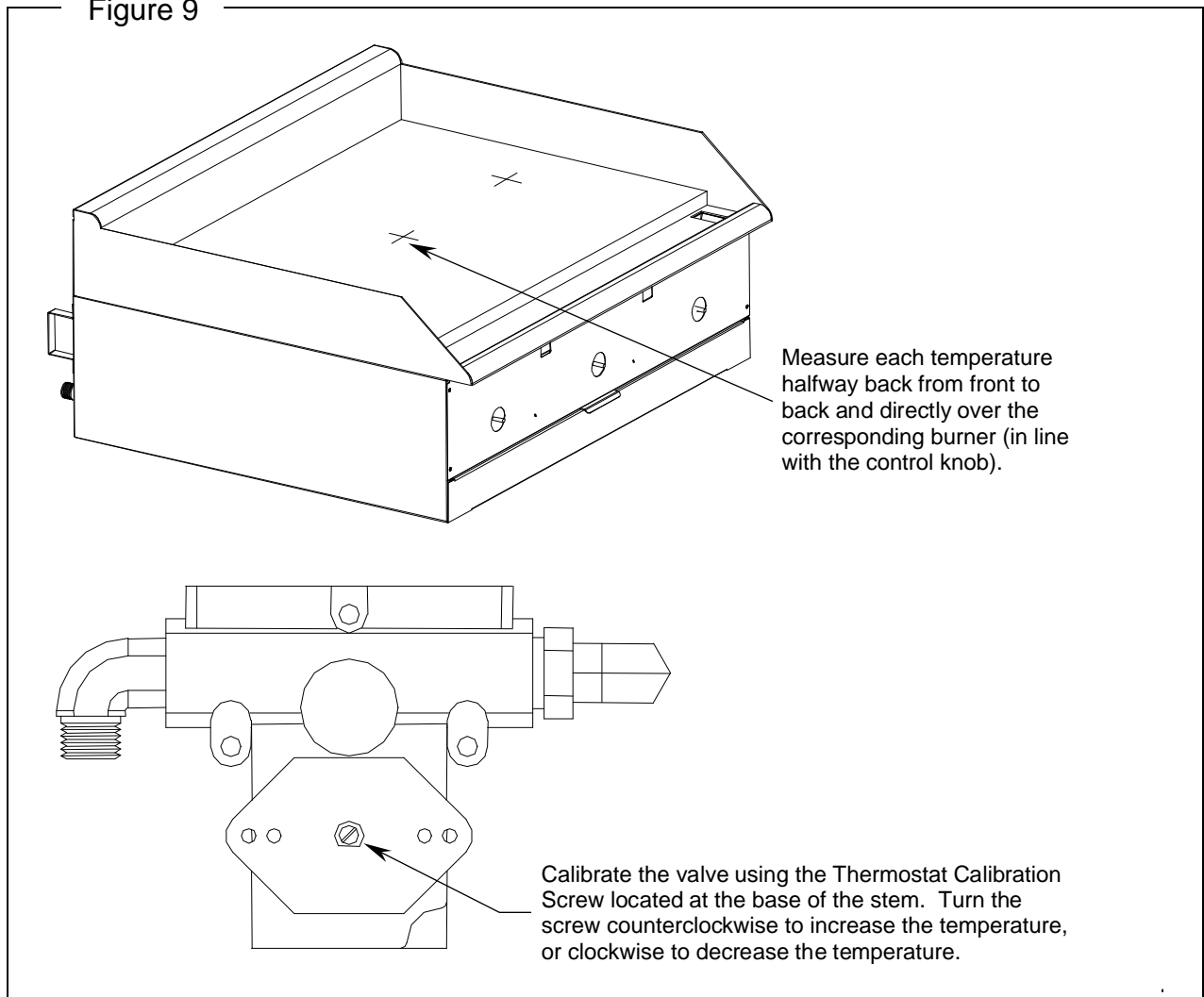


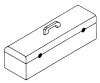
## ADJUSTMENT OF GRIDDLE THERMOSTATS

Each burner's control knob operates a snap-action thermostatic valve that was adjusted at the factory. If the griddle surface temperature is different from the thermostat dial setting, adjust the valve using the following procedure:

1. Turn all the control knobs to the 300°F.
2. Wait 30 minutes (or 1 hour if the griddle was cold).
3. Place a reliable thermometer or test-instrument thermocouple (able to register 300°F) halfway back from the front to the back of the griddle and directly over a burner (in line with the burner's control knob, see Figure 9 below). Check the temperature over each burner every five minutes until the temperature over each burner stabilizes and does not change by more than 30°F between two consecutive measurements.
4. If the average temperature over any burner is not within 30°F of the knob setting (300°F), adjust the corresponding thermostatic valve. To do so, remove the knobs and control panel, adjust the calibration screw on the thermostatic valve (see Figure 9 below), replace the knobs and control panel, then repeat Step 3.

Figure 9





# TROUBLESHOOTING

Consult the following table for troubleshooting guidance.

Problem	Look for -
No burners or pilots will turn on	<ul style="list-style-type: none"> <li>- Main gas supply to unit is "OFF"</li> </ul>
Problem with a particular burner	<ul style="list-style-type: none"> <li>- Valve for that burner in "OFF" position</li> <li>- Pilot out</li> <li>- Burner not level in support brackets</li> <li>- Clogged burner ports</li> <li>- Clogged burner venturi</li> <li>- Clogged burner orifice</li> <li>- Wrong type of burner orifice</li> <li>- Burner orifice out of alignment with burner</li> </ul>
Griddle will not heat up	<ul style="list-style-type: none"> <li>- Main gas supply to griddle is "OFF"</li> <li>- Pilot(s) not lit</li> <li>- Fault in thermostat(s)</li> <li>- Clogged orifice or burner ports</li> </ul>
Lava-rock charbroiler has "hot spots"	<ul style="list-style-type: none"> <li>- Stacked-up lava-rock briquettes (briquettes should be spread out evenly)</li> </ul>
Burners produce excessive carbon deposits	<ul style="list-style-type: none"> <li>- Incorrect gas type</li> <li>- Incorrect orifice size</li> <li>- Incorrect supply pressure</li> <li>- Incorrect burner air mixer adjustment</li> <li>- Burner orifice out of alignment with burner</li> </ul>
Pilot produces excessive carbon deposits	<ul style="list-style-type: none"> <li>- Pilot gas not adjusted properly</li> <li>- Incorrect pilot orifice</li> </ul>
Pilot will not stay lit	<ul style="list-style-type: none"> <li>- Pilot not adjusted properly</li> <li>- Clogged or dirty orifice</li> <li>- Draft condition</li> <li>- Improper ventilation system</li> <li>- Air in gas line</li> <li>- Valve end of thermocouple corroded or loose</li> <li>- Pilot shield needs to be moved closer to pilot</li> <li>- Improper gas pressure</li> <li>- Incorrect gas supply size (not enough volume)</li> <li>- Fault in thermocouple</li> </ul>
Burner makes a slight popping noise when turned off	<ul style="list-style-type: none"> <li>- This is normal when using propane gas</li> </ul>
Electronic ignition module will not generate a spark	<ul style="list-style-type: none"> <li>- Dead battery in ignition module</li> <li>- Fault in spark module</li> <li>- Fault in switch</li> </ul>

TROUBLESHOOTING



HEAVY DUTY COUNTERLINE

Notes:

# HEAVY DUTY COUNTERLINE



Commercial Food Equipment Service Association



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.



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