Broil King®

OWNER'S MANUAL

FOR USE WITH L.P. (LIQUID PETROLEUM GAS) IN CANADA, PROPANE GAS

ANSI Z21.58-2018 / CSA 1.6-2018

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NOTE TO INSTALLER: THESE INSTRUCTIONS MUST BE LEFT WITH THE CONSUMER.

⚠ DANGER

IF YOU SMELL GAS:
1. **SHUT OFF GAS TO THE APPLIANCE**
2. **EXTINGUISH ANY OPEN FLAME**
3. **OPEN LID**
4. **IF ODOR CONTINUES, KEEP AWAY FROM THE APPLIANCE AND IMMEDIATELY CALL YOUR GAS SUPPLIER OR YOUR FIRE DEPARTMENT**

⚠ WARNING

1. **DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE LIQUIDS OR VAPORS IN THE VICINITY OF THIS APPLIANCE**
2. **AN LP CYLINDER NOT CONNECTED FOR USE SHALL NOT BE STORED IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE**

PLEASE RECORD YOUR MODEL NUMBER, SERIAL NUMBER AND DATE OF PURCHASE HERE.

This information can be found on the black and silver OMC caution sticker on the back or side of your gas grill.

Model Number						-		
Serial Number			-					

Date of Purchase ____ / ____ / ____
dd mm yyyy

READ ALL INSTRUCTIONS CAREFULLY BEFORE OPERATING YOUR GAS GRILL.
RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

FOR ASSEMBLY INSTRUCTION, PLEASE SEE YOUR ASSEMBLY MANUAL
OR VISIT www.omcbbq.com TO VIEW OUR ASSEMBLY VIDEOS.

1-800-265-2150
info@omcbbq.com

Onward Manufacturing Company Limited
Since 1906
585 KUMPF DRIVE
WATERLOO, ONTARIO, CANADA
N2V 1K3

EN
20094-40LP REV M 09/20

SAFETY

Your new BROIL KING® gas grill is a safe, convenient appliance when assembled and used properly. As with all gas-fired products, however, certain safeguards must be observed. **Failure to follow these safeguards may result in serious injury or damage.** If you have questions concerning assembly or operation, consult your dealer, gas appliance specialist, Gas Company or our direct customer service line at 1-800-265-2150. / info@omcbbq.com

CAUTION

- **FOR OUTDOOR USE ONLY.**
- **IF STORED INDOORS, DETACH AND LEAVE CYLINDER OUTDOORS.**
- **THIS APPLIANCE MUST NOT BE OPERATED UNATTENDED.**
- **SPECIAL CARE MUST BE TAKEN TO KEEP SMALL CHILDREN AWAY FROM HEATED SURFACES.**

Use caution when handling or transporting this product. Metal edges can be hazardous. Use appropriate gloves when lifting or handling. Before lifting, remove side shelves, grids and grates.

ELECTRICAL CAUTION

1. If any accessory is used on this appliance that requires an external electrical power source, the accessory when installed must be electrically grounded in accordance with local codes. In the absence of local codes, the following standards apply:

   (U.S.A.) ANSI/NFPA No. 70-Latest Edition and

   (Canada) CSA C22.1 Canadian Electrical Code

2. Do not cut or remove the grounding prong from the plug.
3. Keep the electrical supply cord and fuel supply hose away from any heated surface.

⚠ WARNING

This product can expose you to chemicals including lead, which is known to the state of California to cause cancer, birth defects or other reproductive harm. **Wash your hands after handling this product.**

The burning of gas cooking fuel can expose you to chemicals including Carbon Monoxide, which is known to the state of California to cause cancer, birth defects or other reproductive harm. **To minimize exposure to these substances, always operate this unit according to the owner's manual, ensuring you provide good ventilation when cooking with gas.**

FOR MORE INFORMATION GO TO WWW.P65WARNINGS.CA.GOV

INSTALLATION

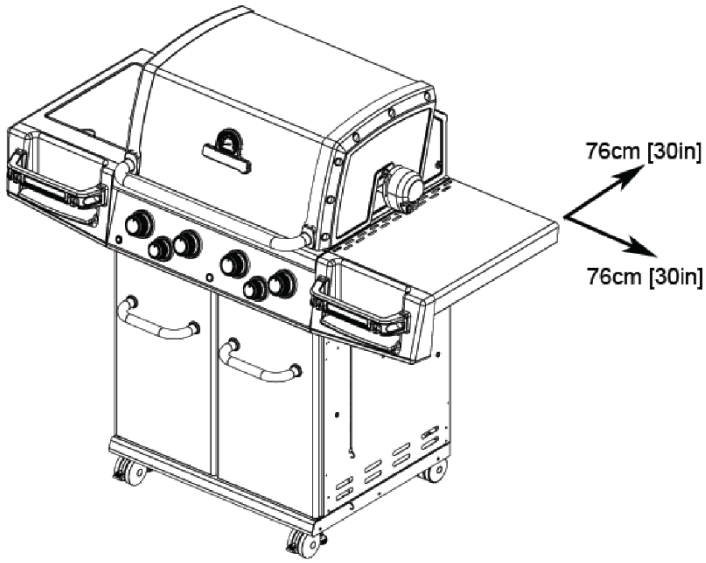
1. In the U.S.A., this appliance must be installed in accordance with the local code and the relevant national code:

   ANSI Z223.1/NFPA 54 - Latest Edition National Fuel Gas Code and Latest Local Codes where Applicable

2. In Canada, this appliance must be installed in accordance with the local code and the relevant CSA standards:

   CSA-B149.1 Natural Gas and Propane installation Code

3. The appliance must be located away from combustible surfaces by at least 76cm / 30" from each side, and 76cm / 30" from the rear.



4. Do **not** operate this appliance under any overhead roof construction or foliage.
5. This appliance is for **OUTDOOR USE ONLY, DO NOT** operate in garage, shed, balcony or other such enclosed areas.
6. **DO NOT** restrict the flow of air to the appliance.
7. Keep the area surrounding the appliance free of combustible materials, gasoline, and all flammable liquids and vapors.
8. This appliance is not intended to be installed in, or on, recreational vehicles and/or boats.
9. Keep the ventilation opening(s) of the cylinder enclosure free and clear from debris.

LP GAS CYLINDER PLACEMENT

The instructions below apply to LP models only. LP gas cylinders must be installed according to assembly instructions using retainer provided. Do not store a spare cylinder under or near this appliance. All cylinders used must be compatible with supplied means of cylinder retention.

