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PLEASE KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE



BISTRO 4500

BY: SHERWOOD INDUSTRIES LTD

OWNER'S MANUAL



NOTE: This appliance must not be used indoors.

WHAT TO DO IF YOU SMELL GAS

- Open windows/extinguish any open flame.
- Do not try to light any appliance.
- Do not touch any electrical switch or use any phone in your building.
- Immediately call your gas supplier from a neighbour's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

FOR YOUR SAFETY

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

A propane (LP) cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.

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SAFETY PRECAUTIONS

Please read these instructions before assembling or operating this outdoor cooking appliance.

The ENVIRO BISTRO is designed for outdoor use only.

The ENVIRO gas barbecue must be installed and operated in accordance with the installation requirements of your local gas supply authority or the appropriate installation code in the area of installation. In the absence of local codes, use either the National Fuel Gas code, ANSI Z223.1, or CAN/CGA-B149.1, National gas Code or CAN/CGA-B149.2, Propane Gas Code.

If an external electrical source is utilized, this gas grill, when installed, must be electrically grounded in accordance with the local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.1.

Keep electrical cord and the fuel source hose away from any heated areas.

This outdoor gas grill is not intended for use in or on recreational vehicles and or boats.

Operate this gas grill only in areas free of obstructions for combustion and ventilation air.

The exterior surfaces of this gas grill can become very hot when in use. **Exercise caution.** Use protective gloves and/or pot holders.

DO NOT USE THIS APPLIANCE IN AN ENCLOSED AREA.

Examples of enclosed areas are garages, sheds or enclosed sundecks or any other enclosed areas. Do not use this gas grill under overhead, unprotected combustible materials such as awnings or umbrellas.

KEEP CHILDREN AWAY.

Do not allow children to operate this appliance. Keep children and pets away from barbecue during use.

CHECK FOR GAS LEAKS.

Once the barbecue has been assembled and installed, make sure the gas knobs and valves are in the "OFF" position. Turn gas "ON" at the source. Use a small brush to apply a warm soapy water solution to all gas connections (use a half dish soap and half warm water). If a gas leak is present, bubbling will occur. Gas leaks can be repaired by using an approved pipe thread sealant or approved Teflon tape. The flexible gas hose must be inspected before each use.

NEVER USE AN OPEN FLAME WHEN TESTING FOR LEAKS.

LPG GAS CYLINDER.

An approved 20 lb. gas cylinder is required for optimum performance and convenience.

LPG gas cylinder is not provided with this appliance. When purchasing a LPG cylinder, make sure the cylinder has a manual shut off valve and that the cylinder has a collar to protect the manual shut off valve.

LPG gas cylinder must be constructed and marked in accordance with specifications of the U.S. Department of Transport (DOT). In Canada gas cylinders must meet Canadian Transportation and Communications (CTC) specifications.

Lift the LPG cylinder by its collar, never from the valve.

NEVER CONNECT AN UNREGULATED LP GAS CYLINDER TO YOUR BARBECUE.

DO NOT SUBJECT LP GAS CYLINDERS TO EXCESSIVE HEAT.

WHEN THE APPLIANCE IS NOT IN USE, THE GAS SUPPLY SYSTEM MUST BE TURNED "OFF" AT THE SOURCE.

KEEP APPLIANCE AWAY FROM ANY COMBUSTIBLE MATERIALS.

VISUALLY INSPECT THE RUBBER GAS HOSE AND CONNECTIONS AND BURNERS ON A REGULAR BASIS TO ENSURE NO DAMAGE OR DETERIORATION IS PRESENT.

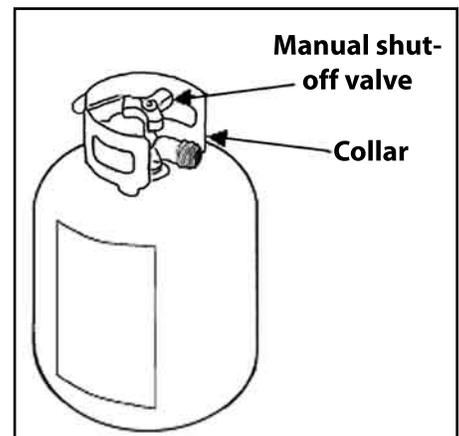


Figure 1

SPECIFICATIONS

DIMENSIONS:

Width:	64 ¹ / ₁₆ inches	(162.7 cm)
Depth at bottom:	22 ⁷ / ₁₆ inches	(56.9 cm)
Height to side shelf:	34 ¹⁵ / ₁₆ inches	(88.7 cm)
Overall height:	49 ⁷ / ₈ inches	(126.6 cm)

