



BROILMASTER[®]

PREMIUM GAS GRILLS

S5

SERIES GRILLS

(PROPANE GAS AND NATURAL GAS TYPES)

OWNER'S MANUAL

THESE GRILLS ARE FOR OUTDOOR USE ONLY.

IMPORTANT

READ THIS OWNER'S MANUAL CAREFULLY BEFORE INSTALLING OR USING THIS PRODUCT. INSTALLER SHOULD LEAVE THIS MANUAL WITH THE CONSUMER AND THE CONSUMER SHOULD RETAIN IT FOR FUTURE REFERENCE.

WARNING

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE INJURY OR PROPERTY DAMAGE. REFER TO THIS MANUAL. FOR ASSISTANCE OR ADDITIONAL INFORMATION CONSULT A QUALIFIED INSTALLER, SERVICE AGENCY OR THE GAS SUPPLIER.

FOR YOUR SAFETY

IF YOU SMELL GAS:

1. SHUT OFF GAS TO APPLIANCE.
2. EXTINGUISH ANY OPEN FLAME.
3. OPEN GRILL LID.
4. IF ODOR CONTINUES, IMMEDIATELY CALL YOUR GAS SUPPLIER OR YOUR FIRE DEPARTMENT.
5. DO NOT TOUCH ELECTRICAL SWITCHES.

FOR YOUR SAFETY

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

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INTRODUCTION

Congratulations! You have chosen the finest grill for your barbecuing pleasure. Please take the time to read through this entire manual before assembling your Broilmaster® gas grill. Outdoor cooking is an art you will master.

Your Broilmaster® grill is identified by its model number, serial number, and gas type on a product identification label located on the grill. Always reference the grill's model number, serial number, and gas type when contacting your Broilmaster® dealer. Record information from label here for easy reference.

Model Number: _____

Serial Number: _____

Gas Type: NATURAL _____ PROPANE _____

SAFETY

Both NATURAL gas and PROPANE (also known as LP) gas have a long history of safe use when rules listed below are followed. If they are not followed, there is a danger of fire, explosion or personal injury.

Installation must conform to local codes or, in the absence of local codes, with the National Fuel Gas Code ANSI Z223.1. In Canada, installation shall be in accordance with CAN/CGA-B149.2 Propane Installation Code, or CAN/CGA-B149.1 Natural Gas Installation Code, and local codes where applicable. Consult your local NATURAL gas company or PROPANE gas dealer for code regulations and recommended procedures.

Never use PROPANE gas in a grill designed for NATURAL gas or NATURAL gas in a grill designed for PROPANE gas. Please consult your local gas company for any questions about propane or natural gas.

Propane Gas Grills

On PROPANE gas grills, use only the PROPANE gas cylinder (tank) recommended or supplied. Broilmaster's PROPANE gas grills are for use with standard 20 pound PROPANE gas cylinders. **DO NOT CONNECT A BROILMASTER PROPANE GAS GRILL TO A PROPANE GAS CYLINDER EXCEEDING 20 POUNDS CAPACITY.** A cylinder of approximately 12-1/8" (30.8 centimeters) tall is the maximum size cylinder allowed. The LP gas supply cylinder to be used must be:

1. constructed and marked in accordance with the specifications for LP gas cylinder 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. provided with a listed overfilling prevention device;
3. provided with a listed safety device having direct access with the vapor space of the cylinder and the cylinder supply system must be arranged for vapor withdrawal;
4. provided with a shutoff valve terminating in a valve outlet as specified in the Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections, ANSICGA-V-1;
5. provided with a plug to effectively seal off the cylinder outlet when the cylinder is being stored or transported;
6. provided with a collar to protect the cylinder valve.

Always use the pressure regulator and hose assembly supplied with each PROPANE gas grill. The pressure regulator has an outlet pressure of not more than 11 inches water column and is to be connected to the PROPANE gas cylinder's female valve before the grill can be operated. Keep the pressure regulator's fitting clean and free of nicks and scratches. A dirty, nicked or scratched fitting can cause a gas leak, resulting in an explosion or fire when connected to the PROPANE gas cylinder. Replacement parts must be as specified by the repair parts list or as specified by Broilmaster.

CAUTION: OPERATION OF A PROPANE GAS GRILL WITHOUT THE PRESSURE REGULATOR AND HOSE ASSEMBLY WILL CAUSE GAS LEAKS WHICH COULD CAUSE A FIRE, EXPLOSION OR PERSONAL INJURY.

NOTE: SOME VALVE AND TANK COMBINATIONS ARE NOT COMPATIBLE. CHECK WARNING TAG ON VALVE AND TANK; ALSO CHECK EXTERNAL THREADS OF FITTINGS. Broilmaster pressure regulator and hose assemblies are equipped for cylinders with a Type 1 cylinder connection device.

Handle PROPANE gas cylinders with care:

- A. If the cylinder's outlet valve is damaged, do not attempt to use or repair. The cylinder must be replaced.
- B. **DO NOT** store a grill indoors unless the PROPANE gas cylinder is disconnected and removed from the grill. When the cylinder is installed on the grill they must be stored outdoors in a well-ventilated area.
- C. Disconnected cylinders must have a threaded valve plug tightly installed and must not be stored in a building, garage or any other enclosed space. **KEEP OUT OF REACH OF CHILDREN.**
- D. Do not apply heat directly to a PROPANE gas cylinder.
- E. Always transport, store and use PROPANE gas cylinders in an upright secure position.
- F. **DO NOT** carry PROPANE gas cylinders in the passenger area of a vehicle.
- G. For PROPANE gas grills, have PROPANE gas cylinders filled by a qualified gas dealer; cylinders are to be filled by weight, to no more than 80% of physical capacity.

Natural Gas Grills

NATURAL gas grills do not have a pressure regulator. Broilmaster Natural gas grills operate at a manifold pressure of 7 inches water column.

For NATURAL gas grills, contact your local gas company to have a gas supply line installed for the grill. For NATURAL gas grills installed on a cart, use Broilmaster's NG12 twelve foot flexible hose and quick disconnect kit to connect the grill to a pre-installed gas supply line.

All Grills

Check for gas leaks, after connecting a PROPANE gas cylinder, when a cylinder has not been used recently, or when a grill is being used for the first time. Use soapy water to check for leaks. Refer to CHECKING FOR LEAKS at the end of the Installation section.

CAUTION: DO NOT USE CANDLES, MATCHES OR OTHER IGNITION SOURCES WHEN CHECKING FOR LEAKS. GASES ARE VERY FLAMMABLE AND, IN CERTAIN CONCENTRATIONS, EXPLOSIVE. CHECKING FOR LEAKS WITH AN OPEN FLAME MAY LEAD TO FIRE, EXPLOSION OR PERSONAL INJURY.

DO NOT use grill until all leaks are repaired. Always turn gas OFF at the valve on the PROPANE gas cylinder or, for NATURAL gas, at the supply line shutoff valve when grill is not in use.

Inspect grill's hose before each use of the grill. If there is excessive wear, or the hose is cut, it must be replaced. Replace only with the hose assembly specified by the repair parts list or as specified by Broilmaster.

GRILL LOCATION

This grill was designed for outdoor use and should not be used in any building, garage or other enclosed area, nor is it intended for use in or on any recreational vehicle or boat.

Never use the grill under combustible materials. (carport, covered porch, patio umbrella, etc.)

Minimum clearance from sides of grill to combustible materials (walls, fences, etc.) must be at least 16 inches. Minimum clearance from back of grill must not be less than 18 inches.

CAUTION: IF THIS GRILL IS INSTALLED AND OPERATED AT CLEARANCES LESS THAN THOSE SPECIFIED BY THESE INSTRUCTIONS, THE POSSIBILITY OF A FIRE, PROPERTY DAMAGE OR PERSONAL INJURY MAY EXIST.

CAUTION: DO NOT INSTALL OR USE THIS GRILL IN ANY AREA WHERE EXPLOSIVE MATERIALS SUCH AS GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS ARE BEING USED OR STORED, THE FLAME PRODUCED BY THE GRILL IS EXPOSED AND FLAME CONTACT WITH ANYTHING EXPLOSIVE OR FLAMMABLE WILL RESULT IN EXPLOSION OR FIRE.

Keep area around grill clear. Do not obstruct grill's combustion and ventilation air flow.

Keep the ventilation opening(s) of the cylinder enclosure free and clear of debris.

Make sure grill is level prior to use.

