



Barbecue Grills

United States and Canada

Owner's Manual



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Cal Spas Home Resort™

www.calflamebbq.com

LTR50001038, Rev. C
12/26/11

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Read all instructions before you operate your grill.

WARNING

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

Do not store an LP cylinder not connected for use in the vicinity of this or any other appliance. A fire resulting in serious injury or death may occur.

If you are installing a natural gas grill, you are responsible for ensuring that the natural gas line installed is safe to use. LMS will not be held responsible for an improperly installed gas line.

Save these instructions!

CONTACT INFORMATION

For customer service, please contact your authorized dealer immediately. If you need additional information and/or assistance, please contact:

LMS Customer Service Department
1462 East Ninth Street
Pomona, CA 91766.

Toll Free: 1-800-CAL-SPAS
Fax: 1-909-629-3890

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Due to continuous improvement programs, all models, operation, and/or specifications are subject to change without prior notice.

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Using Your Grill

Read all instructions before you operate your grill.

We recommend you wash your entire grill with soap and water prior to lighting it for the first time. Oils are used during the manufacturing process and some residual oil may still be on the stainless steel parts of your grill. Washing will reduce the possibility of discoloration. We also recommend you keep your grill covered when not in use. This will minimize the amount of dust and dirt that accumulates on your grill and extend the life of your grill.

Remember to use your Cal Flame grill safely by following these reminders:

- It is dangerous to use barbecue grills and side burners in any manner other than for what it is designed for.
- Do not use charcoal in a gas grill or side burner.
- Do not heat sealed containers such as cans or jars on grills or side burners. Explosion may result resulting in injury or death. Any sealed container, such as a pressure cooker, must have a properly operating pressure relieve valve to minimize explosion hazard.
- Never put combustible material such as paper, cloth, or flammable liquids on your grill at any time. Do not use grill, side shelves, cabinets, or any area around grill to store flammable materials.
- Never operate main burners and rear infrared convection burners at the same time. Excessive grill temperatures will result.

Basic Grill Operation

Before lighting, make sure all burner controls are off. Do not attempt to light the burners if the smell of gas is present. Check the connection with a soap and water solution after attaching the hose. For LP units, make sure there is gas in the tank and it is sitting upright. For natural gas units, make sure the shut off valve is on.

1. Make sure the drip tray is in place.
2. Light the grill burners using the instructions on the previous page.

3. Turn the control knob to HIGH and preheat the grill for 15 minutes. Close the top cover during the appliance preheat period.
4. Place the food on the grill and cook to desired completion. Adjust heat setting if necessary. You may set the control knob to any position between HIGH and LOW.
5. Allow the grill to cool and clean the drip tray after each use.

Do not leave the grill unattended while cooking.

Warning

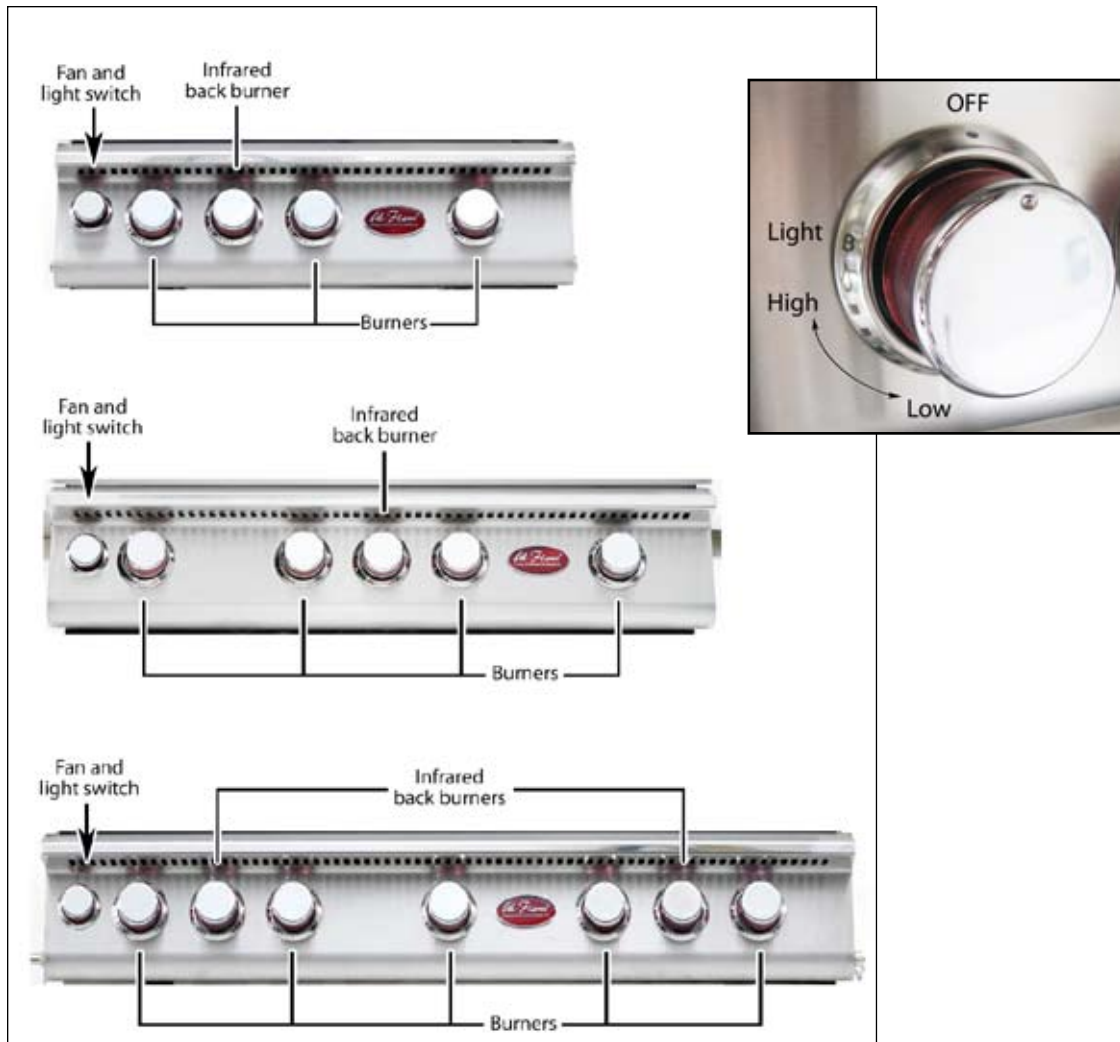
NEVER cover the entire cooking or grill surface with griddles or pans. Overheating will occur and burners will not perform properly when combustion heat is trapped below the cooking surface.

CAUTION: NEVER spray water on a hot gas unit. This may damage porcelain or cast iron components.

Grill Controls

The controls shown below are for Cal Flame drop-in grills. Familiarize yourself with these controls before lighting your grill.

The ON / OFF switch controlling the fan and halogen light is located on the control panel at the front lower left side.



Lighting the Burners

Each time you light the grill, check the following:

- Inspect the hose before using the grill. If there is excessive abrasion or wear, or if the hose is cut, it must be replaced prior to using the grill. If you need a replacement hose, contact your Cal Flame dealer.
- Ensure the area around the barbecue is clear of flammable substances such as gasoline, yard debris, wood, etc.
- Ensure there is no blockage of the airflow through the vent space located below the face of the unit.
- When using propane gas, keep the special ventilation openings in the enclosure free and clear of debris.
- If connected to a propane cylinder, carefully inspect the rubber hose attached to the regulator before each use.
- Ensure the propane cylinder, regulator, and rubber hose are installed in a location not subject to heating above 125° F (51° C).
- Ensure the burner flames burn evenly along both sides of each burner with a steady flame (mostly blue with yellow tipping). If burner flames are not normal, check the orifice and burner for insects or insect nests.
- Ensure the in-line gas valve or gas cylinder valve is always shut OFF when the barbecue is not in use.
- Do not operate the side burner with its cover closed or the back burner with its cover installed.