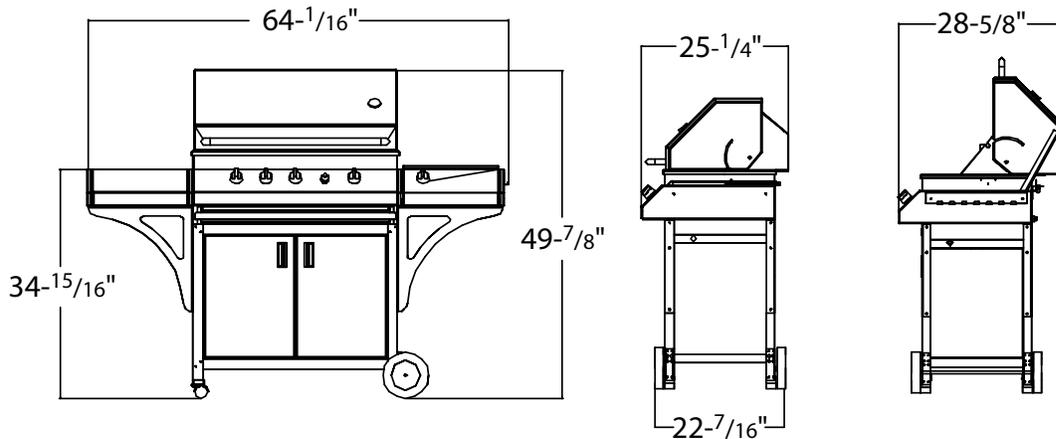


Figure 2

ORIFICE SIZES:

Bistro 4500	Main	Rear	Side
Natural Gas (NG)	#51 DMS	#46 DMS	#51 DMS
Propane (LPG)	#56 DMS	#54 DMS	#56 DMS

CLEARANCES TO COMBUSTIBLES:

DO NOT USE THIS APPLIANCE IN AN ENCLOSED AREA, for example: Garages, sheds or enclosed sundecks or any other enclosed areas. Do not use this gas grill under overhead, unprotected combustible materials such as awnings or umbrellas.

KEEP THIS APPLIANCE FREE FROM COMBUSTIBLE MATERIALS.

DO NOT OBSTRUCT THE FLOW OF COMBUSTION AND VENTILATION AIR

KEEP THE VENTILATION OPENINGS AROUND THE LPG GAS CYLINDER ENCLOSURE CLEAR AND FREE OF DEBRIS

Rear to unit **A:** 16 Inches (40.6 cm)

Side to unit **B:** 8 Inches (20.3 cm)

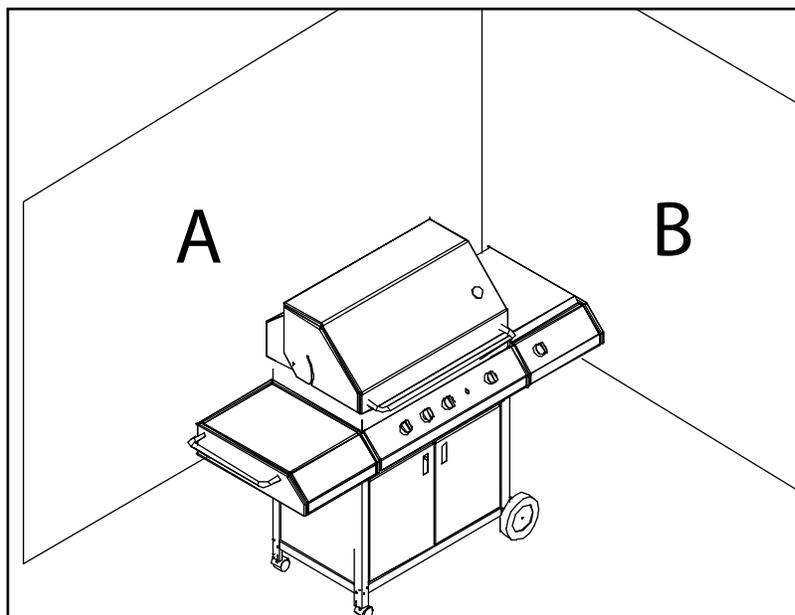


Figure 3

ASSEMBLY INSTRUCTIONS

Your ENVIRO BISTRO will require some assembly. Please do not use a drill to modify any component, it is not necessary. Inspect all components for damage before assembly begins. If damage is present, please contact your local dealer or a courier company. Replace the damaged components with original manufacturer's parts, no substitutions will be permitted. Do not commence construction if components are damaged or missing.

The Cart assembly and Main Engine have been pre-assembled for convenience and ease of assembly.

TOOLS REQUIRED:

- 1/4" socket or nut driver
- 5/32" Allen key (supplied)
- 7/16" wrench or adjustable wrench
- 11/16" wrench or adjustable wrench
- 3/4" wrench or adjustable wrench
- Hammer or mallet

CART COMPONENTS:

- Pre-assembled cart
- (2) Stainless steel axle mount
- Side shelf
- (30) 1/4" stainless steel lock washers
- (2) Plated caster assemblies
- (2) BBQ wheels
- Side shelf top
- (20) 1/4" stainless steel nuts
- Aluminum axle and (2) end caps
- (2) Shelf gussets
- (30) 1/4" x 1/2" stainless steel bolts
- 5/32" Allen key



Figure 4

Once the cart assembly has been removed from the packaging, open the doors and remove all the objects from inside of the cart. The cart will look similar to Figure 4.

There should be a small box, a large box, the aluminum axle and some packaging materials.

The components shown in Figure 5 should be found in the larger box.