ASSEMBLY AND INSTALLATION INSTRUCTIONS

All Broilmaster grills require some assembly and installation. Some models require more than others. Some of the following assembly and installation instructions do not pertain to all grill models. Some grill models come equipped with accessories (i.e. side burner, cart, etc.) which were assembled and installed at the factory. Some grill models come with accessories (i.e. cart) which are ready to be assembled and installed. Follow the instructions provided with the accessory to complete it's installation on a specific grill model.

PREPARATION

1. Before assembling the grill determine which post or cart the grill will be mounted on. See the enclosed "GRILL MOUNTING" sheet for mounting options. Obtain and assemble the desired mount (post or cart) per instructions furnished with it.

NOTE: If grill is to be mounted on an in-ground post, the post shall be protected against corrosion as warranted by soil conditions. Corrosion protection shall be provided as needed with a suitable coating to retard the effects of corrosion conditions existing in local areas.

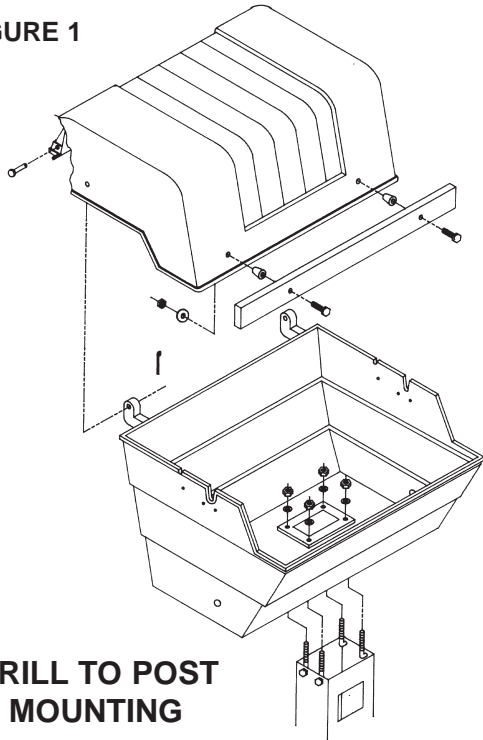
2. Gather the following items. They will be needed for grill assembly and installation.
 - Phillips Screwdriver
 - Two adjustable wrenches or a set of open end wrenches or a socket/ratchet set
 - Soapy water solution (to test for gas leaks)
 - Pencil (to check off steps as completed)
3. Remove all loose parts from inside the grill carton and grill housing which are to be assembled and installed.

GRILL ASSEMBLY AND INSTALLATION

1. If the grill is to be mounted on a cart, assemble the cart as shown in figure 1A & 2 with #10-3/8" sheet metal screws.
2. Attach the valve to the control panel with two No. 10-24 x 1/2" Phillips head screws. See figure 2A.
 - A. Push the gas knobs onto valve stems as shown by figure 2A. Turn knobs clockwise to OFF.
 - B. If the grill is furnished with a pushbutton ignitor, insert the ignitor into the ignitor hole of the control panel and then secure it to the control panel with a nut as shown by figure 4.
3. Install the Piezo Ignitor
 - A. If your grill is furnished with an ignitor, assemble the ignitor's collector box as shown by figure 5.

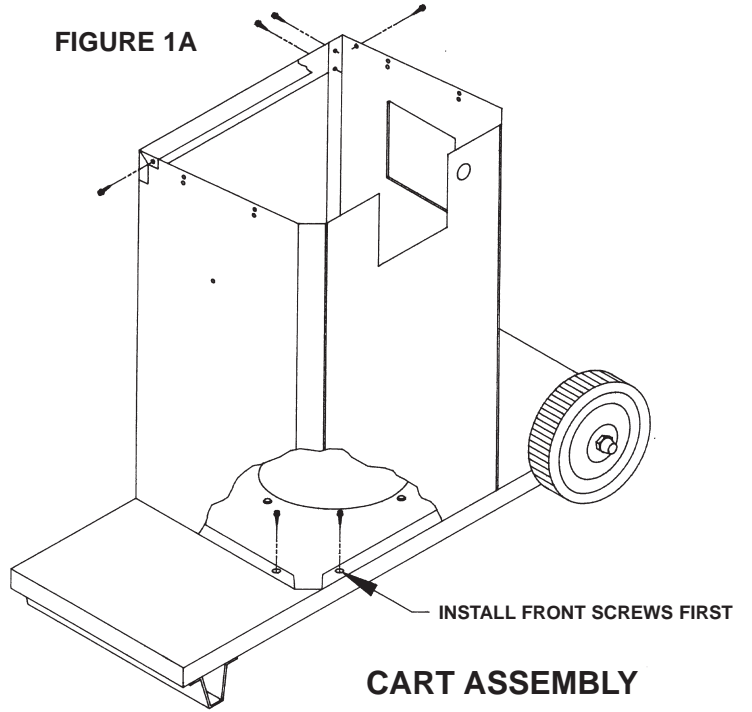
Caution: do not cut or damage the ignitor wire protruding from the collector box.
 - B. Install the collector box in the grill bottom thru the 15/32 hole located toward the front of the grill as shown in figure 5A. Flat washer, lock washer, 2 nuts align control panel with casting front and tighten nuts. See step 5 in Patio Base Instructions to hook up gas.
4. Insert 10-24 x 3/4 bolt through 7/32" dia. hole located right of center towards rear of grill bottom. Attach speed nut and tighten. See figure 6.
5. Install Control Panel. Post Models Only.
 - A. For post models, route two 1/4-20 x 1-1/2" screws install flat washer, lock washer and nuts through two holes in bottom of the grill bottom and the top of the control panel. Align control panel with casting front and tighten nuts. See figure 3. See step 5 in Patio Base instructions for gas hook up.
6. Mount the grill per Figure 1 or Figure 2A.
 - A. If the grill is to be mounted on a post, mount the grill bottom to the prepared post assembly so the eyebolts will protrude through the holes at the corners of the rectangular opening in the grill bottom. Secure the grill bottom with four 1/4 shakeproof washers and four 1/4-20 hex nuts. See figure 1.
 - B. For cart models, install the control panel between the cart angle brackets, and grill bottom. align holes. Insert four 1/4-20 x 1-1/2" screws, install flat washer, lock washer and 1/4-20 nut, then tighten. See figure 2A.
7. Attach the lid handle to grill lid using two No. 10-24 x 3 1/2" carriage bolts, two handle spacers, two shakeproof washers and two No. 10-24 hex nuts. See figure 1 for cart installation.
8. Mount the grease tray as shown in figure 6. See Patio Base instructions for base installation.
 - A. Use the #10-24 wing nut and 5/8" O.D. flat washer to attach the grease tray bracket to the screw installed in step 4. Do not tighten wing nut yet.
 - B. Place the provided aluminum grease tray in the bracket and adjust the bracket to align the tray with the grill's grease drain hole in grill bottom.
 - C. Tighten the wing nut. When the grease tray is full replace with a new empty tray.
 - D. Mount grease cup assembly as shown in Patio Base Instructions (figure 6)
9. Attach side shelf, if included, using two 1/4-20 x 1/2" hex bolts, 1/4 I.D. lock washers, and 1/4-20 hex nuts as shown by figure 7. Use the #8 x 1/2" sheet metal screw and the 1/4" x 5/16" O.D. spacer to keep the wood shelf from sliding.