LP GAS CYLINDER

The standard for outdoor gas appliances, ANSI Z21.58/ CAN/CGA-1.6, requires that LP gas cylinders used with LP gas appliances be equipped with both

- An Overfill Prevention Device (OPD)
- A QCC®-1 Quick Closing Coupling system

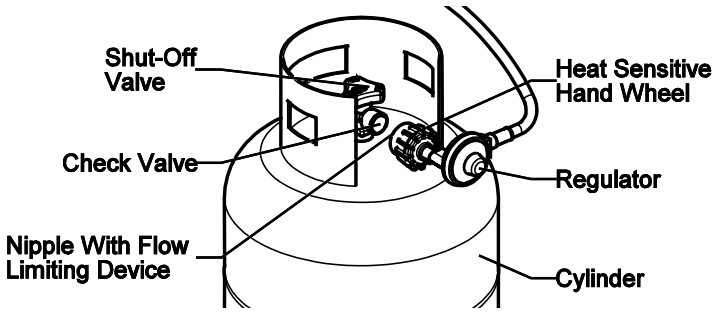
OVERFILL PREVENTION DEVICE

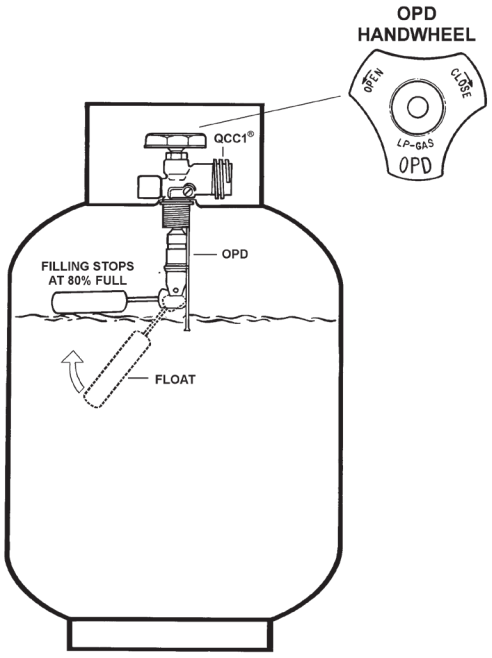
The OPD is designed to reduce the potential of over filling propane cylinders, thus reducing the possibility of relief valve discharges of raw propane. **The OPD causes a slower purge/fill operation**.

QCC®-1 QUICK CLOSING COUPLING

The QCC®-1 system incorporates safety features required by the American National Standards Institute (ANSI) and the Canadian Standards Association (CSA).

- Gas will not flow until a positive connection has been made
- A thermal element will shut off the flow of gas between 240° and 300° F
- When activated, a Flow Limiting Device will limit the flow of gas to 10 cubic feet / hour





The LP gas **cylinder is not included with the Gas Grill.**
Be sure to use an LP gas cylinder equipped with the OPD and the QCC® valve.

IDENTIFICATION

The QCC®-1 valve is recognized by the external threads on the inlet port of the LP gas cylinder valve.
The OPD hand wheel has been standardized to the shape shown.
QCC® /OPD equipped LP gas cylinders are available from your Gas Grill Dealer.

NOTE: Any attempt to connect the regulator, by use of adapters or any other means, to any other valve could result in damage, fire or injury and may negate the important safety features in the QCC®-1 system.

SPECIFICATION

1. All LP gas cylinders used with this appliance must be constructed and marked in accordance with the Specifications for LP gas cylinders of the U.S. Department of Transportation (D.O.T.) or the National Standard of Canada, CAN/CSA-B339, Cylinders, Spheres and Tubes for Transportation of Dangerous Goods ; and Commission, as applicable.
2. The LP gas cylinder used for this appliance must not have a capacity exceeding 20 lb. (9 kg). Approximately 18” (46cm) high and 12” (31cm) diameter.
3. All LP gas cylinders used with this appliance should be inspected at every filling and re qualified by a licensed service outlet at the expiry date (10 years), in accordance with the DOT (USA) and Canadian Transport Commission (Canada) codes for LP Gas Cylinders.
4. All LP gas cylinders used with this appliance must be provided with a shutoff valve terminating in a cylinder valve outlet No. 510, specified in the Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connection (USA) ANSI/CGA-V-1-1977 (Canada) CSA B96.
5. The LP gas cylinder supply system must be arranged for vapor withdrawal.
6. The LP gas cylinder must include a collar to protect the cylinder valve.
7. The LP gas cylinder must be installed as per assembly instructions.
8. Never fill the LP gas cylinder beyond 80% full. A fire causing death or serious injury may occur.
9. The LP gas cylinder valve must include a safety relief device having direct communication with the vapor space of the cylinder.

LP GAS CYLINDER

HANDLING

1. Government regulations prohibit shipping full LP gas cylinders. You must take your new cylinder to a LP gas dealer for filling.
2. A filled LP gas cylinder is under very high pressure. Always handle carefully and transport in the upright position. Protect the valve from accidental damage.
3. Do not tip the LP gas cylinder while connecting it to the regulator. Fasten the LP gas cylinder securely during transport, use and storage.
4. If the LP gas cylinder is tipped after it is connected to the regulator, shut off the gas, disconnect the regulator and have it checked before using it again.

STORAGE

1. Store the LP gas cylinder outdoors in a well-ventilated place.
2. Do not store the LP gas cylinder in direct sunlight, near a source of heat or combustion.
3. Do not store a spare LP gas cylinder in an enclosure. Disconnected cylinders must have a dust cap installed and must not be stored in a building, garage or any enclosed area.
4. Keep out of the reach of children.
5. When the LP gas cylinder is connected to the gas grill, the gas grill and LP gas cylinder must be operated outside in a properly ventilated place.

OPERATION

1. Never connect your gas grill to an LP gas cylinder without the regulator provided, and **NEVER TO AN UNREGULATED LP GAS SUPPLY**. The regulator supplied with the barbecue must be used.
2. **Always** leak test the LP gas cylinder to regulator connection when connecting the LP gas cylinder to the appliance. See “Leak Testing” (page 5).
3. **Do not** operate appliance if the smell of LP gas is present. Extinguish all flame and determine source of LP gas leak before proceeding. **Do not** ignite the appliance until the LP gas leak has been found and sealed.
4. **Always** shut off LP gas cylinder valve when the appliance is not in use.

HOSE & REGULATOR

1. LP gas grills are equipped with a hose and regulator with a QCC®-1 Quick Closing Coupling.
2. The QCC®-1 coupling contains a magnetic Flow Limiting Device which will limit the flow of gas should there be a leak between the regulator and the appliance valve. This device will activate if the cylinder valve is opened while the appliance valves are open. **Be sure the appliance valves are off before the cylinder valve is opened to prevent accidental activation**.
3. The QCC®-1 coupling incorporates a heat sensitive hand wheel that will cause the back check module in the QCC®-1 cylinder valve to close when exposed to temperatures between 240° and 300°F. Should this occur, do not attempt to reconnect the hand wheel. Remove hose/regulator assembly and replace with a new one.
4. The pressure regulator is set at 11 inches WC (water column) and is for use with LP gas only. The hose and hose couplings comply with CGA Standard CAN 1.83. No modifications or substitutions should be attempted.
5. Protect the hose from dripping grease and **do not allow the hose to touch any hot surface**, including the base casting of the barbecue.
6. Inspect the seal in the QCC®-1 cylinder valve when replacing the LP gas cylinder or once per year whichever is more frequent. Replace the seal if there is any indication of cracks, creases, or abrasion.
7. Inspect the hose before each use. If the hose is cracked, cut, abraded or damaged in any way, the appliance must not be operated.
8. For repair or replacement of the hose/regulator assembly, contact customer service.

CONNECTION

1. Be sure LP gas cylinder valve and appliance valves are “OFF.”
2. Place full LP gas cylinder in LP gas cylinder well and secure as per assembly instructions.
3. Center the nipple in the LP gas cylinder valve and hold in place. Using other hand, turn the hand wheel clockwise until there is a positive stop. **Do not use tools. Hand tighten only. When making the connection, hold the regulator in a parallel with the LP gas cylinder valve, so as not to cross thread the connection**.
4. Leak test connections. See “Leak Testing” (Page 5).
5. Refer to lighting instructions. **To avoid activating the Flow Limiting Device when lighting, open LP gas cylinder valve slowly with the appliance valves off**. If the Flow Limiting Device is accidentally activated, turn LP cylinder valve off then turn all burners to OFF position. Disconnect the regulator from the cylinder. Wait two minutes. Re-attach regulator to the cylinder. Open the cylinder valve slowly. Wait one minute. Light grill as per “Lighting” (page 7).