Most of the stainless steel components are covered with plastic to prevent scratching the unit during assembly. This can be removed

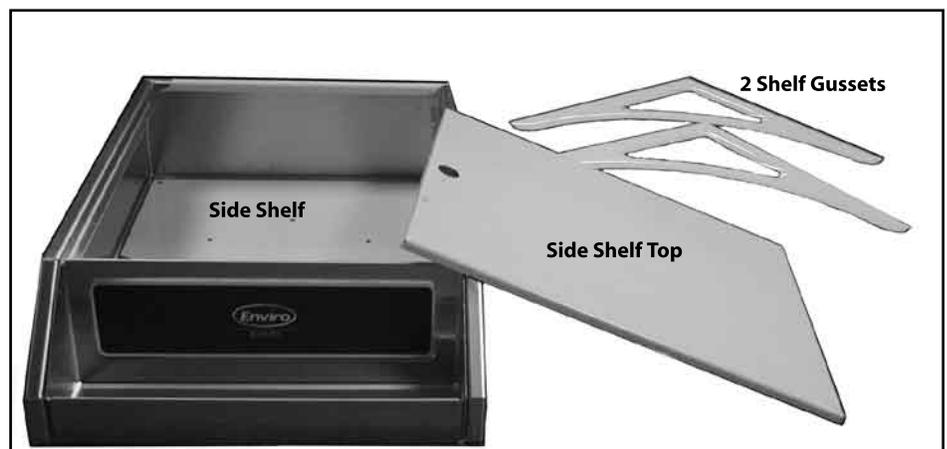


Figure 5



Figure 6

The components shown in Figure 6 should be found in the smaller box.

ENGINE COMPONENTS:

- Pre-assembled engine
- Metal Foil Container
- Grill removal tool
- (8) 1/4" x 1/2" stainless steel bolts
- (3) Flame diffusers
- Utensil rack
- Warranty card
- (2) 1/4" stainless steel nuts
- Warming Rack
- Owner's manual
- Hose with pressure regulator
- (8) 1/4" stainless steel lock washers



Figure 7

When the top of the shipping box has been removed and the lid has been opened, it will look similar to Figure 7.

A metal foil container is taped to the warming rack and the warming rack is taped to the windshield. All tape must be removed from inside the engine before your **Bistro 4500** is started for the first time. The three flame diffusers are stacked and the rest of the components will be found in the manual bag.

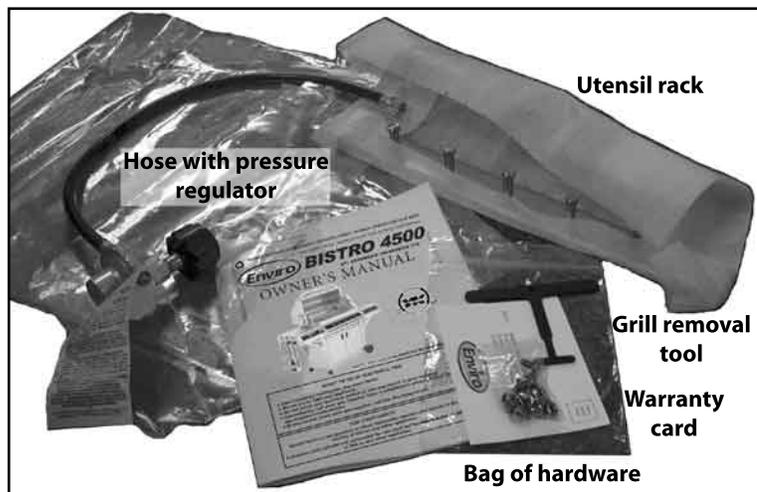


Figure 8

The components shown in Figure 8 should be found in the manual bag found inside the engine.

SIDE BURNER COMPONENTS (OPTIONAL):

- Pre-assembled side burner
- (2) Shelf gussets
- Cast side burner grill (2 pieces)
- Side burner porcelain diffuser cap
- NG Orifice
- Nutdriver (used to change orifice)
- (10) ¼" x ½" stainless steel bolts
- (4) ¼" stainless steel nuts
- (10) ¼" stainless steel lock washers



Figure 9

ROTISSERIE COMPONENTS (OPTIONAL):



Figure 10



Figure 11

- Rotisserie Motor
- Side mount bracket
- (4) Stainless steel thread rolling screws (one extra)
- Rotisserie rod (not shown)
- (2) Spit forks
- Spit bushing
- Counter weight assembly



Figure 12

CASTERS AND WHEELS INSTALLED ONTO CART ASSEMBLY:

When the cart cabinet has been emptied the wheels and casters can be installed. Leave the cart body upside down; this will make installing the wheels and casters easier.