FIGURE 1



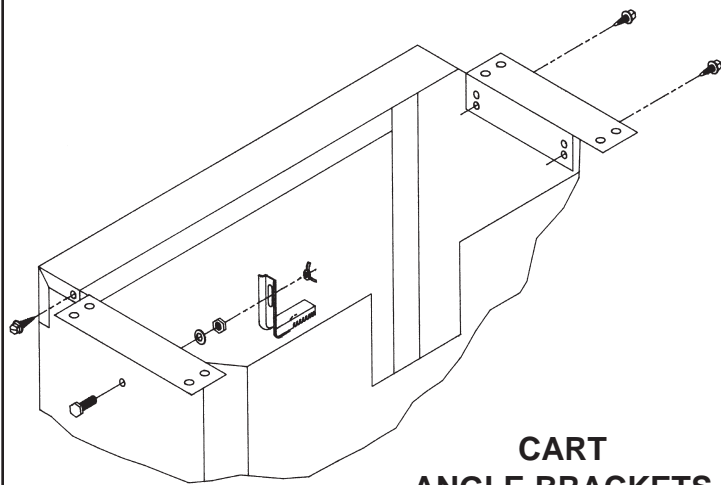
**GRILL TO POST
MOUNTING**

FIGURE 1A



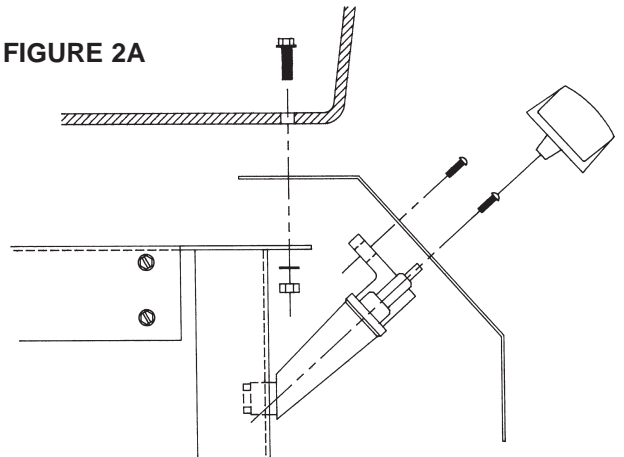
CART ASSEMBLY

FIGURE 2



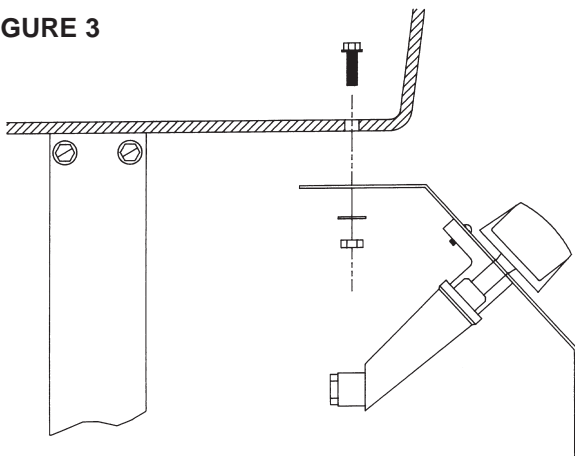
**CART
ANGLE BRACKETS**

FIGURE 2A



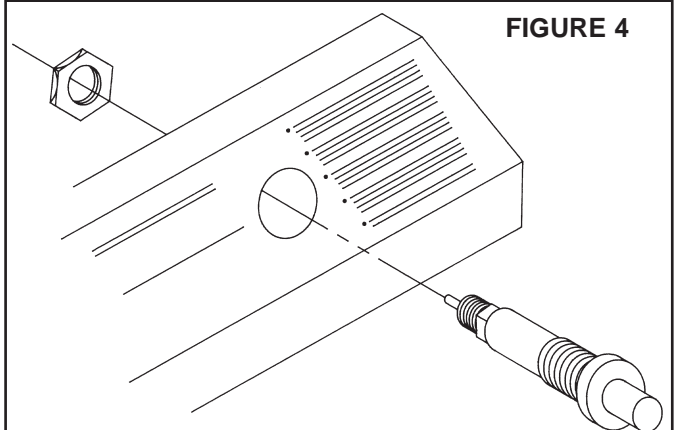
**CONTROL PANEL ASSY.
TO CART**

FIGURE 3



CONTROL PANEL ASSY. TO POST

FIGURE 4



IGNITOR TO CONTROL PANEL

FIGURE 5

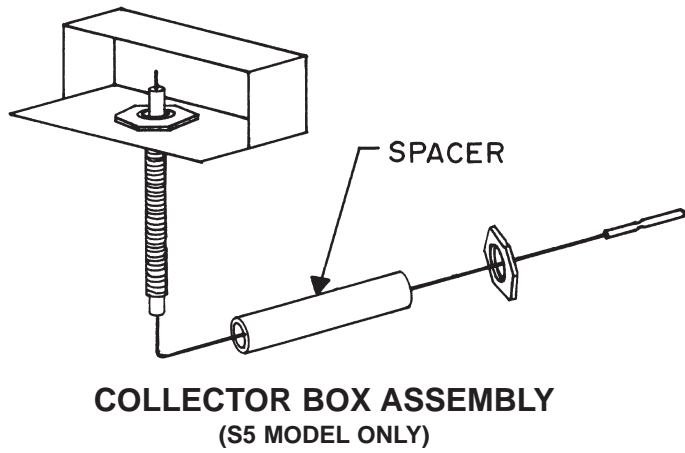


FIGURE 7

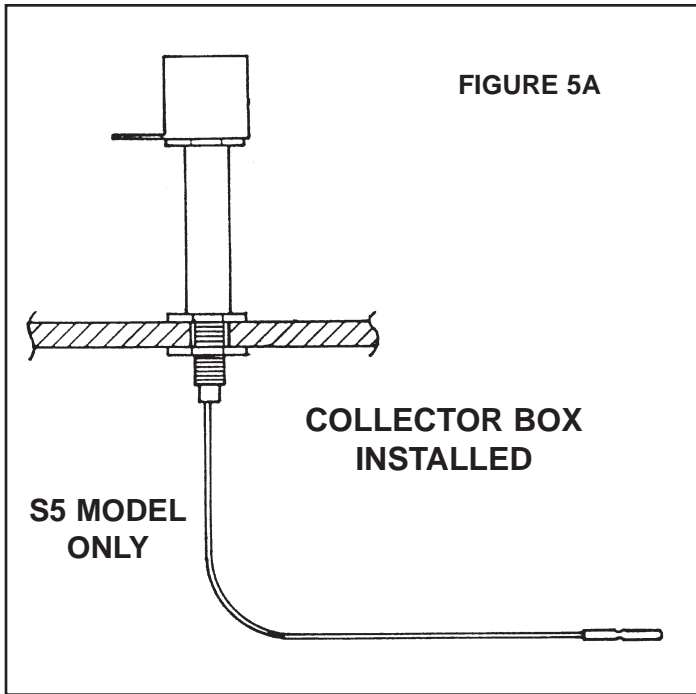
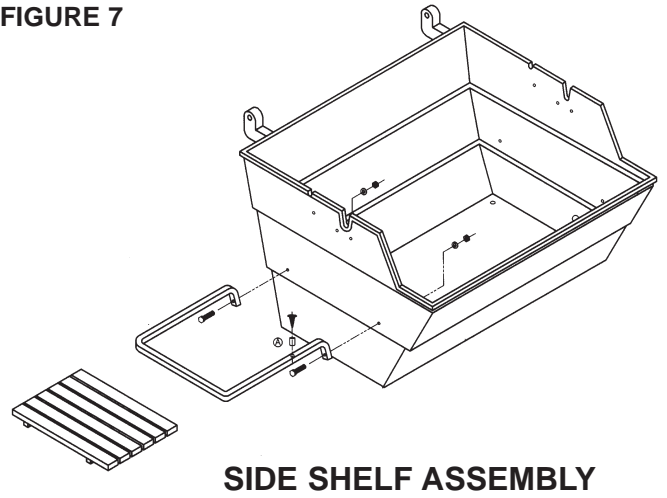