Electronically Lighting the Burners

1. Open the hood.
2. Keep your face as far away from the burners as possible.
3. Press and rotate the burner knob counter clockwise past the light position to HIGH. You will hear a loud click as the electronic lighter produces a spark.
4. Listen for the sound of the gas igniting. If the burner does not light on the first try, repeat immediately.
5. If the burner does not light after three attempts, turn the control knobs to the OFF position. Wait five minutes until the gas clears before attempting to light it again.
6. Repeat the procedure or try the manual lighting procedure below.
7. Upon successful lighting, repeat the process on the other burners you wish to light.
8. To shut off the burners, rotate the knob and turn to OFF. It is normal to hear a popping sound when the burners are turned off.

Manually Lighting the Burners

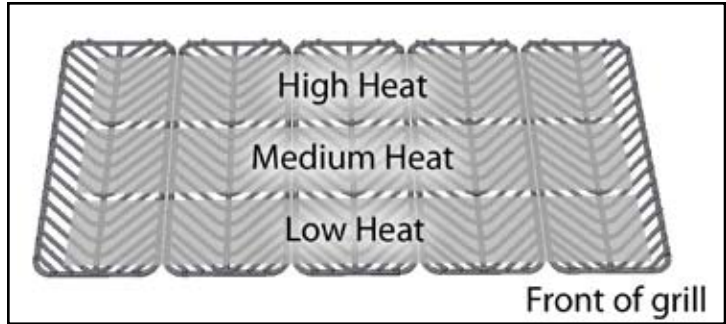
WARNING: Do not use standard matches or cigarette lighters to perform match lighting procedures. Serious burns can occur and lighters can explode.

1. Open the hood.
2. If you have just attempted to light the burner, allow five minutes for any accumulated gas to dissipate.
3. Slide out the drip tray from the grill.
4. Keep your face as far away from the burners as possible.
5. Light and insert a long stem match, holding it near the burner ports.
6. Push in and turn the control knob just past the LIGHT position to HIGH.
7. Listen for the sound of the gas igniting. If the burner does not light after five seconds, turn the control knobs to the OFF position. Wait five minutes until the gas clears before attempting to light it again.
8. If the burner does not light after several attempts see Troubleshooting Guide in the back of this manual.

Heat Distribution on the Cooking Grates

When you place food your Cal Flame grill, remember that the back of the grill tends to be hotter than the front.

As your food cooks, you should periodically shift it to different spots on the cooking grates to ensure everything cooks evenly without burning.



Convection Fan

A convection grill has an internal fan that circulates heated air evenly throughout the grilling area when the hood is closed. Cooking in this way distributes heat more efficiently so you no longer have to be concerned with "hot spots" on the grill where food tends to burn. The fan switch is located at the far left of the front panel of the grill.



Cooking with the Rotisserie

The rotisserie cooks with the infrared back burner, which provides intense searing radiant heat. The location of the rotisserie and burner allows the placement of a rotisserie-basting pan (NOT included) beneath the food to collect juices and drippings for basting and gravy.

Before you can use the rotisserie, you need to mount the brackets and motor to the grill. See page 9 for instructions.

The rotisserie does not require an additional outlet as it is powered by a 12-volt input located on the side of the grill connected with a stainless steel sheathed power cable. See page 9 for more information.

Loading food on the rotisserie rod

1. Hold the handle firmly while sliding one of the fork assemblies (prongs facing away from the handle) onto the rod.
2. Push the rod through the center of the food, then slide the other holder (prongs toward the food) onto the rod.
3. Center the meat on the rod and push the fork assemblies firmly together.
4. Tighten the thumbscrews.
5. To secure any loose portions of your meat, use butcher string (never use nylon or plastic string).
6. Place a basting pan under the food to collect the drippings.

Cooking with the rotisserie

1. Remove the warming rack.
2. Place the pointed end of the rotis rod into the motor and rest the threaded end on the support at the side of the grill. When the rod is pushed as far as possible into the motor, the grooved end of the rod should rest on the right side bracket.
3. If necessary, to offset unbalanced loads, slide the counter weight on to the rod. With the counter weight loose, allow the loaded rod to rotate and come to a stop. Now rotate the counter weight above the rod in a vertical position and tighten the thumbscrew. You can slide the counter weight away from or closer to the rotisserie rod as needed for balanced operation.
4. Light the infrared back burner. It will reach cooking temperature in about one minute. The orange/red glow will even out in about five minutes. The back burner flame can be adjusted to the level of intensity you prefer.



The rotisserie motor has an ON / OFF switch that controls the single-speed motor. The rotisserie rotates in both directions. You can change the direction by turning it off and turning it back on again.



Optional Grill Accessories

These grill accessories are optional and may be ordered directly from Cal Flame customer service. See page 21 for ordering information.

Sear Zone Infrared Burner



BBQ07890P

The Sear Zone infrared burner can be use in place of any regular burner. Producing intense infrared heat, it cooks quickly with searing heat to seal in juices. (Note: The Sear Zone infrared burner is NOT the same as the infrared back burner used with the rotisserie.)

Instructions for installing the optional Sear Zone burner are on page 32.

Pizza Brick Tray



BBQ07900

You can use your grill as a pizza oven using the pizza brick tray. Made of stone and stainless steel, it fits on any Cal Flame grill and is large enough to cook a large sized pizza.

Set the tray on the grates, set the burners to medium heat, and heat up your grill for about 10 minutes. Place the pizza on the tray and close the hood. Depending on the size of the pizza, it will need between 10 to 20 minutes to cook.

Smoke Tray

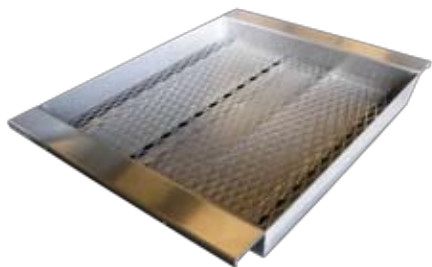


BBQ08854P

Any burner can be switched to accommodate the Smoke Tray.

1. Remove a grate and a flame tamer (the angular metal piece covering the burner). Do not remove the burner.
2. Set the smoke tray in the grilling area so that the notches in the end rest on the round metal posts attached to the inside of the grill area. The smoke tray will resting over, but not ON, the burners.
3. Place wood chips or charcoal in the Smoke Tray.
4. Replace the grate.
5. Ignite the burner under the Smoke Tray and turn it up to HIGH.
6. Let it burn until the wood chips start to smoke. This should take 7 to 10 minutes. Then lower the heat to low.

Charcoal Tray



BBQ11859

Use Turn part of your Cal Flame grill into a charcoal and gas grill. Turn off the gas and wait for the grill to cool before setting the Charcoal Tray in place.

Placement

1. Remove two grates (left or right side) and the flame tamers (the angular metal pieces covering the burners). Do not remove the burners.
2. Set the charcoal tray in the grilling area so that the notches in the side rest on the round metal posts attached to the inside of the grill area. The charcoal tray will resting over, but not ON, the burners.
3. Place the ash screen in the Charcoal Tray.

Using the Charcoal Tray

The Charcoal Tray is designed and intended to be used with plain charcoal. Quick-light charcoal can produce excessive heat and may be dangerous.

Make sure the drip tray is in the grill before you begin.

Keep the hood up until you are ready to cook.

1. Arrange charcoal in the tray.
2. Replace the grates.
3. Ignite both burners under the Charcoal Tray and turn them up to HIGH.
4. Let them burn until the charcoal remains lit without help from the burners. This should take 7 to 10 minutes.
5. When the charcoal is ready, turn off the burners.
6. Lower the hood if you wish to use the grill as a smoker.