Components Required:

- Pre-assembled cart
- (2) Stainless steel axle mount
- (14) 1/4" stainless steel lock washers
- (2) Plated caster assemblies
- (2) BBQ wheels
- (14) 1/4" stainless steel nuts
- Aluminum axle and (2) end caps
- (14) 1/4" x 1/2" stainless steel bolts

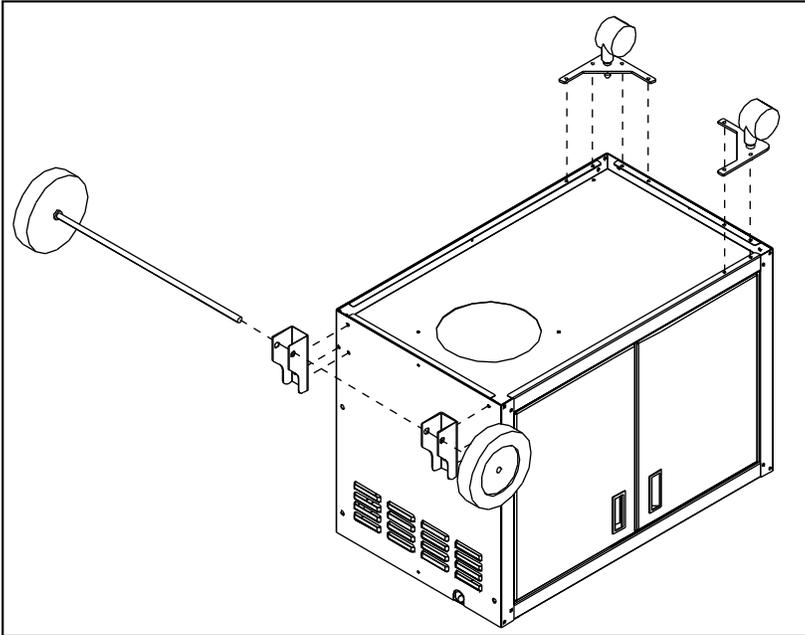


Figure 13

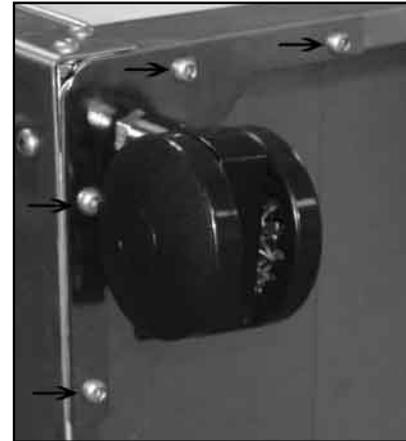


Figure 14

The casters must be installed on the bottom left side of the cart body. Each caster requires four (4) bolts, four (4) lock washers, and four (4) nuts. Put the casters in place (see Figure 13 & 14) and slide the bolts through the holes in the caster brackets into the holes in the bottom of the cart body. Open cabinet doors and place a lock washer and a nut onto each bolt. Using a 1/4" socket or nut driver and a 5/32" Allen key, tighten all the nuts and bolts.

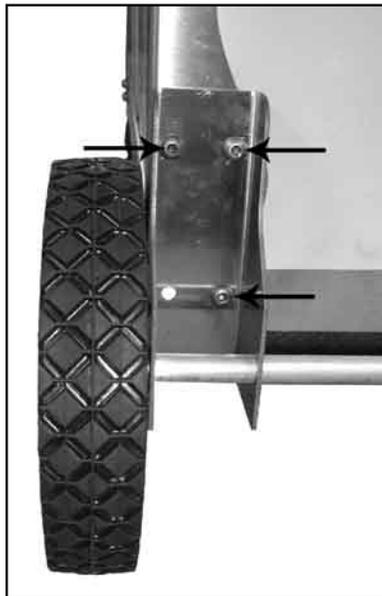


Figure 15



Figure 16

The axle mounts must be installed on the right side of the cart body. Each axle mount requires three (3) bolts, three (3) lock washers, and three (3) nuts. Put the axle mounts in place with the holes for the axle closest to the bottom of the cart body (see Figure 13 & 15). Slide the bolts through the holes in the mount into the holes in the side of the cart body. Place a lock washer and a nut onto each bolt. Using a 1/4" socket or nut driver and a 5/32" Allen key tighten all the nuts and bolts.

Before the wheels can be installed they must be partially assembled. Press one wheel onto an end of the axle so that approximately 1/2" (1 cm) of the axle is out past the wheel. The side with the webbing on it is to face out. A hammer or mallet may be needed to help put the wheels on the axle. Press an end cap all the way onto the end of the axle with the wheel on it; ensure the wheel is butted up against the end cap (see Figure 16). Slide the axle through the holes in both axle mounts; it may be a tight fit so turn the axle while pressing it through the holes. Press the other wheel, then the end cap, onto the free end of the axle.

ENGINE INSTALLED ONTO CART ASSEMBLY:

Components Required:

- Rolling cart
- Pre-assembled engine
- (4) $\frac{1}{4}$ " x $\frac{1}{2}$ " stainless steel bolts
- (4) $\frac{1}{4}$ " stainless steel lock washers
- Metal Foil Container
- Drip tray

WARNING: Two (2) people are required to lift the engine onto the cart safely.

Empty all the components (frame deflectors, manual bag, and warming tray) from inside the engine to make it lighter to lift. Turn the cart body right side up. Using two (2) people, lift the engine onto the cart. Take care to line up the manifold fitting on the bottom of the engine with its corresponding cut away on the top of the cart. Refer to Figure 17.