FIGURE 8

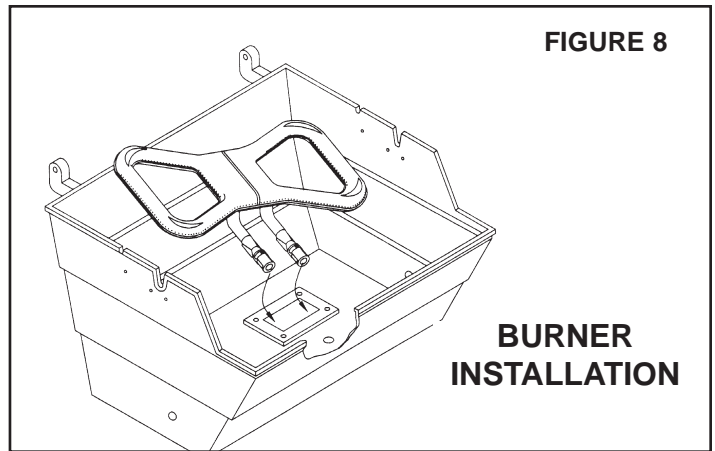


FIGURE 9

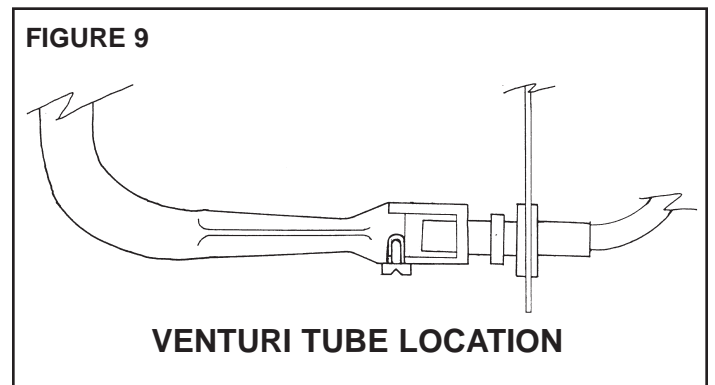
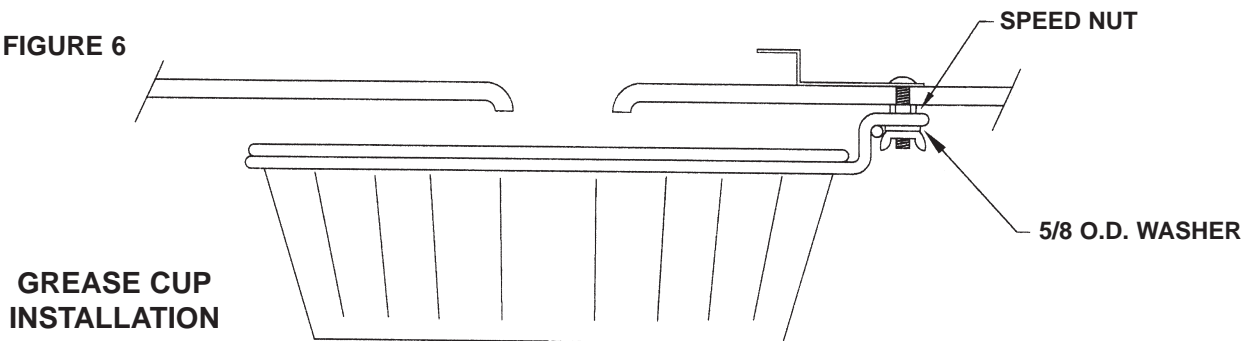


FIGURE 6



11. Install the burner as shown by figure 8 and figure 9.
 - A. Tilt the burner forward and guide its two venturi tubes through the rectangular hole in the bottom of the grill as shown by figure 9. **CAUTION:** During installation of the burner, care should be taken to not damage the grill's ignitor wire.
 - B. Push the ends of venturi tubes onto the corresponding factory-installed gas orifices located beneath the grill. See figure 10.
 - C. Install ignitor wire, female end, by pushing it onto male ignitor, if equipped with piezo. See Patio Base Instructions, step 8 for control housing installation.
12. Place the Briquet Rack in the grill bottom. See figure 10.
13. Spread the Briquets in a single layer evenly over the Briquet Rack. Do not overlap or stack briquet. There may be some briquets left over. Save them for future use. See figure 10.
14. Put cooking grids in place in the grill bottom. The cooking grids can be independently placed in different positions for different cooking heights above the Briquets. See figure 10.
15. Install Warming Rack as shown by figures 11, depending on your grill model.
16. If your grill is equipped with a side burner, the side burner has been factory-assembled and its gas hose has been factory-connected to the grill. Mount the side burner on whichever side of the grill you choose and install two knobs on the side burner. See figure 12.
 - A. Determine which side of the grill the side burner is to be mounted on.
 - B. Install the side burner's mounting bracket. The side burner mounting bracket installs exactly like a side shelf mounting bracket. See figure 7.
 - C. Lower the side burner onto the mounting bracket so that the side burner's rear clamp is clamped around the back tube of the mounting bracket as shown by figure 12.
 - D. Attach the front clamp to side burner and the front tube of the mounting bracket with two No. 10-24 x 3/8" screws, two 3/16" ID shakeproof washers, and two No. 10-24 nuts as shown by figure 12.
 - E. Push gas knob onto valve stem protruding through the side burner's front panel as shown by figure 12. The knob will fit only one way on the stem. After knob is on the stem, turn the knob to the OFF position if not already there.
 - F. Attach lid knob to the side burner's lid with one 1/4-20 x 1/2" screw and one 1/2" OD shakeproof washer as shown by figure 12.

Figure 13 shows a side burner mounted on the left side of a grill.

The side burner can be used to simmer, saute, boil or fry.

NOTE: PROPANE-gas grills can only be equipped with PROPANE - gas side burners and NATURAL-gas grills can only be equipped with NATURAL-gas side burners.