Removal and Clean-up

When the grill has cooled and the charcoals are dead, clean the grill as described in the grill owner's manual.

Remove ash from the Charcoal Tray immediately after use. Do not let it accumulate. Do not use the grill again until charcoal ash has been removed from the Charcoal Tray and the drip tray.



Never use the Charcoal Tray over a Sear Zone infrared burner.



NEVER use charcoal in a gas grill without the charcoal tray. Doing so will void your warranty.

Rotisserie Basket



BBQ08892

Perfect for roasting vegetables or cooking fish, this rotisserie basket makes preparing these foods and others easy!

Open the rotisserie basket and set your food inside. Close and clamp it shut, then slide the rotisserie rod lengthwise through it. You can use it with either the standard burners or the infrared back burner.

Deep Fryer Helper Set



BBQ09902

The Deep Fryer Helper can turn part of your grill into a deep frying station. It is designed to fit in any Cal Flame grill.

The Deep Fryer Helper Set is shipped with its own instructions for placement and use. Read them carefully before use.

The Deep Fryer Helper Set comes with two commercial-sized fryer baskets, a built-in thermometer, and storage hangers allow baskets to be stored within unit. The lid closes and seals for easy storage—wet (with oil) or dry (drained). The lid can be removed for easy cleaning.

Griddle Tray



BBQ07862P

The griddle tray is an optional feature installed in Cal Flame barbecue islands. Included with the griddle tray is an enclosure for storage.

When sliding the griddle out of the enclosure, always do it slowly as the heavy weight may cause you to suddenly drop the griddle. Lift the griddle out of the enclosure instead of sliding it all the way out.

Remove two cooking grates for the griddle space. Leave grease in the front drain when cooking. Wait until the griddle cools down when done cooking. Use both hands when removing the griddle and draining the grease.

Before storing the griddle, make sure it is clean and dry. Slide the griddle into the enclosure for safe and easy storage.

Pull-Out Cutting Board



BBQ07891P

The pull-out cutting board is an optional feature installed in Cal Flame barbecue islands.

The cutting board has an extra large cutting surface with a bacteria resistant surface. It is on a gliding mechanism that locks in full open position. A switch in the slider allows the cutting board to be removed for cleaning.

Cleaning and Maintenance

To ensure safe and proper maintenance, we recommend you follow these directions carefully.

Clean internal parts of the grill regularly as determined by the amount of use and foods cooked. The entire grill should be cleaned at least once a year.

In addition, keep the area around your grill clear and free from combustible materials, gasoline, and other flammable vapors and liquids. Do not obstruct the flow of combustion and ventilation air.

DISCONNECT ELECTRICAL SUPPLY BEFORE CLEANING ANY PART OF THE GRILL.

These instructions describe the best way to care for your stainless steel. They apply to grills and barbecue islands with stainless steel fixtures.

Although stainless steel grills will discolor and accumulate grime with regular use, they can keep their original shine with periodic cleaning. We strongly recommend using a surface protectant to prevent smudging and surface rust from accumulating.

The easiest way to clean the grill is immediately after cooking is completed. Doing so will extend the life of your grill, prevent grease fires, and present a pleasant appearance while you grill.

Stainless Steel Care and Cleaning

All exposed stainless steel surfaces require special attention if you want to keep them looking clean and bright. Following these simple instructions will help avoid scratching or damaging the finish and keep your stainless steel attractive.

Cleaning instructions for grill interiors, including racks and burners, are described after this section.

1. Clean

Thoroughly clean stains, food, and grime using a sponge or damp cloth with warm water and a mild dish soap. Use Fantastik or Formula 409 to remove heavier soil.

2. Rinse

Thoroughly rinse all surfaces and dry them completely with a clean towel. Do not allow stainless steel to air dry.

3. Polish

We strongly recommend that you apply a surface protectant to all exposed stainless steel surfaces.

Spray a small amount of WD-40 or Sheila Shine on a piece of paper towel and rub with the grain over the surface of the appliance. Using a clean terry cloth or paper towel, polish the appliance by rubbing with the

Cleaning Products and Materials

DO NOT USE these common cleaning products and materials – they will damage the surface of your stainless steel.

- CLR
- Lime-Away
- Oven cleaner
- Cleansers such as Ajax or Comet
- Ammonia
- Bleach
- Chlorine
- Steel wool pads
- Wire brushes
- Scrapers
- Pumice

We recommend these products for cleaning your stainless steel:

- Mild dish detergent such as Dawn
- Formula 409
- Fantastik
- Instant Rust Out (exterior ONLY)
- WD-40 (exterior ONLY)
- Sheila Shine (exterior ONLY)

We have had best success with Instant Rust Out, but WD-40 works very well too. Instant Rust Out is available in some hardware stores. WD-40 is widely available.

Baking soda, lemon oil, olive oil, vinegar, or club soda can also be effective for cleaning light soil on all stainless steel surfaces.

Do not use steel wool or wire brushes to scrub your grill.

For light soil, use a damp sponge or cloth.

For heavier stains, use a Scotch-Brite scrubber or similar product.

grain until excess liquid is removed and the surface shines. It should not be oily to the touch, however some residue is acceptable.

Furniture polish, such as Old English, can be effective for polishing stainless steel and protecting the surface.



Caution

Do not use Instant Rust Out, WD-40, or Sheila Shine near food or on food preparation surfaces as it is a health hazard. This includes the interior of the grill, grill racks, stainless steel sinks, the inside of cabinets, warming drawers, and ovens.



Fire Hazard

NEVER spray WD-40 or Sheila Shine near an open flame! These products are extremely flammable while in their aerosol forms.

Rust Removal

It is a common misconception that stainless steel does not rust. It does not stain, corrode, or rust as easily as ordinary steel (it *stains less*), but it is not stain-proof. If not properly protected and maintained, it can corrode, pit, and discolor.



Important

Because salt will accelerate rust and corrosion, grill or barbecue island owners who live near the beach need to be diligent in maintaining their stainless steel hardware. You need to clean and polish your stainless steel frequently, apply a protectant, and ensure water does not collect and puddle.

There are two methods of rust removal we recommend:

1. Rust removal with Instant Rust Out:

Spray exterior stainless steel surfaces with Instant Rust Out. Let it stand for about 30 seconds, then wipe with a clean cloth. Apply a second time if necessary.

Instant Rust Out will leave a white residue which can be rinsed off with water. Wipe the grill dry with a clean cloth and apply Sheila Shine or WD-40 as a surface protectant.

2. Rust removal with WD-40 or Sheila Shine:

Spray exterior stainless steel surfaces with WD-40 or Sheila Shine and wipe down with a dry cloth or paper towel until surface is free of rust. If there is significant rust or corrosion, use a Scotch-Brite scrubber.

Both of these products will act as a surface protectant and help resist smudges, stains, and rust.



Caution

Although nitric acid (also called aqua fortis) can be effective for rust removal, it is a highly corrosive chemical. Because of the potential for injury or damage to your stainless steel, we do not recommend using nitric acid.

Cleaning the Interior of Your Grill

1. Thoroughly clean stains, food, and grime using a sponge or damp cloth with warm water and a mild dish soap. Use Fantastik or Formula 409 to remove heavier soil.
2. Thoroughly rinse all surfaces and dry them completely with a clean towel. Do not allow water to accumulate and puddle on stainless steel. Water from various sources such as garden hoses contains iron which will give the appearance of rusting on stainless steel. If allowed to stand for long periods of time on stainless steel, it will cause pitting.
3. The racks, flame tamers, and flavor bars can all be removed for cleaning and are dishwasher safe.

Burners

Spiders and small insects occasionally inhabit or make nests in the burner tubes, obstructing the gas flow. Sometimes this results in a type of fire in and around the gas tubes called "flashback". To reduce the risk of flashback, this procedure should be followed at least once a month or when your grill has not been used for an extended period of time.