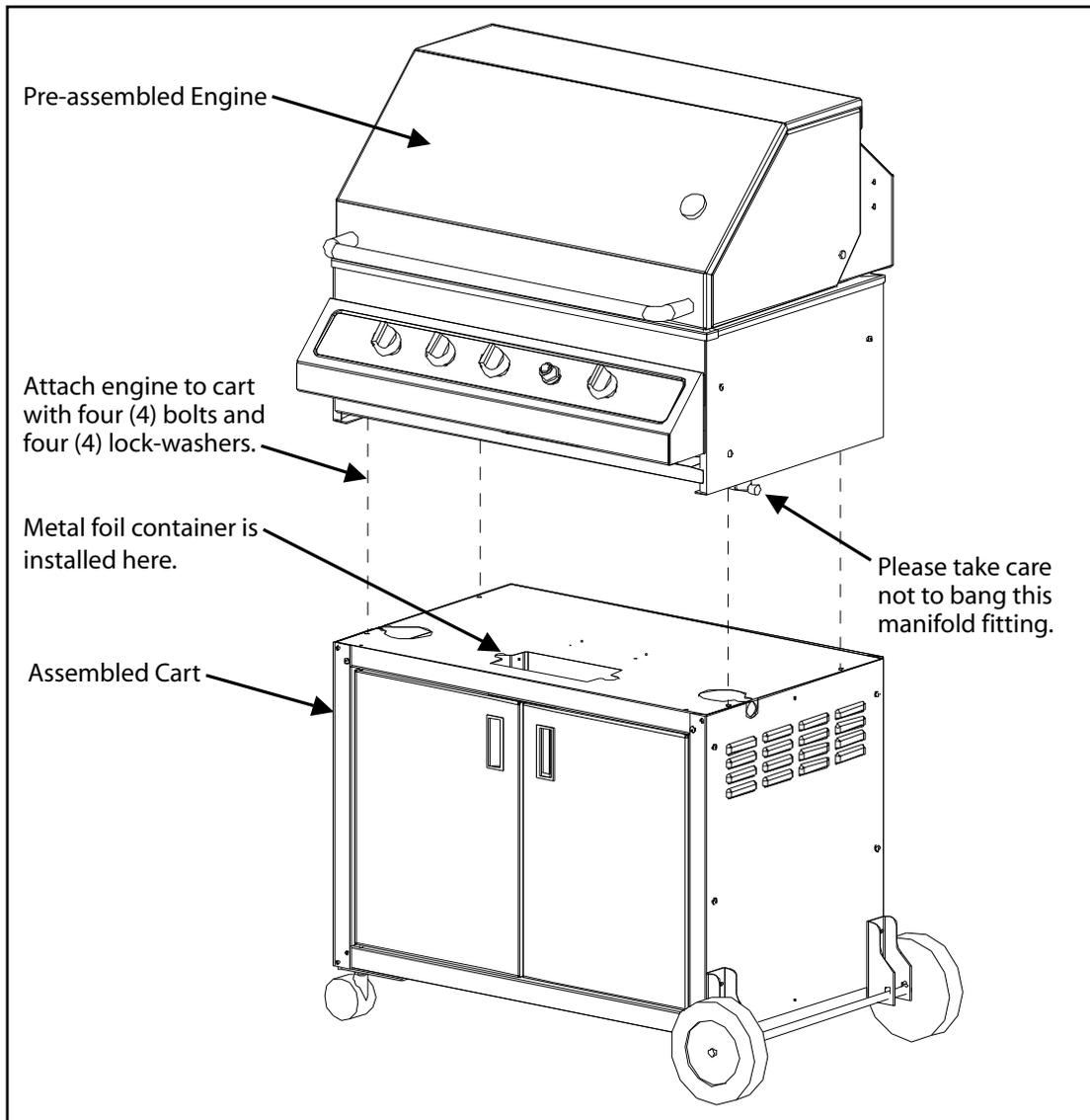


Figure 17

Attach the engine to the cart with four (4) bolts and four lock-washers. The bolts go from inside the cart through the top of the cart into pre-threaded inserts already installed in the bottom of the engine. Using a $\frac{5}{32}$ " Allen key tighten all four (4) bolts.

The metal foil container can be installed at any stage but is pointed out in this step to provide clarity on the location for installation. If installing at a later time, open cabinet and slide container into place.

SIDE SHELF AND UTENSIL RACK INSTALLED ONTO CART ASSEMBLY:

Components Required:

- Rolling cart with engine
- (12) 1/4" x 1/2" stainless steel bolts
- Utensil rack
- (2) Shelf gussets
- (12) 1/4" stainless steel lock washers
- Side shelf top or corian cutting board
- Side shelf
- (6) 1/4" stainless steel nuts