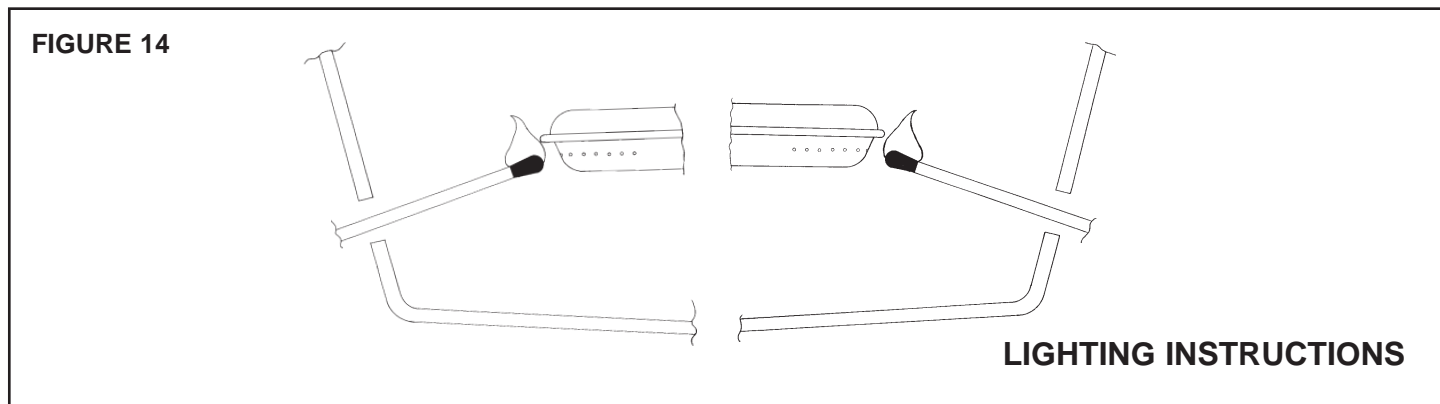
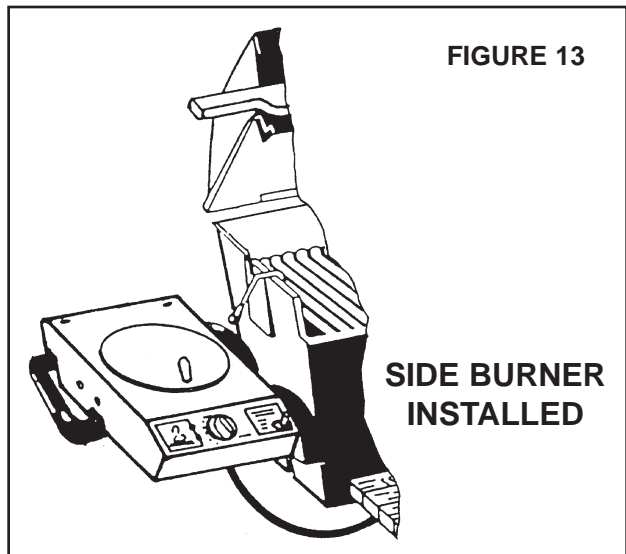
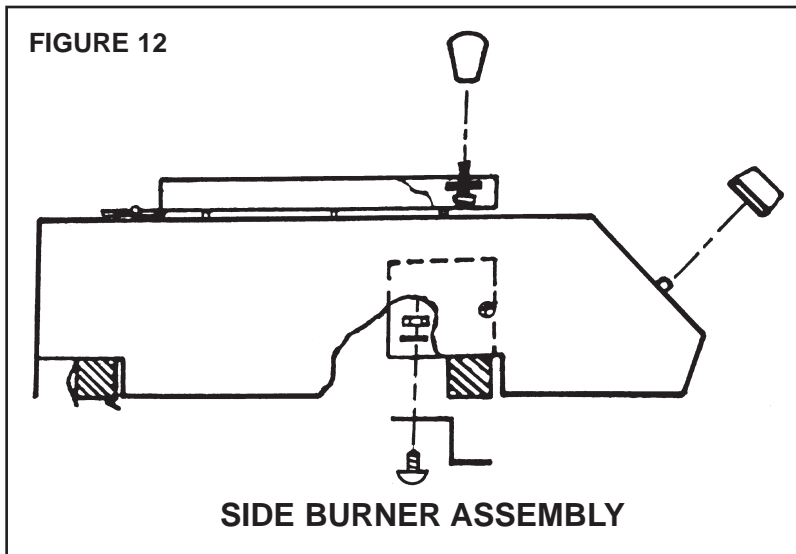
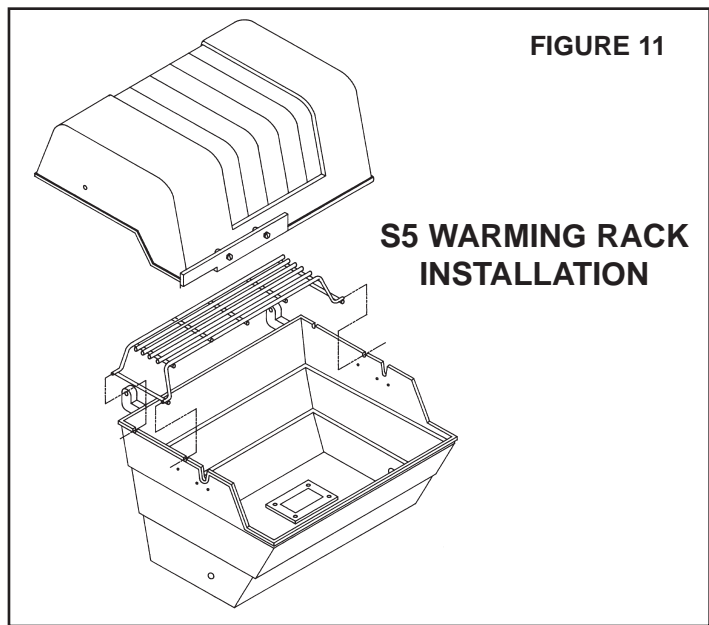
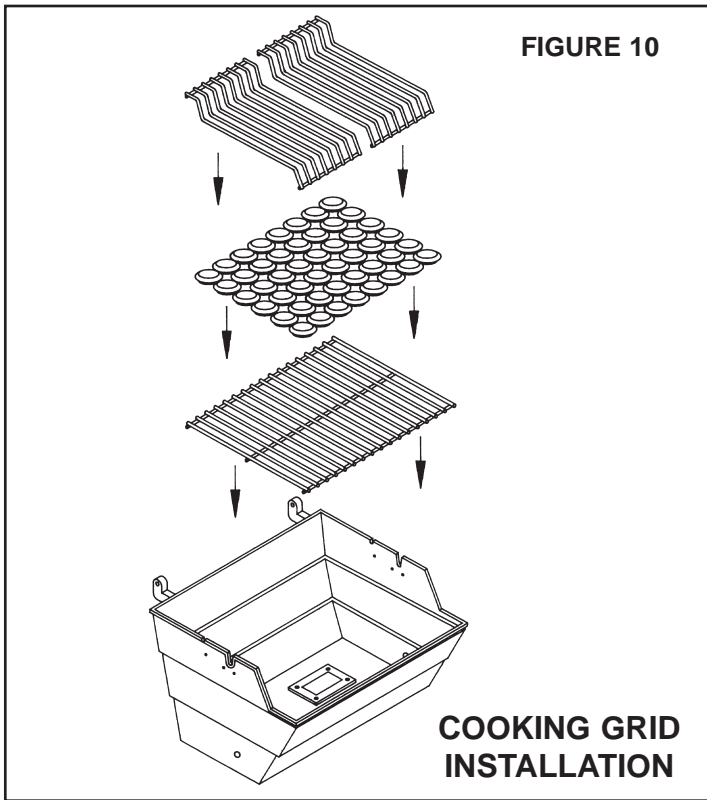
17. Connect gas supply to grill per A or B below.
 - A. For PROPANE-gas grills:
 1. Place properly filled PROPANE-gas cylinder in position and secure with the retainer provided.
 2. Screw the grill's regulator fitting onto the PROPANE - gas cylinder's valve outlet male thread clockwise and tighten securely.

NOTE: Regulator's female fitting has right hand threads. Check fittings on tank and regulator, they may be different or could be left hand threads. Vent on regulator must point down while the regulator is connected to the PROPANE - gas cylinder.

 3. The gas supply must be turned OFF at the PROPANE - gas cylinder when the grill is not in use.
 - B. For NATURAL - gas grills:
 1. Arrange with local gas company to have a gas supply line installed for the grill.
 2. If the grill is mounted on an in-ground post or patio base post, arrange with the local gas company to have the gas supply line connected to the grill.
 3. If the grill is mounted on a cart, obtain Broilmaster's NG12 twelve-foot flexible hose and quick-disconnect kit to connect the grill to the gas supply line installed by the local gas company. Connect the flexible hose to the grill and gas supply line per the instructions furnished with the NG12 kit.
 4. Always turn gas OFF at the gas supply line shutoff valve when a grill is not in use.

18. Check for gas leaks:
 - A. The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.5kPa).
 - B. The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).

Check for gas leaks after connecting a PROPANE - gas cylinder to a grill, or when a cylinder has not been used for a long time, or when a grill (PROPANE or NATURAL model) is being used for the first time or has not been used for long time.



Use soapy water to check for leaks.

DANGER: DO NOT USE CANDLES, MATCHES OR OTHER IGNITION SOURCES WHEN CHECKING FOR GAS LEAKS. FUEL GASES ARE VERY FLAMMABLE AND, IN CERTAIN CONCENTRATIONS, EXPLOSIVE. CHECKING FOR LEAKS WITH AN OPEN FLAME MAY LEAD TO FIRE OR EXPLOSION.

To check for gas leaks:

1. Use water and dish washing soap to make a soapy water solution.
2. Turn gas knobs located on grill's control panel to OFF. Turn gas knob located on side burner's control panel to OFF.
3. For PROPANE - gas grills, turn gas ON at PROPANE - gas cylinder. For NATURAL - gas grills, turn gas ON at gas supply line shutoff valve. (A hissing sound indicates a leak: Turn OFF gas supply, repair leak, turn ON gas supply and proceed.)
4. Apply the soapy water solution to all gas connections.
5. Look for bubbles. Bubbles indicate gas leaks.
6. If bubbles are detected, turn gas OFF and tighten or repair leaking gas connections.
7. Turn gas ON and recheck for leaks. All gas connections must be leak-free.
8. For PROPANE - gas grills, turn gas OFF at PROPANE - gas cylinder until ready for use. For NATURAL - gas grills, turn gas OFF at gas supply line shutoff valve until ready for use.

OPERATING INSTRUCTIONS

Before lighting a grill's burner, make sure its venturi tubes are properly positioned on the gas orifices as described earlier and as shown by figure 9. Check for gas leaks as described earlier.

Burners may be lit by ignitor or wooden match as described below. Light one burner at a time and light only the burners needed.

Avoid moving a portable grill when the gas is turned on and a burner is lit.

IGNITOR LIGHTING PROCEDURE

Turn all gas knobs on the grill and side burner clockwise to OFF, then turn gas on at source and light the desired burners as described below.

To light the grill's double burner:

1. Raise the grill lid.
2. Push in and turn either the left gas knob or the right gas knob counterclockwise to HI.
3. If the grill's ignitor is a pushbutton type, push the ignitor three or four times until the chosen section of the double burner ignites; ignition should occur within about five seconds.
4. After the first section of the double burner is lit, ignite the other section by pushing in and turning its gas knob counterclockwise to HI; ignition should occur automatically within about five seconds.

NOTE: Both sections of the double burner may be lit simultaneously by pushing in and turning both gas knobs to HI and then operating the ignitor three or four times as described by step 3 above; ignition should occur within about five seconds.

If your grill was not furnished with an ignitor and you decide you want one for your grill, you may order an ignitor kit from your Broilmaster dealer: Just read the lighting instructions on your grill's control panel label to determine which type of ignitor kit to order, then ask your Broilmaster dealer for pushbutton ignitor kit B056596.

To light the side burner:

1. Raise the side burner lid.
2. Push in and turn the side burner's gas knob counterclockwise to HI.
3. Push the side burner's ignitor three or four times until the side burner ignites; ignition should occur within about five seconds.