IMPORTANT: Prior to starting this procedure, turn OFF all of the gas control knobs, shut off the fuel supply, and disconnect the fuel line.

The burners can be removed by removing the locking pins and lifting them out. The locking pins are located under the grill toward the back. They are used to keep the burners in place during shipping and are not necessary to operate your grill. Remove burners from the grill by carefully lifting each burner up and away from the gas valve orifice.

Use a wire brush to clean the outer surface of each burner to remove food residue and dirt. Clean any clogged ports with a stiff wire such as an opened paper clip.

Inspect each burner for damage (cracks and holes). If any damage is found, discontinue grill usage until you replace the burner.

Upon reinstallation, inspect the gas valve orifices for cleanliness and condition and the location of the igniters. When you replace the burners, you do not need to replace the locking pins.

Cooking Grates

Use a solution equal parts detergent and hot water just as you would for any cooking equipment. A stiff wire brush or steel wool may also be helpful in removing grime and food deposits.



Note

Do not use a wire brush or stainless steel on any other part of your grill or any other stainless steel surface except the cooking grates or the griddle!

Drip Pan

The full width drip pan will collect grease from the main grill area. The pan should be cleaned after every use to avoid the possibility of a grease fire. Be sure to allow the drip pan to cool prior to cleaning. You may clean the drip pan with a solution of warm soapy water. Make sure to rinse thoroughly to avoid staining.

Griddle

To prevent burns or injury, make sure the griddle is completely cool before cleaning.

The griddle is made from non-magnetic, 304 grade stainless steel. There are various stainless steel cleaners available. Always use the mildest cleaning procedure first, and always scrub in the direction of the grain. Use soapy water for most cleaning. A non-abrasive scrubber may also be helpful in removing grime and food deposits. Steel wool may be used for especially difficult spots. Wipe all areas dry before storing.

Steam Cleaning Your Grill

Steam cleaning the interior of your grill is very effective and will not void your warranty. Portable hand-held steam cleaners are inexpensive and do not require chemicals. You can steam clean all parts of your Cal Flame grill, including the burners. When you are finished, make sure you wipe all surfaces down.

If you spray the burners, ignite them and let them burn for about 10 minutes to prevent any water from accumulating inside them.

Covering Your Grill

When not in use and after cooling, cover your grill with our full length, zippered side canvas cover. (See your local Cal Flame dealer for details.) The cover will help protect your grill from detrimental effects of weather and environmental pollutants. Never put a cover on a hot grill. Allow the grill to cool before covering.

Seasonal Cleaning

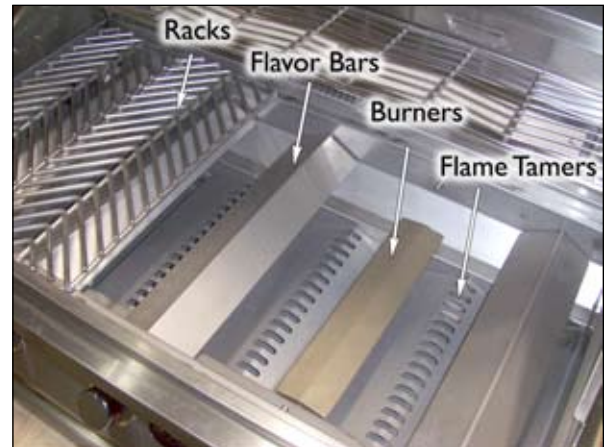
If you haven't used your grill in a few months, we recommend that you clean the burners and the interior of your grill. Cleaning the burners periodically will keep them burning evenly and cleanly and help prevent "flashback", a type of fire in and around the gas tubes. This happens when spiders and small insects inhabit or make nests in the burner tubes, obstructing the gas flow.

IMPORTANT: Before removing the burners, turn OFF all of the gas control knobs, shut off the fuel supply, and disconnect the fuel line.

1. Remove the components

Remove the racks, the flavor bars, and the flame tamers from the grill and set them aside. They don't need to be in the grill in order to clean them. In fact, all of the items can be cleaned in a dishwasher if you wish.

Leave the drip pan in place for now.



2. Remove the burners

The burners can be removed by taking out the locking pins and carefully lifting them up and away from the valve orifice. The locking pins are located under the grill toward the back. They are used to keep the burners in place during shipping and are not necessary to operate your grill.



3. Clean the burners

Use a wire brush to clean the outer surface of each burner to remove food residue and dirt. Clean any clogged ports with a stiff wire such as an opened paper clip.

Make sure the flow channel is clear. The flow channel is the narrow slot on the bottom of the burner near the anchor post.

Inspect each burner for damage, such as cracks and holes. If any damage is found, don't use the grill until you replace the burner.



4. Clean the grill interior

While the burners are out of the grill, you can use this opportunity to clean the interior of your grill thoroughly. You should still have the drip pan in place to catch water and grime as you clean the grill interior.

When the grill interior is clean, remove the drip pan. Dump out any water and grime residue and spray it off with a garden hose.

Dry both the grill interior and the drip pan thoroughly to prevent water damage.

5. Clean the components

You can clean the racks by first soaking them in warm water and dish detergent and scrubbing them with a wire brush.

Clean the flavor bars and the flame tamers with dish detergent. You can use any kind of scrubber you wish: a non-abrasive pad, steel wool, or a wire brush, depending on your needs.

Dry all of the components thoroughly to prevent water damage.

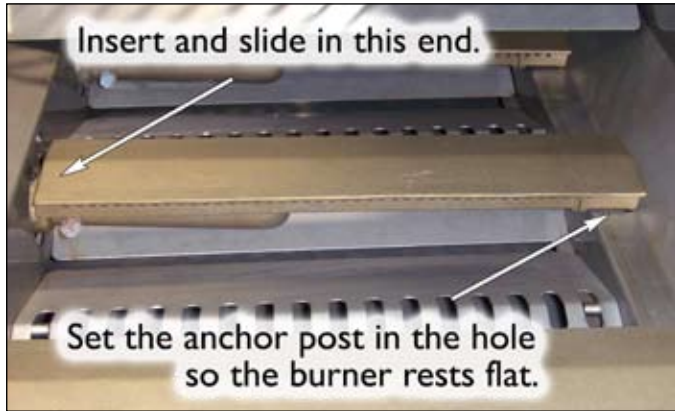
6. Replace the burners

Before you replace the burners, inspect the gas valve orifices for cleanliness and condition and the location of the igniters.

Set the flame tamers in place before you replace the burners.

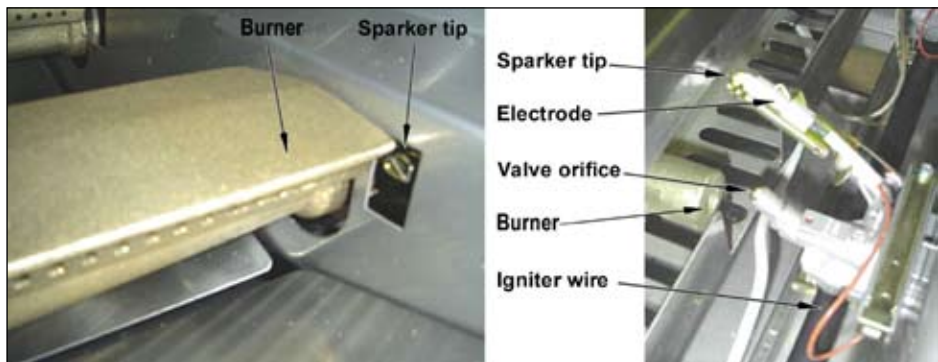
Carefully insert the burner into the opening for the valve orifice and gently slide it in. Then set the other end of the burner down so the anchor post rests in the hole.

When you replace the burners, you don't need to replace the locking pins.