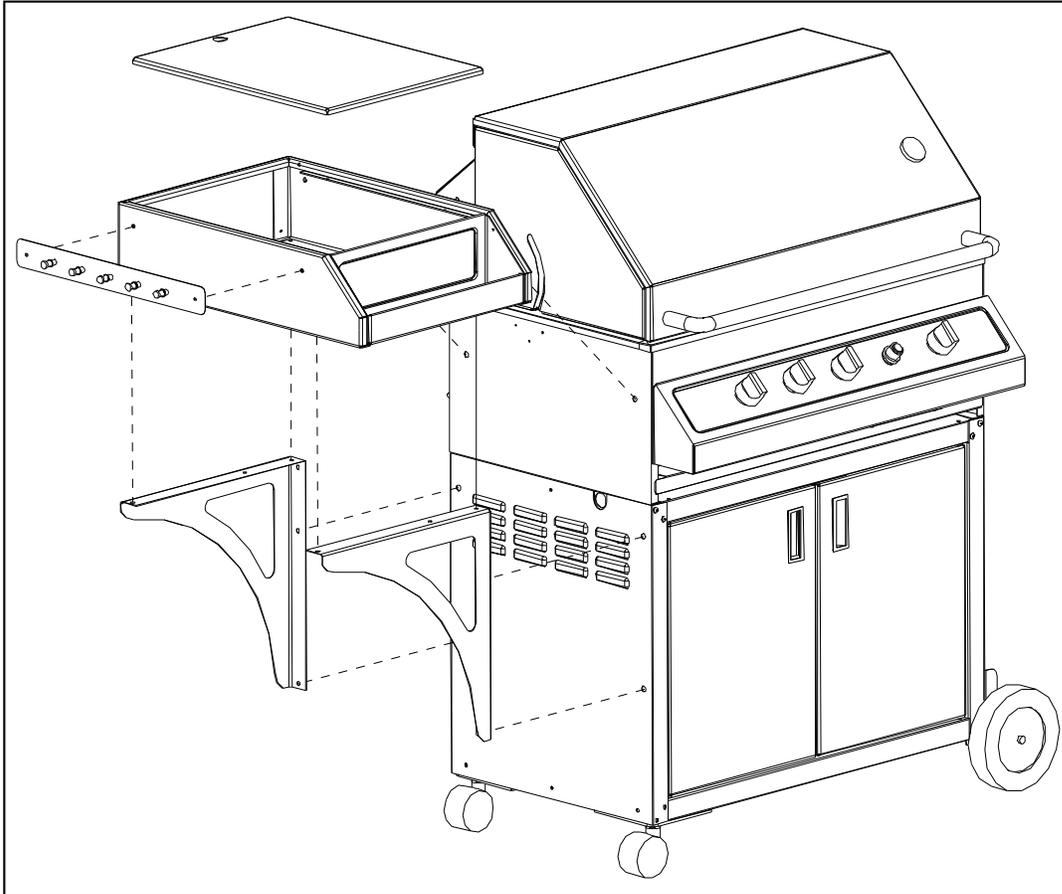


Figure 18

The side shelf can be installed on either side but if a side burn is to be installed as well, the side shelf must be installed on the left side (see Figure 18).

1. Attach the two (2) shelf gussets (formed edges pointing in) onto the front and rear of the left side panel, using four (4) bolts and four (4) lock-washers, through the inside of the side shelf into pre-threaded inserts already installed in the side of the cart.
2. Place the side shelf on the shelf gussets and install four (4) bolts, four (4) lock-washers, and four (4) nuts through the holes in the bottom of the side shelf and the corresponding hole at the top of the shelf gussets. **DO NOT TIGHTEN THESE BOLTS ENTIRELY, THIS WILL HELP WITH ALIGNMENT FOR NEXT STEP.**
3. Install two (2) bolts and two (2) lock-washers through the side of the side shelf into the pre-threaded inserts already installed in the side of the engine assembly.
4. The utensil rack can be installed on the side of the side shelf or directly onto the side of the engine. If it is to be installed onto the side shelf, place the two (2) bolts through the holes on each end of the utensil rack then through the side of the side shelf. Use two (2) lock-washers and two (2) nuts to hold the bolts in place.
5. Using a 1/4" socket or nut driver and a 5/32" Allen key tighten all the fasteners.

SIDE BURNER INSTALLED ONTO CART ASSEMBLY (OPTIONAL):

Components Required:

- Rolling cart with engine
- Side Burner
- (4) ¼" stainless steel nuts
- (2) Shelf gussets
- Side burner porcelain diffuser cap
- (10) ¼" x ½" stainless steel bolts
- Cast side burner grill (2 pieces)
- Side shelf top or corian cutting board
- (10) ¼" stainless steel lock washers