DISCONNECTION

Always close LP gas cylinder valve and remove coupling nut before moving LP gas cylinder from specified operation position.

LEAK TESTING

All factory-made connections have been carefully tested for gas leaks. However, shipping and handling may have loosened a gas fitting.

AS A SAFETY PRECAUTION:

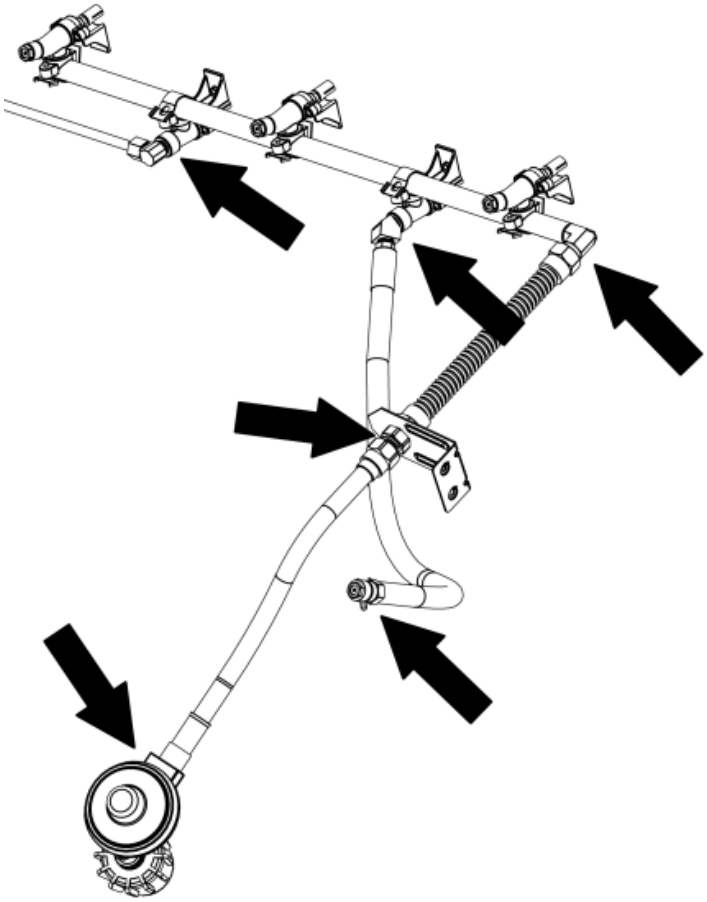
- **Test all fittings for leaks before using your gas grill**
- **Test for leaks every time you disconnect and reconnect a gas fitting, at least once per year or after any period of nonuse**
- **Do not smoke while testing**
- **Never test for leaks with a lit match or open flame.**
- **Test for leaks outdoors.**

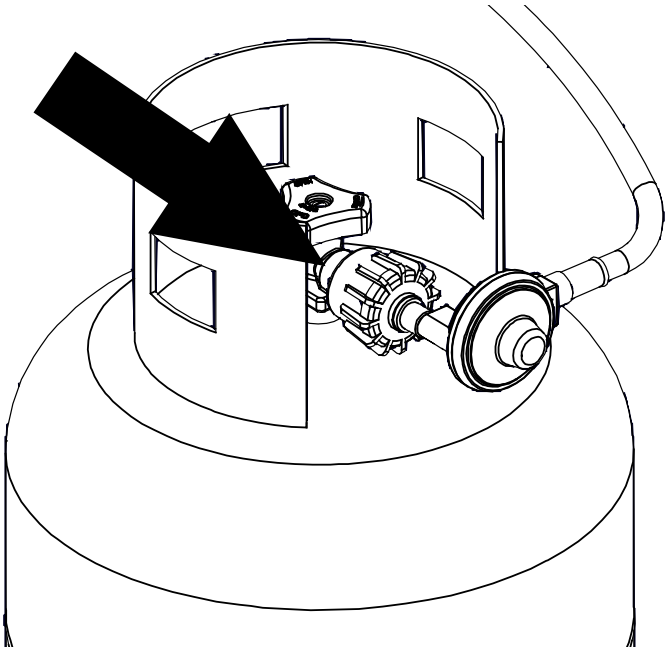
TO TEST FOR LEAKS:

1. Prepare a soap solution of one part water, one part liquid detergent.
2. Extinguish any open flame or cigarettes in the area.
3. Make sure that gas grill valves are “OFF.”
4. Make sure that cylinder valve is “OFF.”
5. With a full gas cylinder, open cylinder valve slowly.
6. Brush the soap solution on each connection.
7. A leak is identified by a flow of bubbles from the area of the leak.
8. If a leak is detected, close the gas cylinder valve or the gas supply valve, tighten the connection and retest.
9. If the leak persists, contact your gas grill dealer for assistance. Do not attempt to operate appliance if a leak is present.

If your gas grill is equipped with a side burner or rear burner:

1. Follow steps 1 - 5 above
2. Place fingertip over the opening in the orifice at the end of hose.
3. Turn “SIDE”/”REAR” control to “HIGH.”
4. Brush soap solution on each connection between orifice and control valve.
5. Turn “SIDE”/”REAR” control to “OFF”.





VENTURI TUBES

- Always keep venturi tubes clean
- Blockages in the venturi tubes caused by spiders, insects and nests can cause a flashback fire
- Although the gas grill may still light, the backed up gas can ignite and cause a fire around the venturi tubes at the control panel or the side burner

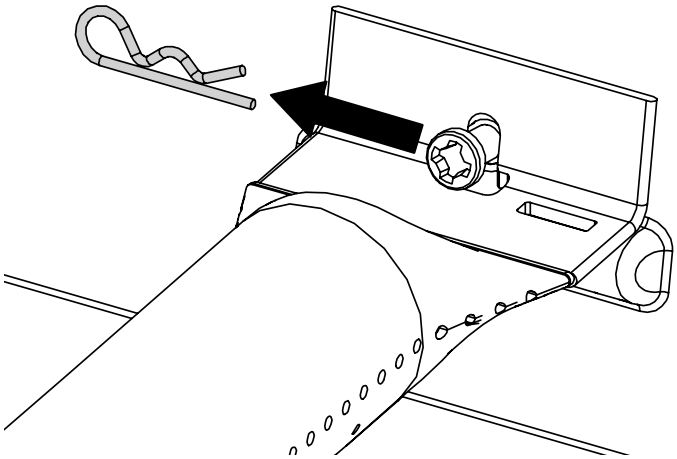
If a flashback fire occurs, turn off gas at the source immediately

Inspect and clean the venturi tubes (main burner, side burner, rear burner) if any of the following symptoms occur:

1. You smell gas.
2. Your gas grill does not reach temperature.
3. Your gas grill heats unevenly.
4. The burners make popping noises.