NOTE: If a burner fails to ignite within five seconds, turn that burner's gas knob clockwise to OFF, wait five minutes for the gas to clear, then reattempt the ignitor lighting procedure or light with a wooden match as described by the following MATCH LIGHTING PROCEDURE.

MATCH LIGHTING PROCEDURE

Turn all gas knobs on the grill and side burner clockwise to OFF, then turn gas on at source and light the desired burners as described below.

To light the grill's double burner:

1. Raise the grill lid.
2. Light a long wooden match and insert it through lighter hole in either side of the grill (which lighter hole depends on which section of the burner is being lit). See figure 14.
3. Push in and turn the corresponding gas knob on the grill's control panel counterclockwise to HI. That section of the burner should ignite within about five seconds.
4. Light the other section of the burner by pushing in and turning the outer gas knob on the grill's control panel counterclockwise to HI. That section of the burner should ignite automatically within about five seconds.

To light the side burner:

1. Raise the side burner lid.
2. Light a long wooden match and place its lit end against side of burner.
3. Push in and turn the side burner's gas knob counterclockwise to HI; the burner should ignite within about five seconds.

IF A BURNER DOES NOT IGNITE

1. Turn that burner's gas knob clockwise to OFF.
2. Wait five minutes for the gas to clear before again attempting to ignite that burner.
3. If the burner still does not ignite, turn that burner's gas knob clockwise to OFF and refer to the TROUBLESHOOTING section of this manual for solutions to the problem.

BREAK- IN

Before cooking on a new grill for the first time, break it in to get rid of fumes and oil from the manufacturing process.

1. Raise grill lid.
2. Ignite grill burner (both sides).
3. Burn on HI for ten minutes with grill lid open.
4. Close grill lid and burn on HI for an additional ten minutes.
5. Grill is ready for cooking, or the burner may be turned off.

PREHEAT

Before cooking on a grill, always preheat it for at least five minutes on HI burner setting with its grill lid closed. This gives the briquets time to heat up in the gas flames. Hot briquets cause better, quicker cooking and better flavor.

CAUTION: DO NOT LEAVE THE GRILL PREHEATING ON HI BURNER SETTING WITH THE GRILL LID CLOSED FOR LONGER THAN 30 MINUTES.

NOTE: NEVER OPERATE THE SIDE BURNER WITH ITS LID CLOSED.

COOKING

A cookbook is provided with each new grill. The cookbook contains helpful cooking tips and instructions as well as great recipes which tell exactly how to prepare many delicious foods on a Broilmaster grill.

MAINTENANCE

LOW FLAME ADJUSTMENT

Low flame setting for the burners is preset at factory. To adjust the flame height up or down at the lowest valve setting.

1. Light the burner on HI setting.
 2. Turn the burner's gas knob to LO setting.
 3. Remove the gas knob and locate screw in center of the hollow valve stem.
 4. Use a small screwdriver to turn the screw counterclockwise for a higher flame or clockwise for a lower flame.
- CAUTION: If flame is adjusted to low, a strong wind condition could blow out the flame. The flame's maximum height (see A of figure 15) at LO valve setting should be no more than 1-1/2".**
5. Put gas knob back on the valve stem after adjustment is complete.

BURNER AIR ADJUSTMENT

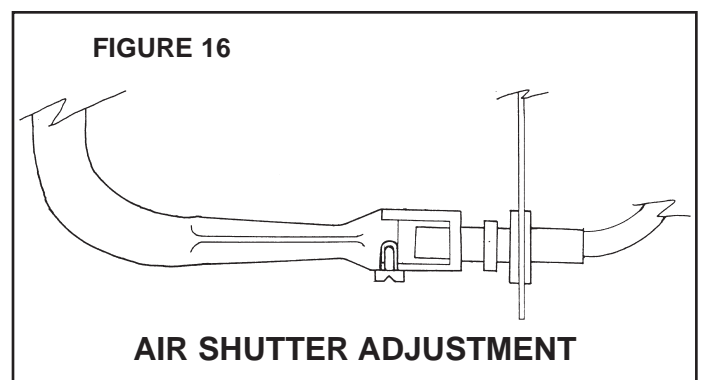
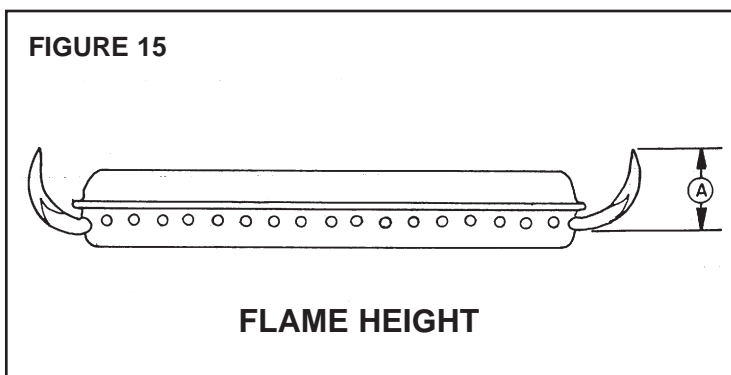
Venturi air shutters on grill burners are preset at the factory so that after five minutes of operation the burner flames should be blue with well-defined cones. However, if after five minutes of operation, the burner flame is yellow or there is a gap between the burner and flame, adjust the burner's venturi air shutter as follows:

1. Turn gas OFF and let burner cool.
2. Loosen venturi air shutter's set screw figure 16.
3. Close the venturi by rotating the air shutter (figure 16) to the minimum air opening.
4. Light the burner, wait five minutes and then carefully open the venturi air shutter until the burner flame is blue with well-defined cones.
5. Tighten the venturi air shutter's set screw (figure 16).

NOTE: Other causes for a yellow flame are spider webs in venturi, seasoning salts on burner, and oil film on burner. See the TROUBLESHOOTING section of this manual for solutions.

CARE AND CLEANING

1. **COOKING GRID:** Wipe with paper towels immediately after cooking and while grease is hot. **DO NOT** use a commercial oven cleaner. Brush with brass bristle brush (available as accessory #DPA21). **DO NOT** use steel wire brush.
2. **BURN OFF:** After each use of grill - -
 - A. Turn gas knob to HI.
 - B. Close grill lid and allow grill to burn for 10 minutes or until smoke no longer comes from grill.
CAUTION: A flare-up may occur if grill lid is opened.
 - C. Turn gas knob to OFF and allow grill to cool.
3. **INSIDE AIR HOLES:** Periodically, remove grids, briquet rack, and clean. **COVER** orifice openings with aluminum foil and scrape accumulations inside grill with a putty knife. Clean bottom air holes with small knife. Rinse with water.
4. **BURNER MAINTENANCE:** Stainless steel burners often oxidize to a reddish brown color. This will not affect performance. At least twice a year, remove and clean burners with a brass - not steel - brush and a mild detergent. Spiders and other small insects can build webs or nests in the venturi tubes of a grill's burner and obstruct the gas flow. A fire in and around the venturi tubes could occur because of the obstruction, This type of fire, known as flashback, could damage components located beneath the grill and create an unsafe operating condition. To reduce chances of flashback, frequent inspection and cleaning inside the venturi tubes is necessary. Cleanings are recommended at least twice a month during late summer and early fall when spiders are most active; cleaning is also recommended if the grill has not been used in a long while. To clean the venturi tubes, remove them and flush them out with water, then use a wire or a small flexible bottle brush to remove any debris which was not flushed out by the water. Allow the tubes to dry before reinstalling. If the grill is equipped with a side burner, its burner should also be removed along with the grill's venturi tubes and cleaned too in the same manner as the grill's venturi tubes. If flashback ever does occur, turn the gas knobs to their OFF position and turn off source of gas; wait until the burners cool, then remove and clean accordingly as described above. Check for damage and make any necessary repairs before using the grill or side burner again.
5. **EXTERIOR:** Clean regularly with a solution of mild detergent and hot water . Touch-Up paint (accessory number DPA18) is available from your Broilmaster dealer. Protective vinyl covers are also available and recommended.
6. **BRIQUETS:** If they are not cleaned after a burn-off, wait until they cool and turn them over. The next time your use your grill, the residue will burn off during normal warm-up.