7. Replace the components

Put all of the components back as they were, as shown in step 1.



Light Bulb Replacement

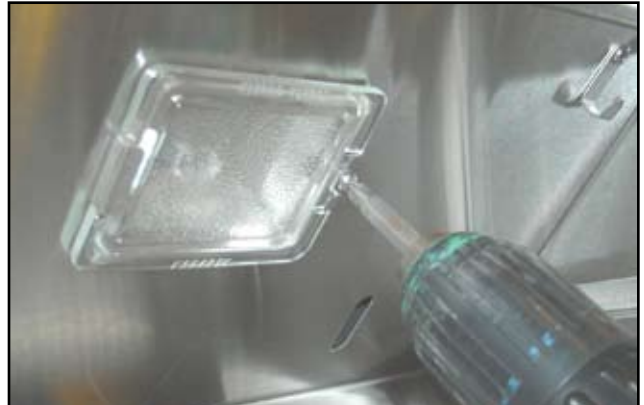
WARNING: Never attempt to replace a light bulb when the grill is in use. Serious burns will result.

WARNING: Never touch halogen bulbs with your bare fingers. Use a tissue or a small piece of paper to handle bulbs. Oils from your hands will damage halogen bulbs.

Cal Flame grills use two different types of light housings. These instructions describe how to change the bulb in both types.

Light Lens with Screw Clip

1. Remove the screw at the left or right of the lens.
2. Carefully pull the lens away and out of the light fixture. Set the lens, screw clip, and screw aside.
3. Unscrew the two screws located at the side of the white ceramic light fixture.
4. Using a tissue or small piece of paper, pull the burnt bulb out of the socket.
5. Using a tissue or small piece of paper, carefully push a new bulb into the socket, making sure both wires on the bulb go into the light socket evenly.
6. Tighten the two screws on the side white ceramic light fixture.
7. Replace the light lens by replacing the screw and screw clip.



Snap-in Light Lens

1. Using a small standard screwdriver, carefully pop out the light lens and set it aside.
2. Using a tissue or small piece of paper, pull the burnt bulb out of the socket.
3. Using a tissue or small piece of paper, carefully push a new bulb into the socket, making sure both wires on the bulb go into the light socket evenly.
4. Replace the light lens by carefully snapping it back in place



Appendix

Troubleshooting

Problem: Smell of gas is present

Solution: Check for loose connections in the gas line. Perform a leak test following the procedure described in this manual.

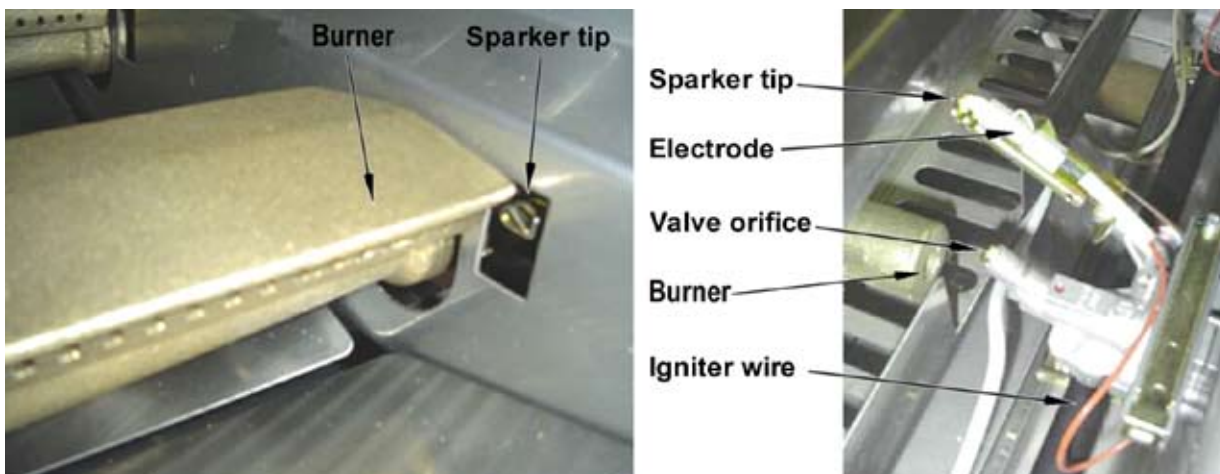
Problem: Burner does not ignite

Solution: Note: Turn off the gas at the source while troubleshooting.

Use the following procedure with the figure below.

Check the position of the sparker tip. It should be pointing forward towards the front of the burner.

- Make sure there is a blue spark at the electrode tip to the burner.
- Make sure the igniter wire is connected firmly to the valve ignition device and the electrode.
- Make sure the valve orifice is free of any debris, dust or grease.
- Make sure the valve orifice is aligned inside the front hole of the burner.
- If there is no spark at all, replace the electrode or igniter wire.



Problem: Burner tube is misaligned over the orifice

Solution: Reposition the burner tube so that it is properly seated over the orifice.

Problem: Obstruction in the gas line

Solution: Remove the fuel line from grill. (Do not smoke or perform any maintenance in the vicinity of an open flame.) Open the gas valve for one second to blow out any debris. Close off the gas valve and reconnect the fuel line securely. Let the area ventilate for a few seconds before reconnecting the fuel line.

Problem: Yellow Flame

Solution: Once the entire burner is operating, check the flame color to be sure that it is mostly blue. Some yellow at the tips may be present due to impurities in the fuel. If the flame is golden or yellow in color, the reason could be seasoning salts, oil film, or other foreign matter on the burner.

Problem: Plugged orifice

Solution: Unplug the orifice as follows:

- Remove cooking grills, flame tamer and grease tray.
- Remove burners from the bottom of the firebox by pulling the locking pin from beneath the burner peg using a standard screwdriver or needle nose pliers.
- Carefully lift each burner up and away from the gas orifice.
- Remove the orifice from the control valve.
- Gently clear any obstruction with a fine wire.
- Reinstall the orifice, reinstall the burners over the orifices, and seat each burner peg into position hole at the bottom ledge of the firebox.
- Replace cooking components and grease collectors.

If an obstruction is suspected in the control valve, contact your local Cal Flame dealer for assistance.

Problem: Misalignment of Igniter on Burner

- Solution:**
- Check for proper position of the electrode tip, which should be pointing forward towards the front of the burner and free of grease to allow proper sparking.
 - The ignition wire should be connected firmly to the valve ignition device and electrode. Replace the ignition wire if it is frayed or cracked.
 - With the gas supply closed and all control knobs set to the off position, check each position igniter individually for the presence of a spark at the electrode. Push each knob in fully and rotate it about 1/4 turn to the left (counter-clockwise) until you hear a loud click. The trigger hitting the strike block should produce a blue spark at the electrode tip. Return control knob to the off position before checking the next igniter.
 - While the grill is still hot, wait for a minimum of five minutes before commencing re-ignition. (This allows accumulated gas fumes to clear.) If all checks / corrections have been made and the gas grill still fails to operate properly, contact your local Cal Flame dealer.

Problem: Flashback

Solution: When fire occurs in and around the burner tubes, immediately turn off gas at its source and turn the control knobs clockwise to the 'OFF' position. Wait until the grill has cooled off and then clean the burner tubes and burners as described on page of this manual.

Converting from LP to NG



WARNING! You must have an authorized service technician perform this procedure. If these instructions are not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life. Lloyd's Material Supply (LMS) will not be held responsible for an improperly converted gas grill.

All Cal Flame grills are manufactured as standard liquid propane (LP) grills and can be converted to burn natural gas (NG). There are two steps required to convert a grill from LP to NG.

You must perform both steps.

Step 1: Switching the regulator behind the grill

Step 2: Changing the burner orifices

The conversion kit provided with your grill may include **some or all** of the parts shown at right, depending on the size and model of your grill.