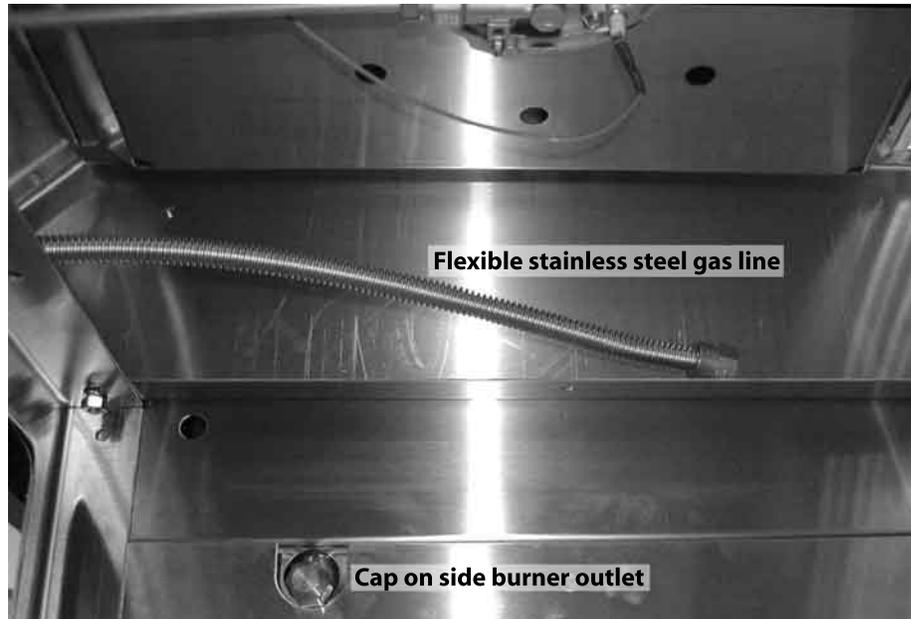


Figure 19

The side burner must be installed on the right side. The initial installation steps for the side burner are very similar to the side shelf so you may refer to Figure 18.

1. Attach the two (2) shelf gussets (formed edges pointing in) onto the front and rear of the right side panel, using four (4) bolts and four (4) lock-washers through the inside of the side shelf into pre-threaded inserts already installed in the side of the cart.
2. Place the side burner on the shelf gussets and install four (4) bolts, four (4) lock-washers, and four (4) nuts through the holes in the bottom lip of the side burner and the corresponding hole at the top of the shelf gussets. **DO NOT TIGHTEN THESE BOLTS ENTIRELY, THIS WILL HELP WITH ALIGNMENT FOR NEXT STEP.**
3. Install two (2) bolts and two (2) lock-washers through the side of the side burner, accessed through the open bottom of the side burner, into the pre-threaded inserts already installed in the side of the engine assembly.
4. Using a ¼" socket or nut driver and a 5/32" Allen key tighten all the fasteners.
5. Once the side burner has been installed the gas line must be connected. Using a 11/16" wrench remove the cap installed on side burner outlet on the right side of the engine (see Figure 19).
6. Attach the flexible stainless steel gas line to the side burner outlet using a ¾".
7. When the gas has been attached to the **Bistro 4500** (see "Hooking Up To Gas Supply" section), turn on the main gas supply and perform a leak test. Using a liquid dish soap and water solution, spray or brush on all gas connections. If large bubbles are present this is the sign of a gas leak. Re-tighten gas connections and leak test once again until there are no signs of bubbling.

ROTISSERIE INSTALLED ONTO CART ASSEMBLY (OPTIONAL):

Components Required:

- Rolling cart with engine
- (3) Stainless steel thread rolling screws
- Spit bushing
- Rotisserie Motor
- Rotisserie rod
- Counter weight assembly
- Side mount bracket
- (2) Spit forks

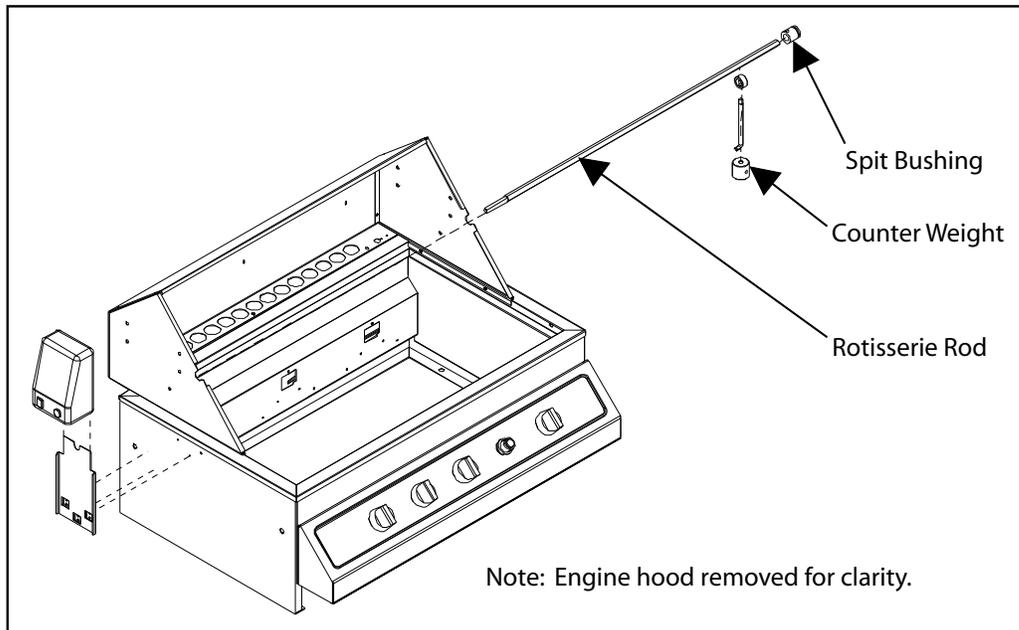


Figure 20

1. Install the motor mounting bracket onto the left side of the engine with the three (3) screws provided.
2. Slide the rotisserie motor into the mounting bracket.
3. Place the forks, counterweight, and spit bushing onto the rotisserie rod (see Figure 20). If cooking a large item on the rotisserie, the forks are not mandatory.
4. Slide the pointed end of the rotisserie rod into the rotisserie motor and rest the groove in the bushing on the notched right side of the windshield.