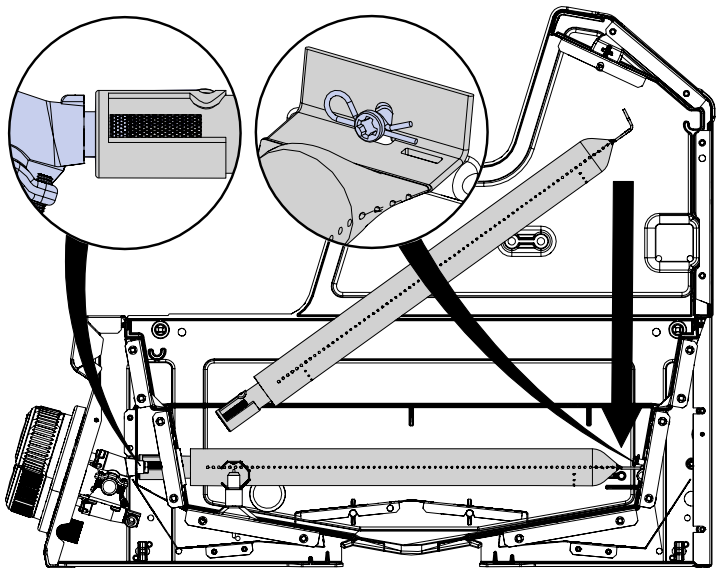
INSPECTING & CLEANING VENTURI TUBES

1. Be sure that cylinder valve is “OFF”.
2. When gas grill is cool, remove the burner fasteners. Proceed to lift the burners from the gas grill housing.



3. Clean the venturi tubes with a pipe cleaner or venturi cleaning tool (Accessory #77310 or #18270).

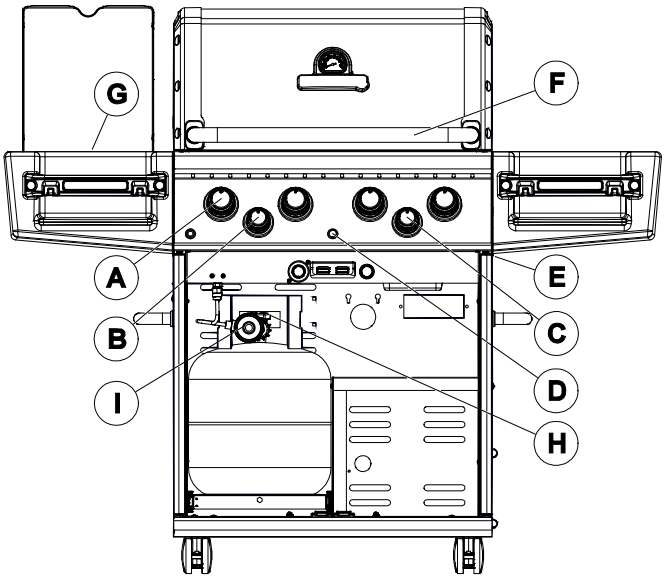
4. Lower the burner into position in the gas grill housing, making sure that the venturi tubes are correctly aligned and fitted on the orifices.



5. Secure burners with burner fasteners.

LIGHTING

BASIC GAS GRILL COMPONENTS



A. Main burner controls
B. Side burner control
C. Rear burner control
D. Ignitor
E. Manual lighting hole
F. Handle
G. Side burner
H. Cylinder valve

LIGHTING INSTRUCTIONS

- The grill must be assembled and installed as per the assembly and installation instructions.
- Ensure LP cylinder is full and properly connected to the regulator. See: “Hose and Regulator” (Page 4).
- Ensure there are no gas leaks in the gas supply system. See: “Leak Testing” (Page 5).
- Ensure that the venturi tubes are properly located over the gas valve orifices. See Venturi diagram, (Page 6).
- Ensure that Main Burner, Side Burner and Rear Burner ignition wires are connected.
- Check that the battery has been installed in the electronic ignition.
- Carefully review all instructions on the information plate attached to the gas grill.

1. Open lid before lighting.
2. Do not lean over gas grill while lighting.
3. Set control knobs to “OFF” and turn on the gas supply.

LIGHTING THE MAIN BURNER:

To light burner with the ignitor:
4. Push and turn one main burner control knob to “HIGH.”
5. Push and hold down the ignitor.
6. Burner should ignite within 5 seconds; turn off gas source immediately if ignition does not occur in this timeframe.

To light burner with a match:
4. Use the match holder and, apply lit match to burner port.
5. Push and turn right main burner control knob to “HIGH.”
6. Burner should ignite within 5 seconds; turn off gas source immediately if ignition does not occur in this timeframe.
7. After the first burner is lit, push and turn the adjacent main burner control knob to “HIGH” then repeat for other burners; these burners should light automatically without the ignitor.

Note: In windy conditions, ignite each burner individually.

LIGHTING THE SIDE BURNER:

To light burner with the Ignitor:
4. Push and turn side burner control knob to “HIGH.”
5. Push and hold the ignitor button.
6. Burner should ignite within 5 seconds.

To light burner with a match:
4. Apply lit match to burner ports.
5. Push in the side burner control knob and turn to “HIGH.”
6. Burner should ignite within 5 seconds.

Note: Pots on the side burner must not exceed 9” (23 cm) in diameter or 15 lbs. (7 kg) in weight.

LIGHTING THE REAR ROTISSERIE BURNER:

Warning: do not operate the main burner simultaneously with the rear burner.

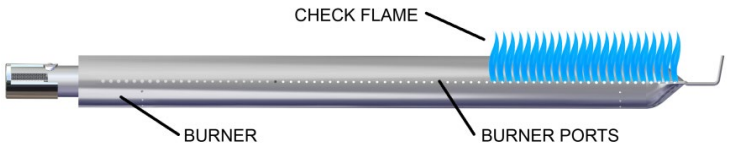
- **REMOVE THE WARMING RACK**

To light burner with the Ignitor:
4. Push and turn rear burner control knob to “HIGH.”
5. Push and hold the ignitor button.
6. Burner should ignite within 5 seconds.

To light burner with a match:
4. Apply lit match to burner ports.
5. Push in the rear burner control knob and turn to “HIGH.”

Burner should ignite within 5 seconds.

CAUTION: Check your gas grill after lighting. All burner ports should show a 2.5cm / 1” flame on “HIGH.”



If any of the following symptoms occur there is probably a blockage in the venturi tubes. Shut off gas at once and clean the venturi tubes. See “Venturi Tubes.” (Page 5)

1. You smell gas.
2. A flashback fire occurs.
3. Your gas grill heats unevenly.
4. The burners make popping noises.

IF BURNER DOES NOT IGNITE:

- Push and turn control knob to “OFF.” Wait 5 minutes then try again with control knob set at “MEDIUM”
- If any burner will not light, see “Troubleshooting” on page 21. If problem persists, do not attempt to operate the appliance; contact OMC, your dealer or an approved service center.

SHUTDOWN:

1. Turn LP gas cylinder valve or gas supply valve off.
2. Turn control knobs to “OFF”.

OPERATION

⚠ WARNING

NEVER cover slots, holes, or passages in the front or bottom of the grill or cover an entire rack with material such as aluminum foil. Doing so blocks air flow through the grill and may cause over heating or carbon monoxide poisoning.