The kit contains orifices to convert main burners, rear infrared burners, and the large infrared burner. Your kit will have only the parts you need to convert your grill.






Before you begin, make certain the LP gas source has been disconnected from the grill.

To gain access to the NG regulator, tilt the grill forward.

Step 1: Switching the regulator behind the grill

The manifold in the image below has been removed from a grill to illustrate this procedure.

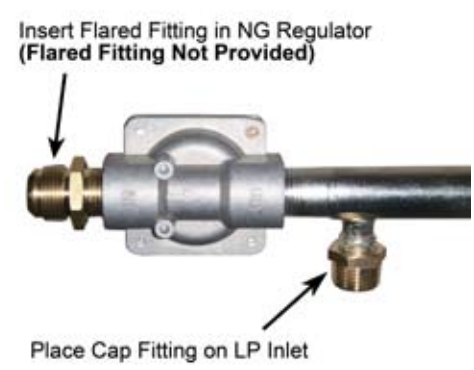
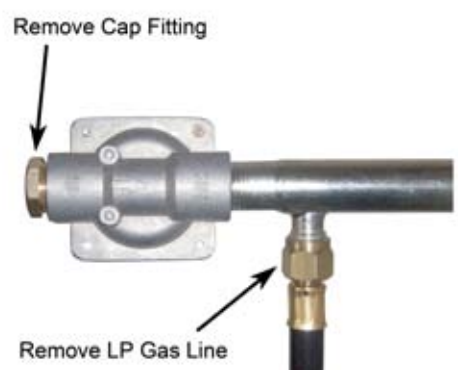
1. Remove the LP gas line.
2. Remove the cap fitting from the end of the NG gas regulator.
3. Place the cap fitting over the LP gas inlet.
4. Insert a male flared fitting (**not provided**) in the NG gas regulator.

-  1.9 mm orifices for main burners (two to five pieces)
-  1.75 mm orifices for side burners (one to two pieces)
-  #50 orifice for large infrared burner (one piece) (for grills made before 2010)
-  #52 orifice for large infrared burner (one piece) (for grills made 2010 and later)
-  #54 orifices for dual infrared burners (two pieces)

NOTE: A flared fitting is NOT included with your grill.

If you are attaching a flex hose to the regulator, you will need a fitting. The fitting requires a male flare on the input end with a 1/2" MPT on the output end. The flared male input end needs to be the size of your flex tubing. You can also connect the regulator directly to your NG gas service, which will not require a flared fitting.

- You will need:
- 13mm open end wrench
 - Male flared fitting (**not provided**)
 - Pipe compound suitable for natural gas

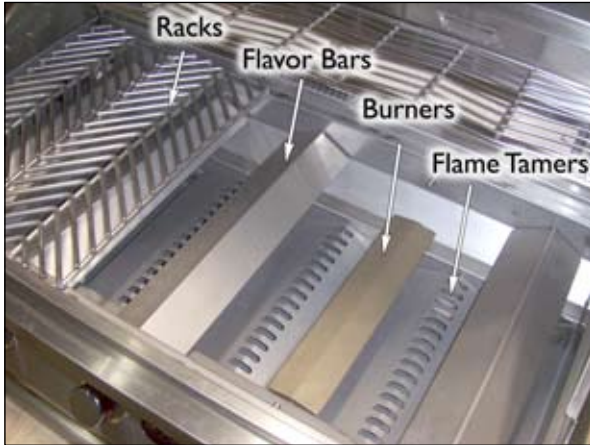


Gas Conversion (continued)

Step 2: Changing the burner orifices

1. Replace the main burner orifices

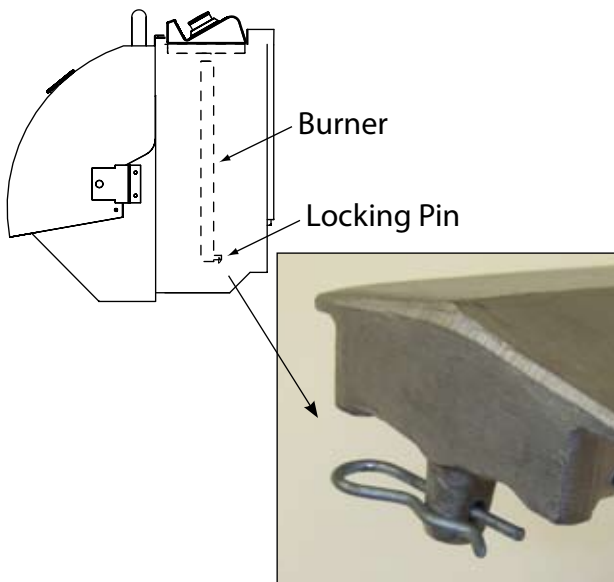
- a. Remove the grates, flame tamers, and drip tray from the grill. See figure below.



- b. Remove the locking pins from the end of the burners.

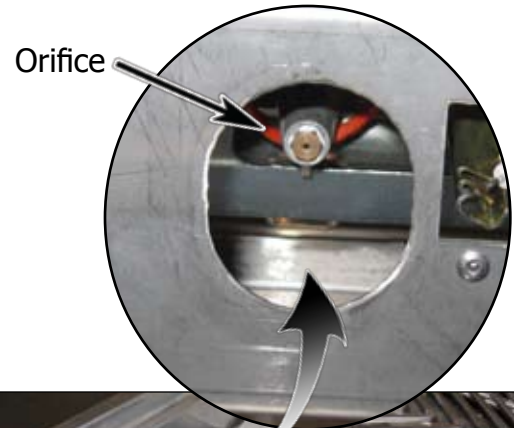
The locking pins are accessible by removing the drip tray and tilting the grill back. They can be seen underneath the grill in the back. See figures below.

- c. Remove all burners by carefully lifting them up and away from the valve orifice.



You will need:

- 6mm socket or nut driver
- Two to five 1.9mm orifices (depending on your grill)
- Pipe compound suitable for natural gas



- d. Using a 6mm socket or nut driver, remove the orifice for the burner.
- e. Apply a small amount of pipe compound to the orifice threads.
- f. Screw in the orifice until it is finger tight.
- g. Tighten the orifice with the 6mm wrench.
- h. Repeat the above steps for the remaining burners.
- i. Replace the burners, flame tamers, drip tray, and grates.

You do not need to replace the locking pins. They are used to keep the burners in place during shipping and are not necessary to operate your grill.

Gas Conversion (continued)

2. Replace the infrared burner orifices

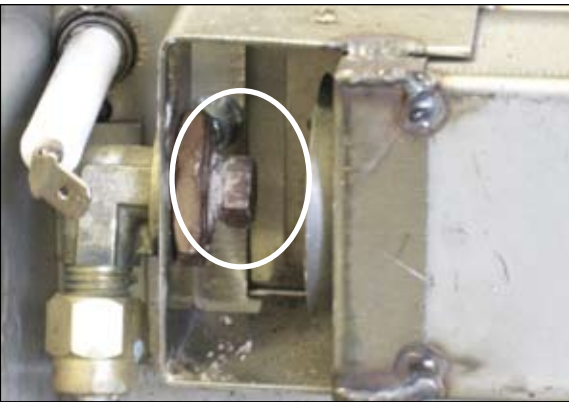
You will need:

- Either a 13mm or 10mm open end wrench
- One #50 orifice (for single infrared burner)
OR
- Two #54 orifices (for dual infrared burners)
OR
- One #52 orifice (for single infrared burner)
- Pipe compound suitable for natural gas

- Unscrew the back cover from the grill and lift it up and under the grill hood.



- Using a wrench, remove the orifice for the infrared burner.



- Apply pipe compound to the fitting threads where you will place the new orifice.
- Screw on the correct orifice for your grill until it is finger tight.
- Tighten the orifice with the wrench.
- If you have dual infrared burners, repeat the previous steps for the second burner.
- Replace the back cover.