TROUBLESHOOTING

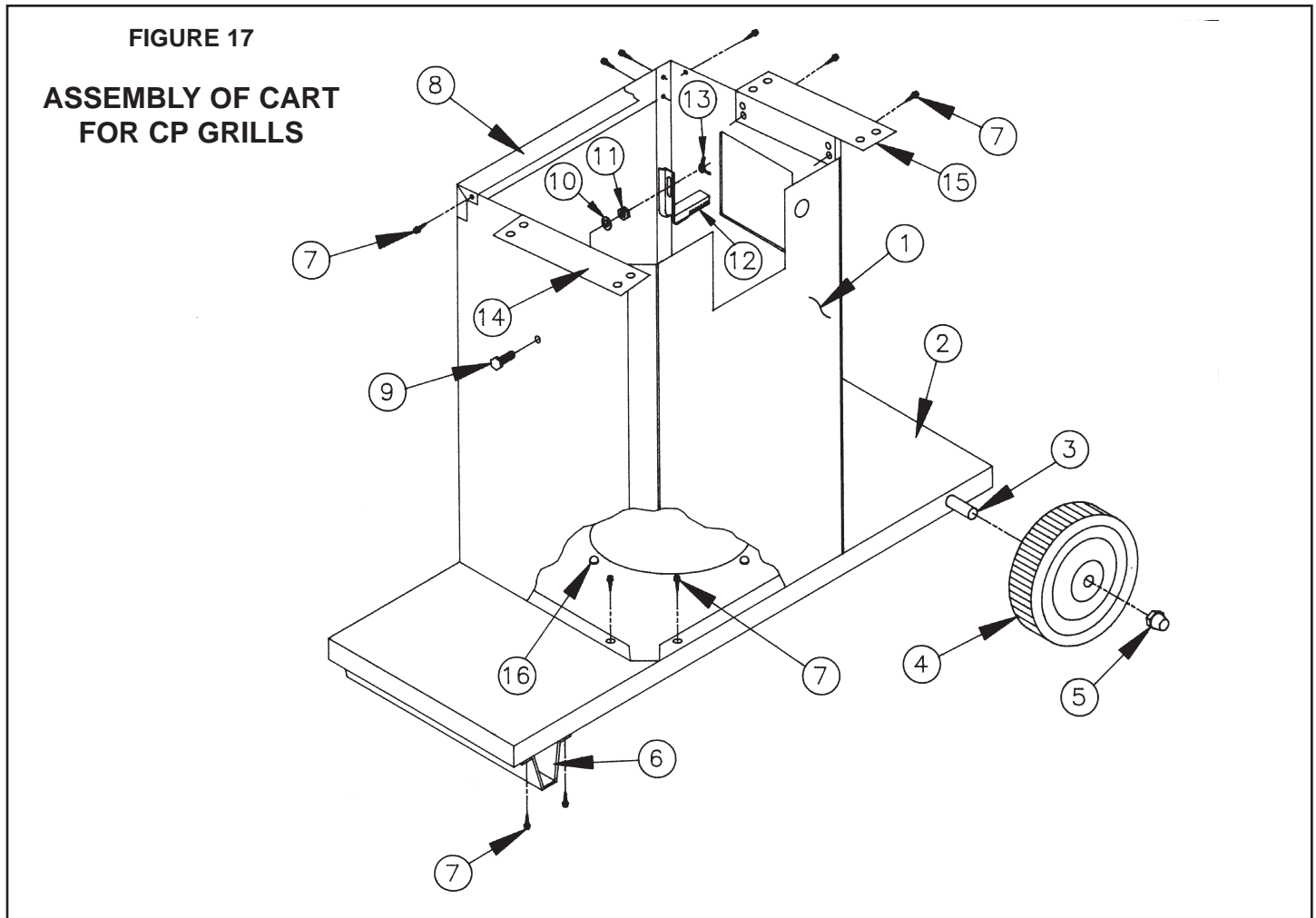
While the manufacturer has made every reasonable effort to insure that these grills operate properly and satisfactorily, sometimes problems do arise. The following troubleshooting chart lists several possible problems with their probable cause and solution.

PROBLEM	CAUSE	SOLUTION
GRILL'S BURNER WON'T LIGHT	<ol style="list-style-type: none"> 1. Misalignment of burner/venturi on orifice. 2. Plugged orifice. 3. Obstruction in gas line. 4. Spider webs in venturi tubes. 5. Misalignment of collector box and burner. 6. Out of gas. 	<p>Reposition venturi opening to make sure it is properly positioned on the orifice.</p> <p>Remove orifice from gas control assembly and clean. Turn gas knob to HI for 1 second only to blow out any debris which might be in gas valve. Turn gas knob to OFF and reinstall the orifice.</p> <p>For propane models, make sure gas valve on cylinder is OFF. Remove the flexible hose and blow out any dirt.</p> <p>Clean venturi tubes (see instructions).</p> <p>Check for proper positioning of electrode and clean collector box.</p> <p>Refill propane-gas cylinder. If natural model, turn on gas at source.</p>
GRILL NOT HOT ENOUGH	<ol style="list-style-type: none"> 1. Poor combustion. 2. Misalignment of burner/venturi on orifice. 3. Inadequate gas pressure. 	<p>Air shutter needs adjusting.</p> <p>See 1 under "Grill's Burner Won't Light" above.</p> <p>Have gas company check.</p>
FLAME BLOWS OUT ON LO	<ol style="list-style-type: none"> 1. Cold grill. 2. Misalignment of burner/venturi on orifice. 3. Poor combustion. 4. Low flame setting 5. Extreme wind. 	<p>Allow grill to preheat at least 5 minutes on HI with the grill lid closed before turning to LO.</p> <p>See 1 under "Grill's Burner Won't Light" above.</p> <p>Air shutter needs adjusting.</p> <p>Turn low flame setting higher.</p> <p>Turn or shield grill.</p>
YELLOW FLAME	<ol style="list-style-type: none"> 1. Air shutter improperly set. 2. Spider webs in venturi. 3. Seasoning salts on burner. 4. Oil film on burner. 	<p>Open air shutter (see instructions).</p> <p>Clean venturi tubes (see instructions).</p> <p>Clean and wash burner with mild detergent.</p> <p>Allow burner to operate 10-15 minutes at HI.</p>

REPAIR PARTS

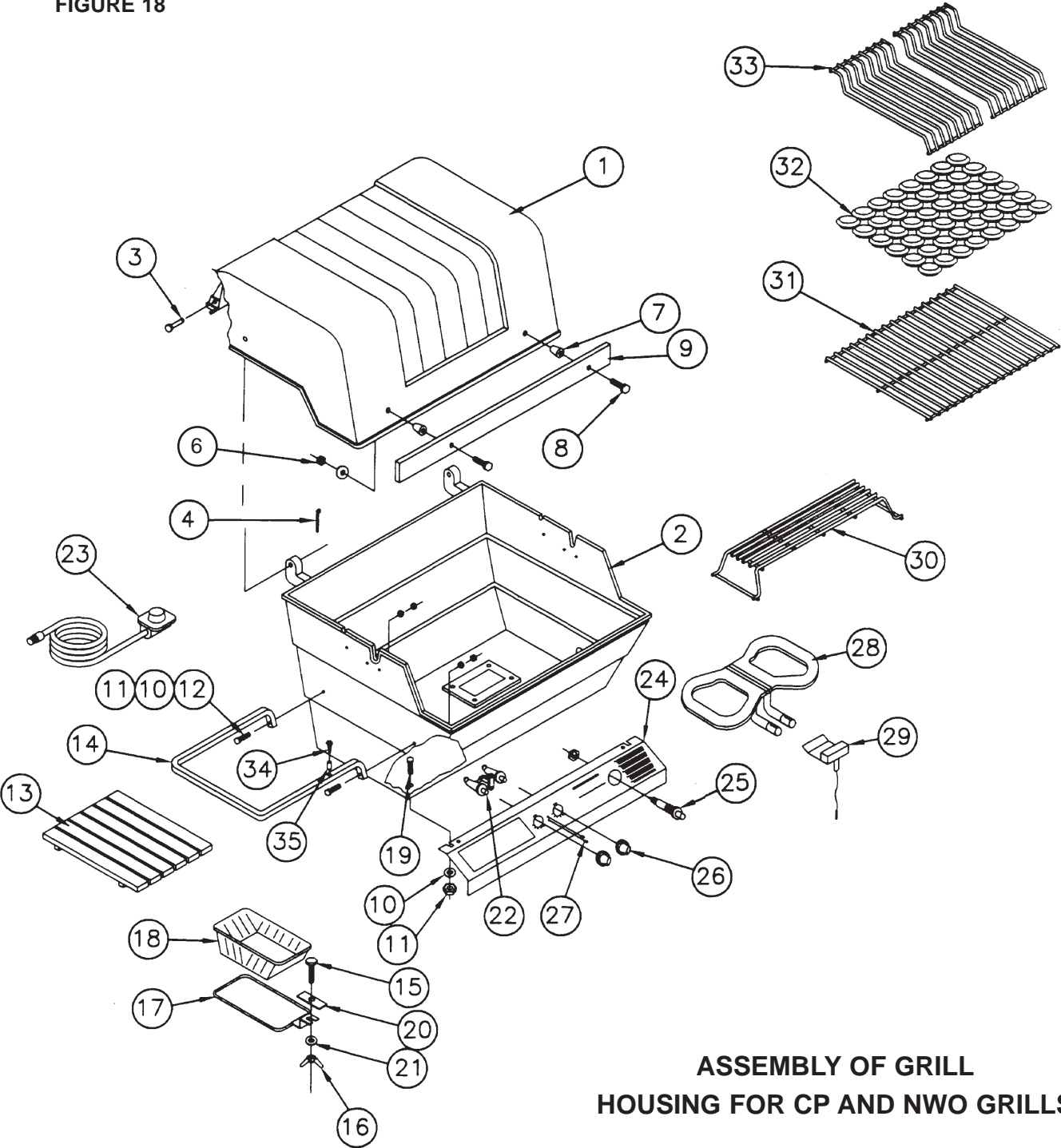
See figures 18 for CP Grill repair parts. Order all repair parts from your Broilmaster dealer. To help ensure prompt and accurate filling of orders, please supply the following information when placing a repair order:

1. MODEL NUMBER OF CART
2. PART NAME
3. PART NUMBER
4. QUANTITY OF PARTS NEEDED



KEY NO.	PART NAME	QTY. PER CART	S5 CP PART NO.
1	Pedestal Cart Ptd.	1	B057825
2	Base Cylinder Shelf Ptd.	1	B057819
3	Axle 17"	1	B058124
4	Plastic Wheel 7"	2	B100095
5	Hub Cap	2	B100108
6	Foot Cart	1	B058619
7	#10 x 3/8" Screw	20	B053779
8	Rear Cart Brace Ptd.	1	B057812
9	1/4 - 20 x 1-1/4 Screw	1	B100114
10	1/4 x 5/8" Lock Washer	1	B100139
11	1/4 - 20 Hex Nut	1	B100120
12	Cylinder Retainer Assembly	1	B064791
13	1/4 - 20 Wing Nut	1	B100126
14	Bracket Ped/Grill (Left)	1	B057815
15	Bracket Ped/Grill (Right)	1	B057816
16	Rubber Grommet	3	B100103

FIGURE 18



ASSEMBLY OF GRILL
HOUSING FOR CP AND NWO GRILLS

ITEM NO.	DESCRIPTION	QTY.	S5CP	S5NWO
1	Lid Casting Ptd.	1	B100062	B100062
2	Bottom Casting Ptd.	1	B100063	B100063
3	Hinge Pin	2	B057804	B057804
4	Bridge Pin	2	B057805	B057805
6	10-24 Keps Nut	2	B073967	B073967
7	Standoff Lid Handle	2	B059271	B059271
8	10-24 x 3 1/2 Carriage	2	B059273	B059273
9	Lid Handle	1	B060312	B060312
10	1/4 x 5/8 Lock Washer	7	B100139	
10	1/4 x 5/8 Lock Washer	2		B100139
11	1/4 - 20 Hex Nut	7	B100120	
11	1/4 - 20 Hex Nut	2		B100120
12	1/4 - 20 x 1-1/2 Hex Bolt	2	B100112	N/A
13	Wood Side Shelf	1	B060324	N/A
14	Pull Handle Bracket	1	B053783	N/A
15	10 - 24 x 1 Screw	1	B100138	B100138
16	10 - 24 Wing Nut	1	B100125	B100125
17	Grease Tray Bracket	1	B060336	B060336
18	Grease Tray	2	B060337	B060337
19	1/4 - 20 x 1-1/4	4	B100114	
19	1/4 - 20 x 1-1/4	2		B100114
20	#10 - 24 Speed Nut	1	B100121	B100121
21	9/32 ID X 5/8 Washer	5	B100136	
21	9/32 ID X 5/8 Washer	3		B100136
22	45° Copreci Valve	1	B069751	B069750
23	Hose & Regulator	1	B069756	N/A
24	Control Panel Assembly w/Label	1	B100188	B100188
-	Control Panel Label (Not Shown)		B058123	B058123
25	Ignitor (Pushbutton)	1	B885160	N/A
26	Valve Knob	2	B070084	B070084
27	10 - 24 x 3/8 Screw	2	B100137	B100137
28	Burner Assembly	1	B053791	B053791
29	Collector Box Assembly	1	B056482	N/A
30	Warming Rack	1	B878363	B878363
31	Briquet Rack	1	B070404	B070404
32	Ceramic Briquets	1	B058122	B058122
33	Cooking Grids	1	B878361	B878361
34	#8 x 1/2 Screw	1	B100140	N/A
35	Handle Spacer	1	B662325	N/A

REPAIR PARTS AND WARRANTY

Periodic inspections and maintenance are essential. All Gas Grill products eventually begin to wear due to environment, contaminants, erosion or aging or components made of metal or rubber. Inspect all components at least two times per year and replace when necessary.

A repair parts pamphlet is provided with this manual. When placing a repair part order with your Broilmaster dealer, refer to the pamphlet for repair part information.

A warranty is provided with this manual. For warranty claims, follow the instructions provided by the warranty.

SAVE THIS MANUAL FOR FUTURE REFERENCE.

WARRANTY



LIMITED WARRANTY

Manufactured in U.S.A. by Broilmaster, a Division of Empire Comfort Systems, Inc., P.O. Box 529, Belleville, Illinois 62222.

WHAT IS COVERED AND FOR HOW LONG.

From the date this grill is first purchased for use, Broilmaster will make available, at our factory, a free replacement for any defective part covered by this warranty on the following basis:

LIMITED LIFETIME WARRANTY

- Aluminum Grill Housing
- Stainless Steel Burners
- Stainless Steel Carts
- Stainless Steel Carts and/or Mountings
- Side Burner & Housing
- Porcelain Coated Cast Iron Cooking Grids (Damaged by dropping, scraping or abrasive cleaning voids the warranty for the cooking grids)
- Stainless Components for Built-in Series (BIKH, BIKSB, BIKBIN, BIKDR)

LIMITED 5-YEAR WARRANTY

- Painted Electrogalvanized Steel Components

LIMITED 2-YEAR WARRANTY

- Porcelain Coated Steel Cooking Racks
- All Other Parts

LIMITED 1-YEAR WARRANTY

- Rotisserie Units
- Premium Tool Set
- Grill Covers
- Shelving

WARRANTY

WHAT IS NOT COVERED

- Removal and reinstallation cost.
- Labor for replacement or repairs.
- The costs of a service call to diagnose a problem.
- Transportation and shipping cost.
- Finishes on surface that are damaged by improper installation, improper storage, accident, misuse, abuse or alteration.
- Inoperable due to improper or lack of cleaning.
- Damage from accident, misuse, alteration, abuse, improper installation or storage.

This warranty does not imply or assume any responsibility for consequential damages that might result from use, misuse, or improper installation of this cooking appliance.

This warranty does not cover claims, which do not involve defective workmanship or materials.

A bill of sale, cancelled check, or payment record should be kept to verify purchase date and establish warranty period.

HOW TO GET SERVICE

Service under this warranty must be obtained by contacting your Broilmaster dealer. (See telephone directory or call 800-851-3153, Consumer Relations Department, Empire Comfort Systems, Inc.) Provide the dealer with Model number, Serial number, type of gas and purchase verification information.

YOUR RIGHTS UNDER STATE LAW

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

This warranty applies only to the original purchaser and may not be transferred. This warranty applies as long as the grill can be used safely as a residential gas grill.

BROILMASTER®

A Division of Empire Comfort Systems, Inc.

918 Freeburg Ave.

Belleville, Illinois 62220

Phone: 1-800-851-3153

FAX: 1-800-443-8648

Visit our web site at www.broilmaster.com

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THE MOST DURABLE GRILL
KNOWN TO MAN

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