First Time Use

Before cooking on your gas grill for the first time, clean the components and preheat the appliance to rid it of any odors or foreign matter in the following manner:

- Remove and clean the cooking grids and Flav-R-Wave™ with mild soap and water
- With cooking grids and Flav-R-Wave™ removed, light the gas grill following lighting instructions (see Page 15) and operate the gas grill on **"Medium"** for **30 minutes**. Next, turn gas source off then turn all control knobs to the "OFF" position
- Let grill cool, then replace the Flav-R-Wave™
- Season the cooking grids by coating grids with an organic cold processed cooking oil with a high smoke point, light the grill and operate on Med/Low for 30 minutes
- Recommended cooking oils:
  - Avocado Oil – smoke point (260C/500F)
  - Rice Bran Oil – smoke point (255C/490F)
  - Canola Oil – smoke point (204C/400F)
- You are ready to grill. Proceed to "Preheating"

Preheating

- **Preheat the gas grill on MEDIUM** with the lid closed for 15 minutes
- Clean cold grids with a nylon grill brush (Item # 65643) or hot grids with a stainless steel wire grill brush (Item #'s 65225, 64014, 64034) and carefully inspect to ensure there are no broken bristles left on the grid
- Coat the grids with a high smoke point cooking oil
- Adjust heat as appropriate for what you are grilling

Lid Position

The position of the lid during cooking is a matter of personal preference, but the gas grill cooks faster, uses less fuel, and controls the temperature best with the lid closed.

A closed lid also imparts a smokier flavor to meat cooked directly on the grid, and is essential for smoking and convection cooking.

Vaporization Systems

Your gas grill is designed for use with the included Flav-R-Wave™ vaporization system. Do not use lava rock, ceramic briquettes or any other vaporization system other than the one that came with the gas grill.

COOKING TEMPERATURES

BROIL KING gas grills are:

- High-performance appliances capable of high searing temperatures
- Designed with controlled airflow to retain heat and minimize fuel consumption

Rarely, if ever, will you require the HIGH setting for extended cooking or preheating.

High Setting

Produces temperatures at the cooking grid of approximately 700 - 750°F (370 - 400° C) with the lid down.

Use high setting only:

- For fast warm-up
- In cold or windy conditions when grilling with the lid up
- To quickly sear steaks before reducing the temperature
- To burn-off food residue from the cooking grids and Flav-R-Wave™ before cleaning (maximum 10 minutes)

Medium/High

Produces temperatures at the cooking grid of approximately 600°F (320° C) with the lid down.

Use medium/high setting to:

- Preheat grill for steaks
- Grill steaks rare & medium rare

Medium

Produces temperatures at the cooking grid of approximately 450° F (230°C) with the lid down.

Use medium setting to:

- Grill steaks medium and medium well
- Grill chops, burgers and vegetables

Medium/Low

Produces temperatures at the cooking grid of approximately 400° F (200°C) with the lid down.

Use medium/low setting to:

- Grill chicken pieces, sausage, fish
- Roast, bake
- Grill dough and pastry such as quesadillas

Low

Produces temperatures at the cooking grid of approximately 310-350° F (155-175° C) with the lid down.

Use low setting to:

- Slow roast and smoke large cuts of meat, delicate fish and for dough and pastry

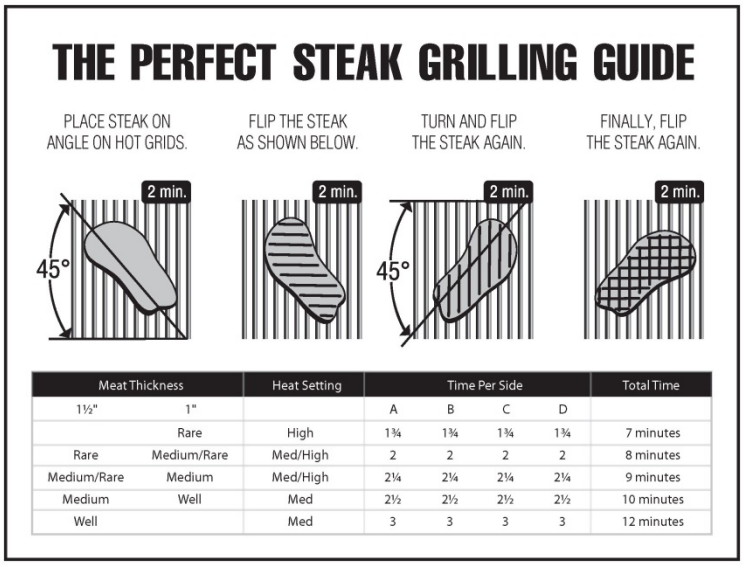
Temperatures are approximate only and vary with the outside temperature and the amount of wind.

COOKING TECHNIQUES

DIRECT GRILLING

The direct grilling method involves cooking the food on grids directly over a lit burner. Direct grilling is the most popular method for most single serving items such as steaks, chops, fish, burgers, kebabs and vegetables.

1. Prepare food in advance to avoid delay and timing problems. If using marinade or spices, they should be applied before placing meat on the cooking grid. If basting with sauces, they should be applied in the last 2-4 minutes of grilling to avoid burning.
2. Organize the area around the gas grill to include forks, tongs, oven mitts, sauces and seasonings to allow you to stay in the vicinity of the gas grill while cooking.
3. Bring meat to room temperature just prior to grilling. Trim excess fat from meat to minimize the “flare-ups” that are caused by dripping grease.
4. Pre-heat the gas grill to the desired temperature with the lid closed.
5. Coat the grids with vegetable or olive oil to prevent food from sticking to the grids.
6. Hold the salt when cooking meats on the gas grill. The meat will stay juicier if the salt is added after cooking.
7. To prevent steaks from “drying out,” use tongs rather than a fork and start on “MEDIUM/HIGH” to sear the meat and seal juices in. Reduce the heat and extend cooking times when grilling thicker cuts of meat.
8. Learn to test when the meat is done by time and feel. Meat firms up as it cooks. When the meat is soft it is rare. When it is firm, it is well done.
9. Follow the perfect steak grilling guide for most meat, fish, poultry and vegetables.



Meat Thickness		Heat Setting	Time Per Side				Total Time
1½"	1"		A	B	C	D	
	Rare	High	1¾	1¾	1¾	1¾	7 minutes
Rare	Medium/Rare	Med/High	2	2	2	2	8 minutes
Medium/Rare	Medium	Med/High	2¼	2¼	2¼	2¼	9 minutes
Medium	Well	Med	2½	2½	2½	2½	10 minutes
Well		Med	3	3	3	3	12 minutes

DIRECT GRILLING GUIDE				
	1” THICK	HEAT SETTING	TIME PER SIDE	TOTAL MINUTES
CHICKEN	MED / WELL	MED / LOW	4 / 4 / 4 / 4	16
CHICKEN WINGS	MED / WELL	MED / LOW	5 / 5 / 5 / 5	20
HAMBURGER	MEDIUM	MED / LOW	3 / 3 / 3 / 3	12
HAMBURGERS 3/4” FROZEN	MEDIUM	MED / LOW	3 / 3 / 3 / 3	12
FISH FILLET	MEDIUM	MEDIUM	2 / 2 / 2 / 2	8 – 10
LOBSTER TAILS SPLIT	MEDIUM	MEDIUM	4 / 4 / 4 / 4	16 - 20
USE SAME TECHNIQUE AS THE PERFECT STEAK GRILLING GUIDE				

COOKING TECHNIQUES

INDIRECT CONVECTION COOKING

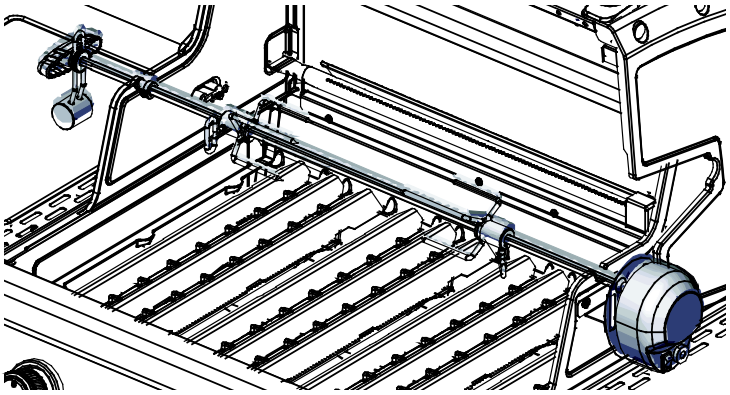
This method is ideal for cooking large cuts of meat such as roasts or poultry. The food is cooked by hot air circulating around it.