3. Replace the side burner orifices

You will need:

- 7mm wrench, socket, or nut driver
- One or two 1.75mm orifices (depending on your side burner)
- Pipe compound suitable for natural gas

- Remove the grate, burner cap and burner diffuser from the side burner.



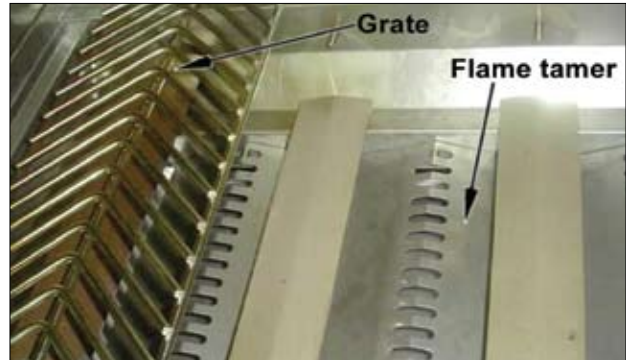
- Using a 7mm wrench, remove the orifice for the burner.
- Apply a small amount of pipe compound to the orifice threads.
- Screw in the orifice until it is finger tight.
- Tighten the orifice with the 7mm wrench.
- If you have dual side burners, repeat the previous steps for the second burner.

4. Mark the rating plate

After conversion has been completed, mark the rating plate as NG with an indelible marker.

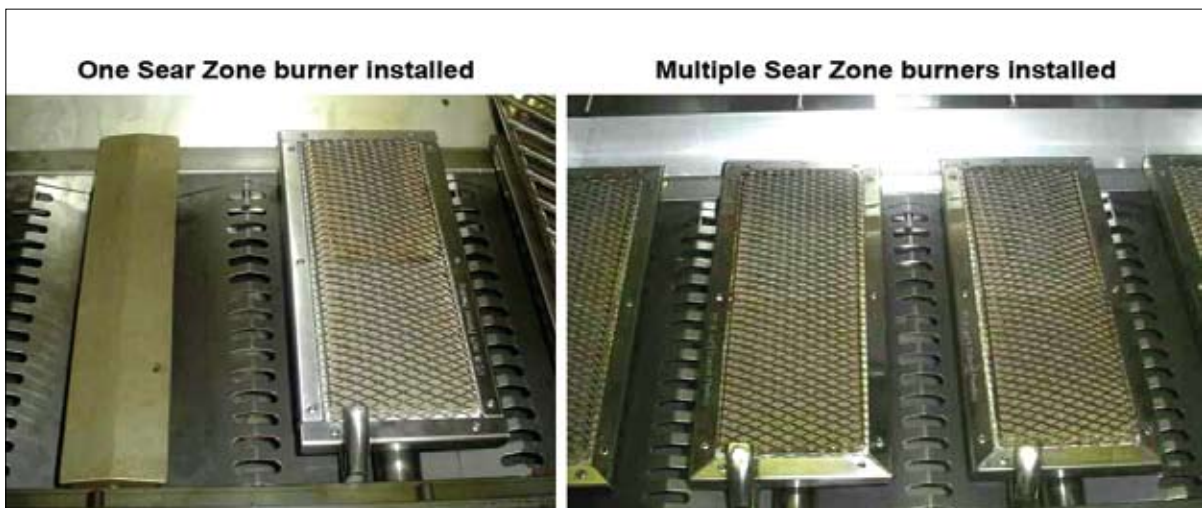
Installing Sear Zone Burners

1. Disconnect or shut off the LP or natural gas line connected to the grill. Wait until the burners cool down.
2. Open the hood and remove the grate and flame tamer on top of the stainless steel burner you want to replace.
3. Through the access door underneath the grill, find the round stud and locking pin that locks the burner you want to replace.
4. Carefully remove the locking pin with your fingers.
5. Raise the stud from the locking hole and carefully move the burner forward to release it from the igniter and gas supply valve.
6. Take the burner out of the grill and store it in a safe and dry place.
7. Install the Sear Zone burner. Align the gas inlet on the burner with the gas supply valve on the grill and torch tube with the igniter. Make sure they align perfectly. Slide the stud at the other end into the locking hole.
8. Adjust the Sear Zone burner, make sure the burner is aligned and in position.
9. Repeat steps 2 through 9 if you want to replace other burners.
10. Put back the grate you just removed. (You don't need flame tamers for Sear Zone burners.)

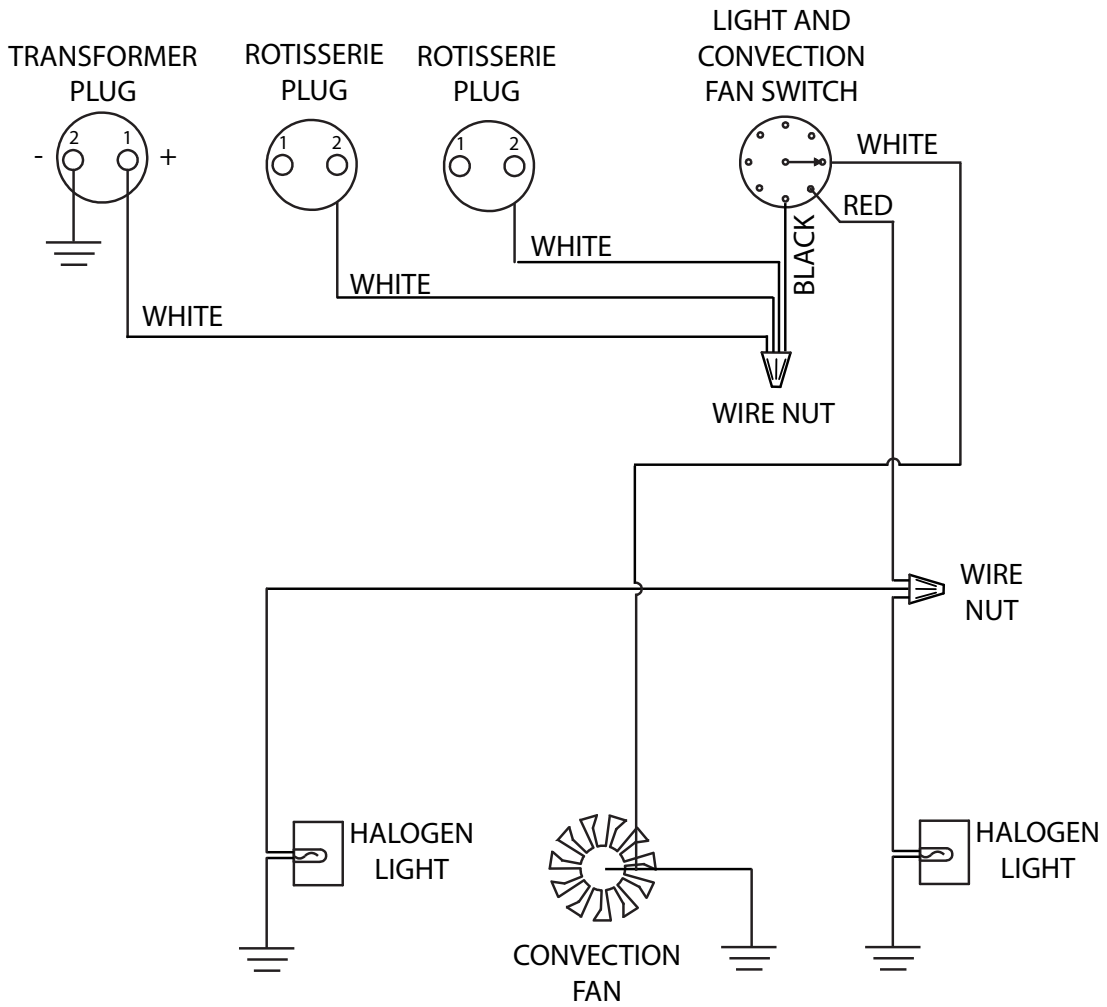


11. Reconnect or turn on the gas line.

If you want to change Sear Zone burners to regular burners, just follow the above procedure above in a similar way.