- For most applications of convection cooking with and without a rotisserie, a drip pan is recommended to catch the drippings. Place drip pan on top of the Flav-R-Wave, beneath center of food. Put half to one inch of water in the drip pan. Fruit juice, wine or marinade may also be added to enhance the flavor. Do not let the drip pan run dry
- Convection cooking without a rotisserie is best with the lid closed and the heat reduced. All burners can be set to low or the outside burners can be set to medium and the middle burner(s) can be turned off. Turning the center burner off will prevent juices in the drip pan from burning
- Prior to placing the meat on the gas grill, baste the meat with vegetable oil. This will enhance browning on the outside of the meat
- When cooking without a drip pan, close attention must be paid to avoid the risk of a grease fire and is not recommended
- Turn gas grill off and allow it to cool before removing drip pan. The fat drippings are highly flammable and must be handled carefully to avoid injury
- For convection cooking roasts and poultry without a rotisserie, put meat in a roasting rack directly on grids

INDIRECT CONVECTION AND ROTISSERIE COOKING GUIDE			
BEEF ROAST	3 - 6 Lb.	MED / LOW	2 – 4 HRS
BEEF ROAST	6 - 10 Lb.	MED / LOW	3 – 5 HRS
PORK ROAST	2 - 5 Lb.	MED / LOW	2 – 4 HRS
PORK ROAST	6 - 10 Lb.	MED / LOW	3 – 5 HRS
TURKEY OR CHICKEN	2 - 5 Lb.	MED / LOW	2 – 4 HRS
TURKEY OR CHICKEN	5 - 10 Lb.	MED / LOW	3 – 5 HRS
WHEN USING ROTISSERIE BURNER, SET HEAT AT MED / HIGH			

ROTISSERIE COOKING

Follow the steps for Indirect Convection Cooking. (See left)



- The rotisserie can accommodate up to 7 kg (15lb) of meat with the limiting factor of rotating clearance. For best results the meat should be centered on the center line of spit to eliminate an out-of-balance condition
- The rotisserie can be used with the cooking grids in place if space allows
- Fasten the meat securely on the spit prior to placing it on the gas grill. For poultry, tie the wings and legs in tightly

REAR BURNER ROTISSERIE

- Certain models feature a rear burner for rotisserie cooking. The rear burner rotisserie method is the ultimate for cooking roasts and poultry. With the heat source located behind the food, there is no chance of a flare up caused by fat drippings. A dish or drip pan placed below the spit will collect the juices for basting or for preparing a sauce
- The spring loaded rear burner may be easily removed when not in use
- To operate your rear burner, see “Lighting the Rear Burner.” (Page 7)

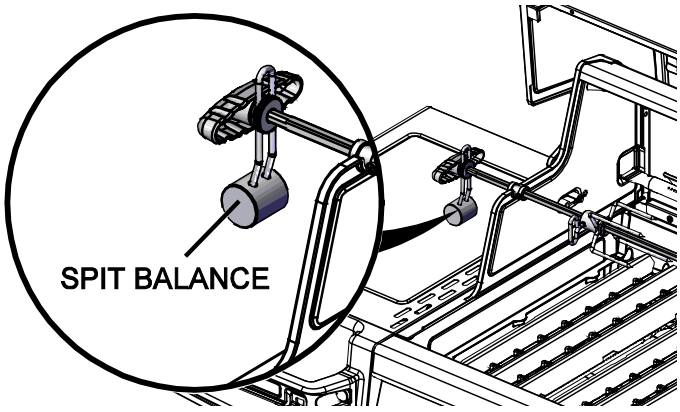
MEAT TEMPERATURE GUIDE			
	RARE	MED	WELL
BEEF / LAMB / VEAL	130°F / 55°C	146°F / 63°C	160°F / 70°C
PORK		150°F / 65°C	170°F / 77°C
POULTRY			170°F / 77°C
HAMBURGER			160°F / 70°C
FOR BEST RESULTS, USE A MEAT THERMOMETER			

COOKING TECHNIQUES

SPIT BALANCE

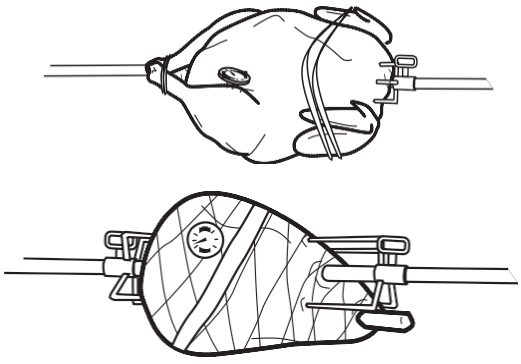
1. Loosen the rod handle to allow the balance to turn freely.
2. Set the rotisserie rod in the slots of the gas grill casting. Let the heaviest side of the meat rotate to the bottom.
3. Adjust the balance to the top of the rod, opposite the heaviest side of the meat.
4. Tighten the rod handle. Periodically, check to see if the meat turns smoothly while cooking. Adjust the spit balance as necessary.

CAUTION: Use oven mitt when adjusting spit balance.



HOW TO USE A PROBE THERMOMETER

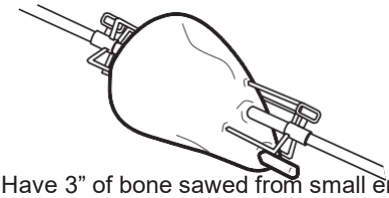
1. The accurate way to determine when a large piece of meat is done is to use a probe thermometer. Insert the thermometer at an angle so the sturdy pointed metal tip rests in the center of the thickest part of the meat. **Be careful that it doesn't touch the spit or the bone, and that the point is not resting in fat (you will notice much less resistance when probing in fat)**.



2. When the thermometer displays the desired temperature the meat is done. Add your sauces during the last few minutes of cooking time and let the meat stand about 15 minutes to firm up. Carve and serve.

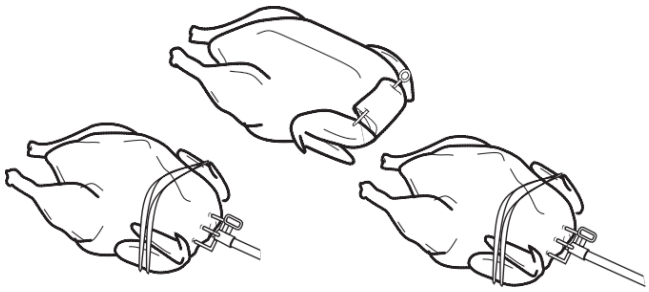
- poultry: insert the tip of the thermometer in the thickest part of the thigh close to the body
- ham or roasts: insert the tip of the thermometer in the center of the heaviest section of the meat

USING A SPIT – LEG OF LAMB



1. Have 3" of bone sawed from small end of leg.
2. Leave meat around bone intact to form a flap.
3. Put a spit fork on rod.
4. Fold flap up and run rod through flap and leg.
5. Put second fork on rod and insert forks in each end of leg. Test for balance. Tighten screws.

USING A SPIT – POULTRY



1. With breast down, bring neck skin up over cavity.
2. Turn under edges of skin; skewer to back skin.
3. Loop twine around skewer and tie.
4. Turn breast side up; tie or skewer wings to body.
5. Put a spit fork on rod. Insert rod in neck skin parallel to backbone and exit just above tail.
6. Put second fork on rod and insert forks in breast and tail. Test for balance. Tighten screws.
7. Tie tail to rod with twine. Cross legs; tie to tail.

THREE CHICKENS ON A SPIT

1. Tie or skewer wings to body.
2. Put a spit fork on rod. Place chickens on rod as demonstrated in the above diagram.
3. Loop twine around tails and legs; tie to rod.
4. Put second fork on rod and insert forks in chicken. Tighten screws.

MAINTENANCE

REGULAR MAINTENANCE

To ensure optimal performance and safety, the following components should be inspected and cleaned as required before use of your gas grill.

COOKING GRIDS - CAST IRON, CAST STAINLESS & HEAVY ROD STAINLESS

BROIL KING® Deep V cast iron and cast stainless cooking grids provide unsurpassed heat retention and grilling performance. BROIL KING® Heavy Rod stainless grids provide maximum durability and good heat retention and good grilling performance. BROIL KING® cast iron grids are coated with a porcelain enamel finish to protect the grids and reduce the tendency of food sticking to grids. Regular use and care improves performance and longevity of the grids.

For optimum performance:

- Before first use and after long periods of storage, wash grids using a light detergent and water and then rinse and dry with paper towel; never air dry grids or use a dishwasher
- Immediately after washing, season cooking grids by coating grids with an organic cold pressed cooking oil with a high smoke point, light the grill and operate on Med/Low for 30 minutes. Recommended cooking oils:
  - Avocado Oil – smoke point (260C/500F)
  - Rice Bran Oil – smoke point (255C/490F)
  - Canola Oil – smoke point (204C/400F)
- Before and after each use, brush grids with a good quality grill brush (Item #'s 65225, 64014, 64034) and lightly coat with a high smoke point cooking oil. This will continue the seasoning process
- **Use medium heat settings to preheat and grill to avoid burning off the protective seasoned coating**
- Avoid applying sugar based marinades or salt to meat before grilling, apply sugar based marinades at end of grilling and salt after grilling
- Use oil based marinades, avoid water based marinades
- Lightly coat food with cooking oil of your choice before grilling
- Turn and rotate your grids periodically
- Ensure the surface of the grid is always coated with a light layer of oil. This helps prevent rust and deterioration and improves the grids non-stick performance
- If rust does occur, Burn-Off the grid, brush with a good quality grill brush and re-season

During long periods of inactivity, grids should be **seasoned**, then stored in a dry place. The grids may be wrapped in protective plastic food wrap. After periods of storage, Burn-Off grids, wash, dry with paper towel and re-season with high smoke point cooking oil.

WARNING:
If you brush the grids with a stainless steel bristle grill brush.

- **If the grill is hot, use caution and oven mitts to protect your hands.**
- **Inspect the grids carefully after brushing to ensure there are no broken stainless steel bristles left on the grid.**

GREASE TRAY

The grease tray is in the pull out drawer located under the control panel. Clean regularly.

FLAV-R-WAVE™

The Flav-R-Wave™ is designed to generate smoke and vapor from the food drippings in order to provide that authentic barbecue flavor while protecting the burner. If residue accumulates on the Flav-R-Wave™, remove the cooking grids and scrape the residue off the Flav-R-Wave™ with the grid lifter. (Part # 60745)

GENERAL CLEANING

Perform a Burn-Off (see below).
When gas grill is cool, remove grids, scrape the Flav-R-Wave™ clean with grid lifter then remove the Flav-R-Wave™.
Clean the interior of the gas grill as necessary by scraping the sides and bottom of the cook box with the grid lifter and vacuum residue.
Rust is a natural oxidation process and may appear on internal stainless steel parts. Rust will not affect performance of your grill.

BURN-OFF

Ignite the burners as per "Lighting" (page 7).
Operate gas grill on HIGH with lid closed for 10 minutes maximum.
Turn the gas source off then turn control knobs to OFF.

ANNUAL MAINTENANCE

The following components should be inspected and cleaned at least once a year or after any period of storage over 30 days to ensure optimal performance, safety and efficiency.

BURNER

Remove burner and inspect for cracks and deterioration. Clean venturi tubes using a pipe cleaner or venturi brush to eliminate any blockages. See "Venturi Tubes." (Page 6) While the burner is removed, remove the grease shields, clean the interior of cook box by scraping the sides and bottom of the cook box and vacuuming.

HOSE

Inspect and replace if necessary. For propane see "Hose and Regulator." (Page 4)

EXTERIOR ALUMINUM COMPONENTS

If white oxidation spots appear, wash the outside of the aluminum cook box with a mild soap and water solution. Rinse the surfaces thoroughly then wipe them with a cloth dipped in cooking oil to restore the luster. For repair of paint scratches and scuffs, use a good quality HIGH temperature (600°F) spray paint for touch-up.

STAINLESS STEEL & PORCELAIN COMPONENTS

Wash with soap and water. Use stainless steel cleaner or "Bar Keepers Friend" to polish and remove stains or rust marks if they occur. Weathering and extreme heat can cause a stainless steel lid to turn a tan color. This is discoloration and is not considered a manufacturing defect.

RESIN COMPONENTS AND SIDE SHELVES

Wash with soap and water.

REPLACEMENT PARTS

If a problem is found with the regulator, hose, burner, or control valves, do not attempt repair. See your dealer, approved service center, or contact the factory for repairs or replacement parts. To ensure optimum performance, use only original BROIL KING® replacement parts.

LEAK TEST

When reconnecting a gas cylinder on propane models, be sure to check for leaks. See "Leak Testing." (Page 5)