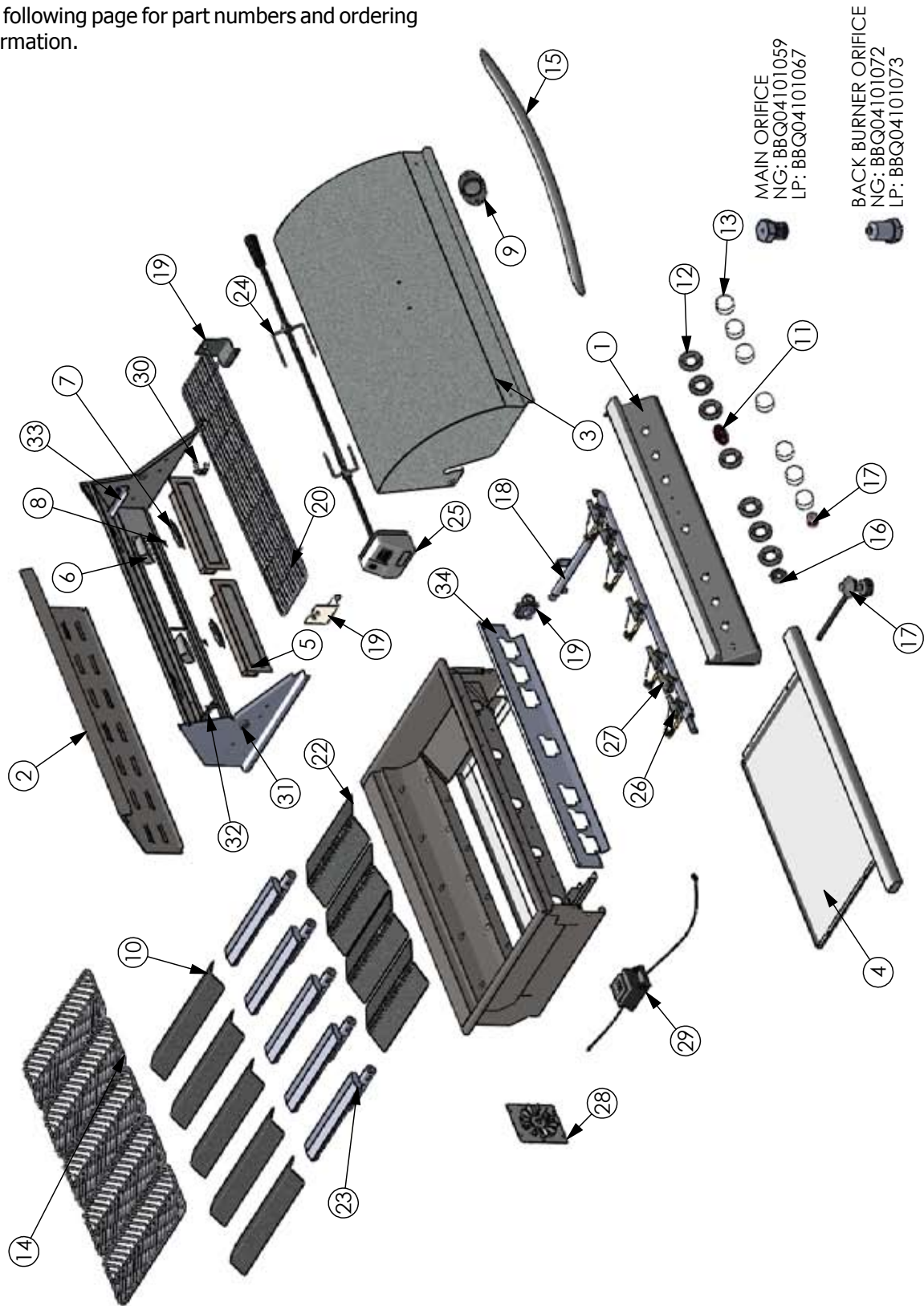


Wiring Diagram



Replacement Parts

See following page for part numbers and ordering information.



All parts can be used on all three grill sizes except where described below.

Item No.	Part	Grill Size	Part #
1	Control panel	3 burner	BBQ10104049-CC
		4 burner	BBQ07104050
		5 burner	BBQ10104051-CC
2	Back panel	3 burner	BBQ07104053
		4 burner	BBQ07104054
		5 burner	BBQ07104055
3	Hood	3 burner	BBQ07100587-CC
		4 burner	BBQ07100588-CC
		5 burner	BBQ07100589-CC
4	Drip pan	3 burner	BBQ07100686
		4 burner	BBQ07100687
		5 burner	BBQ07100688-CC
5	Back burner	3 and 4 burner	BBQ07300440
		5 burner	BBQ07300430
6	Light housing	All	BBQ10103070
7	Light lens	All	BBQ04103059
8	Halogen bulb	All	LIT16300031
9	Thermometer	All	BBQ07410350
10	Flavor bar	All	BBQ04103000
11	Cal Flame logo	All	BBQ04100972
12	Bezel	All	BBQ08410351
13	2" knob	All	BBQ04101028
14	Grates	All	BBQ04100659
15	Handle	3 burner	BBQ07100683
		4 burner	BBQ07100639
		5 burner	BBQ07100641
16	Light bezel	All	BBQ08410354
17	Light/fan knob	All	BBQ08101028
18	Manifold	3 burner	BBQ08000513
		4 burner	BBQ08000514
		5 burner	BBQ08000515
19	Regulator (LP)	All	BBQ04101043
	Regulator (NG)	All	BBQ04103040
20	Warming rack	3 burner	BBQ08100656-CC
		4 burner	BBQ01000657-CC
		5 burner	BBQ08100658
21	Rotisserie bracket	All	BBQ04100786
22	Flame tamer	All	BBQ04103010-CC
23	Burner	All	BBQ07100661

Item No.	Part	Grill Size	Part #
24	Spit rod assembly	3 burner	BBQ08856P3
		4 burner	BBQ08856P4
		5 burner	BBQ08856P5
25	Rotisserie motor	All	BBQ07100781
26	Main burner valve (LP)	All	BBQ04101016
	Main burner valve (NG)	All	BBQ04101015
27	Back burner valve (LP)	All	BBQ04101014
	Back burner valve (NG)	All	BBQ04101013
28	Convection fan	All	BBQ08000420
29	Transformer	All	BBQ07100781
30	Back burner electrode	All	BBQ04101809
31	Hood hinge	All	BBQ04101257
32	Upper rack holder, left side	All	BBQ04100706
33	Upper rack holder, right side	All	BBQ07100707
34	Convection panel heat shield	3 burner	BBQ07220172
		4 burner	BBQ07220170
		5 burner	BBQ07220171
	Grill cover (not shown in drawing)	All -- one size fits all	BBQC2345GB

Ordering replacement parts

To order replacement parts, either contact an authorized selling dealer or LMS Customer Service at (800) 225-7727.

Locating the product serial number

The serial number of your Cal Flame grill is located on the back and is visible when the hood is down. You will need this number to properly register your grill and activate coverage. Write this information in the space provided below.



Grill model: _____

Grill serial number: _____

Type of fuel (circle one): Liquid propane Natural gas

Date purchased: _____

Date installed: _____

Cal Flame dealer's phone number: _____

Cal Flame dealer's address: _____

Don't forget to register your new product at

www.calflamebbq.com.



California Proposition 65 Warning: Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm are found in and/or created by the combustion of natural gas, propane, butane and other fuels. Always operate this unit as described in the owner's manual and in well ventilated areas.