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
SMELL OF GAS	**SHUT OFF LP CYLINDER VALVE AT ONCE. DO NOT USE THE APPLIANCE UNTIL LEAK IS SEALED.**	
Leak detected at cylinder, regulator or other connection.	1. Regulator fitting loose. 2. Gas leak in hose/regulator or control valves.	1. Tighten fitting and “Leak Test.” (page 5) 2. See authorized service center.
Flames Beneath Control Panel (Flashback Fire)	1. Venturi blocked.	1. Remove burner and clean venturi. See “Venturi Tubes” (page 5)
Flickering Burner Flame or Low Temperatures on HIGH Setting	1. Excess flow safety device has been activated in connection between cylinder and barbecue.	1. Turn LP cylinder valve off then turn all burners to OFF position. Disconnect the regulator from the cylinder. Wait two minutes. Re-attach regulator to the cylinder. Open the cylinder valve slowly. Wait one minute. Light grill as per “Lighting” (page 6)
Burner Not Lighting	1. Out of LP Gas. 2. Ignitor issue. 3. Excess flow safety device has been activated. 4. Regulator is not fully connected to the cylinder valve. 5. A leak in the system causing the excess flow device to activate. 6. Venturi blocked or misaligned with valve orifice. 7. Orifice(s) blocked. 8. Hose is twisted.	1. Refill LP Gas Cylinder. 2. Try manually lighting burner with a match. See “Lighting” (page 6). If burner lights successfully, it is an ignitor issue. See “Ignitor not Working” below 3. Follow “Flickering Flame or Low Temperatures on HIGH setting” solution above. 4. Tighten the regulator hand wheel. 5. Leak test connections to determine loose fitting. Tighten fitting. Leak test system. 6. Remove burner, clean venturi and realign with valve orifice. See page 5 for assistance. 7. Remove burner, clean orifices with a pin or fine wire. Do not drill orifices. 8. Straighten hose. Keep away from bottom casting.
Ignitor Not Working	1. Ignitor battery is dead 2. Ignitor wire(s) not connected 3. Electrode misaligned on burner 4. Ignitor malfunction	1. Replace battery 2. Ensure main burner and side burner electrode wires are all connected 3. Realign electrode and clear any surrounding debris from area 4. Use “Match Lighting” procedure. (Page 6)
Decreasing Heat, “Popping Sound”	1. Out of LP Gas. 2. Venturi blocked.	1. Refill LP Gas Cylinder. 2. Remove burner, clean venturi. See “Venturi Tubes” (Page 5) for assistance.
Hot spots on Cooking Surface	1. Venturi blocked 2. Debris buildup on Flav-R-Wave	1. Remove burner, clean venturi. See “Venturi Tubes” (page 5) for assistance. 2. Scrape off Flav-R-Wave and vacuum
“Flare-ups” or Grease Fires	1. Excessive grease buildup on vaporizer or in gas grill cook box 2. Excessive heat.	1. Thoroughly scrape off Flav-R-Wave and inside of cookbox then vacuum out debris 2. Turn burner controls to a lower setting
Regulator Humming Noise	1. Cylinder valve opened too quickly.	1. Open cylinder valve slowly.
Yellow Flame	1. Some yellow flame is normal. If it is excessive, the venturi may be blocked. 2. Burner ports blocked.	1. Remove burner, clean venturi. See “Venturi Tubes” (page 5) for assistance. 2. Remove burner & clean with soft bristle brush (e.g. toothbrush).
Inside of Lid Appears to be Peeling	1. This is a build-up of grease. The inside of lid is not painted and cannot peel.	1. Clean with stiff bristle brush or scraper.
Cooking Grids Rusting	1. Porcelain enamel has been chipped	1. See “Maintenance” (page 10) for help
Control panel or oven lights not working	1. Unit not connected to power. 2. Faulty transformer. 3. Loose or corroded connections. 4. Bulb blown	1. Connect GFI power cord to appliance. Plug to working power outlet. 2. Check transformer output is 12Vac. Replace if required. 3. Clean connections and ensure all connectors are pushed together firmly. 4. Replace bulbs.

If troubleshooting fails to solve any of these or any other issues, please visit www.omcbbq.com for more information including troubleshooting videos, tricks and tips or call customer service at 1-800-265-2150

WARRANTY

The BROIL KING® Warranty is effective from date of purchase and is limited to the repair or replacement of parts at no charge which prove to be defective under normal domestic use.

In United States and Canada replacement is FOB Factory.

In all other countries replacement is FOB BROIL KING® Distributor (Consult your Dealer for name of BROIL KING® Distributor). All other costs are the responsibility of the owner.
This warranty is extended only to the original purchaser as indicated on the warranty registration and applies only to products sold at retail and only when used exclusively by the purchaser in country where purchased. (Different types of gas used in different countries require appropriate valves, orifices and regulators.)

WHAT IS COVERED

	IMPERIAL REGAL BARON	CROWN SIGNET MONARCH	GEM
STAINLESS STEEL LID & PORCELAIN STEEL LID COMPONENTS	Lifetime	Lifetime	10 Years
CAST ALUMINUM COOK BOX & COMPONENTS	Lifetime	Lifetime	10 Years
STAINLESS STEEL COOK BOX	Lifetime	Lifetime	
STAINLESS STEEL COOKING GRIDS	15 Years	5 Years	
CAST IRON GRIDS COOKING GRIDS		2 Years	2 Years
STAINLESS STEEL FLAV-R-WAVE™	15 Years	3 Years	2 Years
DUAL-TUBE™ BURNERS	15 Years	10 Years	
STAINLESS STEEL MAIN BURNERS			5 Years
SIDE BURNER	15 Years	2 Years	2 Years
REAR BURNER	15 Years	10 Years	
INFRA-RED SIDE BURNER (EXCLUDING SCREEN)	15 Years	5 Years	
STAINLESS STEEL COMPONENTS	15 Years	5 Years	
REMAINING PARTS & PAINT	15 Years	2 Years	2 Years

WHAT IS NOT COVERED

Any failures or operating difficulties due to accident, abuse, misuse, alteration, misapplication, vandalism, improper installation or improper maintenance or service, or failure to perform normal and routine maintenance, including but not limited to damage caused by insects within the burner tubes, as set out in the owner's manual.

Deterioration or damage due to severe weather conditions such as hail, hurricanes, earthquakes or tornadoes, discoloration due to exposure to chemicals either directly or in the atmosphere.

Shipping or transportation costs.
Removal or re-installation costs.
Labor costs for installation and repair.
Cost of service calls.
Liability for indirect, or consequential damages.

Gas grills deemed to be used as a communal amenity or gas grills not directly used and maintained by the purchaser

REPLACEMENT PARTS

"Genuine BROIL KING® Gas Grill Parts" must always be used for replacement. Use of any other parts will automatically nullify the above warranty.

BURNERS

The life of BROIL KING® burners (made of stainless steel) depends almost entirely on proper use, cleaning and maintenance. This warranty does not cover failure due to improper use and maintenance. For proper burner maintenance instructions see page 10.

PORCELAIN-COATED COOKING GRIDS

All BROIL KING® cast iron cooking grids are coated with a durable porcelain enamel to assist in cleaning and reduce the tendency of food sticking to the grid. Porcelain is essentially a glass coating. Some chipping may occur if mishandled. This will not affect the use or performance of the grids. The grids are not warranted against chipping or rusting due to mishandling. Consult "Maintenance" (page 10) for proper cooking grid care and cleaning instructions.

VAPORIZATION SYSTEMS

BROIL KING® Gas Grills are designed for use with Flav-R-Wave™ vaporization systems. Use of any other product will nullify the warranty.

FLAV-R-WAVE™

The Flav-R-Wave™ is warranted against defects in materials or rust through for a period of 3 years on Monarch, Signet, Baron, 5 years on Sovereign, Regal and Imperial and 2 years on all other models from date of purchase. Surface rust will not affect the performance of the Flav-R-Wave™ and is not covered by the warranty. See "Maintenance" (page 10) for proper Flav-R-Wave care instructions.

FREIGHT

Courtesy shipping is provided for warranty orders during the six (6) months after the original date of purchase. After this period, a freight charge will be applied to all warranty orders.

REGISTER YOUR GRILL

You can register your grill's warranty online at www.omcbbq.com or by calling 1-800-265-2150.

WARRANTY CLAIMS

All warranty is handled directly by BROIL KING®. Parts must be returned to BROIL KING® Warranty Department, shipping charges prepaid, accompanied by Model Number, Serial Number, and if your grill is not registered, proof of purchase (copy of sales slip or invoice). If inspection confirms the defect, BROIL KING® will repair or replace such part in accordance with the terms of the warranty. On receipt of letter or fax (not by phone) BROIL KING® may at its option not require part or parts to be returned.

NON AMERICAN/CANADIAN RESIDENTS

The above warranty is administered by the BROIL KING® distributor in your country. Contact your dealer for the name of your BROIL KING® distributor.