NOTE: DO NOT USE ROTISSERIE MOTOR IN THE RAIN AND REMOVE MOTOR WHEN NOT IN USE.
DO NOT USE THE WARMING RACK IF THE ROTISSERIE IS BEING USED.

GRILL REMOVAL:

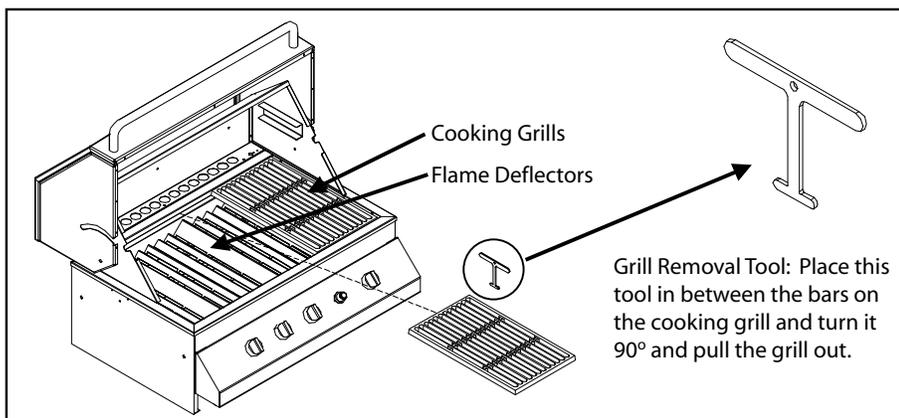
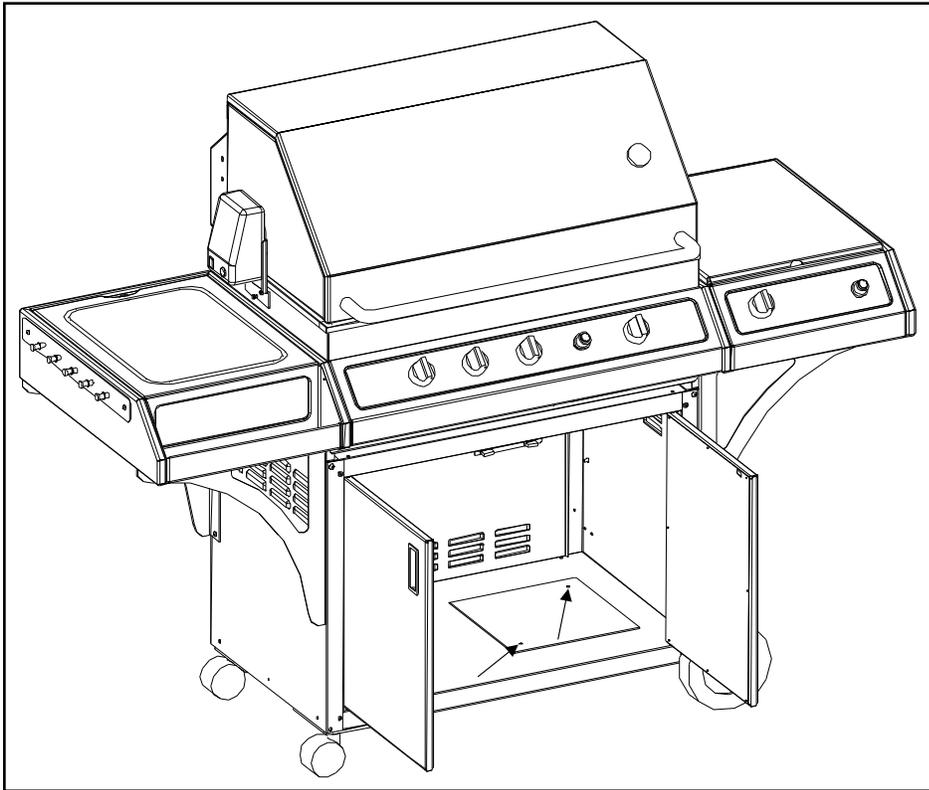


Figure 21

INSTALLING PROPANE CYLINDER IN CABINET:



To install the propane cylinder open the doors to the cabinet, remove the two (2) ¼" nuts and bolts holding the tank hole cover plate (shown in Figure 22). Remove the plate covering the hole. Place the propane cylinder inside the cabinet and drop it into the hole provided in the bottom shelf of the cabinet.

Figure 22

Secure the tank to the cabinet using the attached propane tank holder. Simply undo the wing nut provided, slide the mount over the collar of the propane tank and tighten the wing nut until secure (see Figure 23).

Install the gas line from the propane cylinder as shown in "Hooking Up To Gas Supply - Propane" on next page.

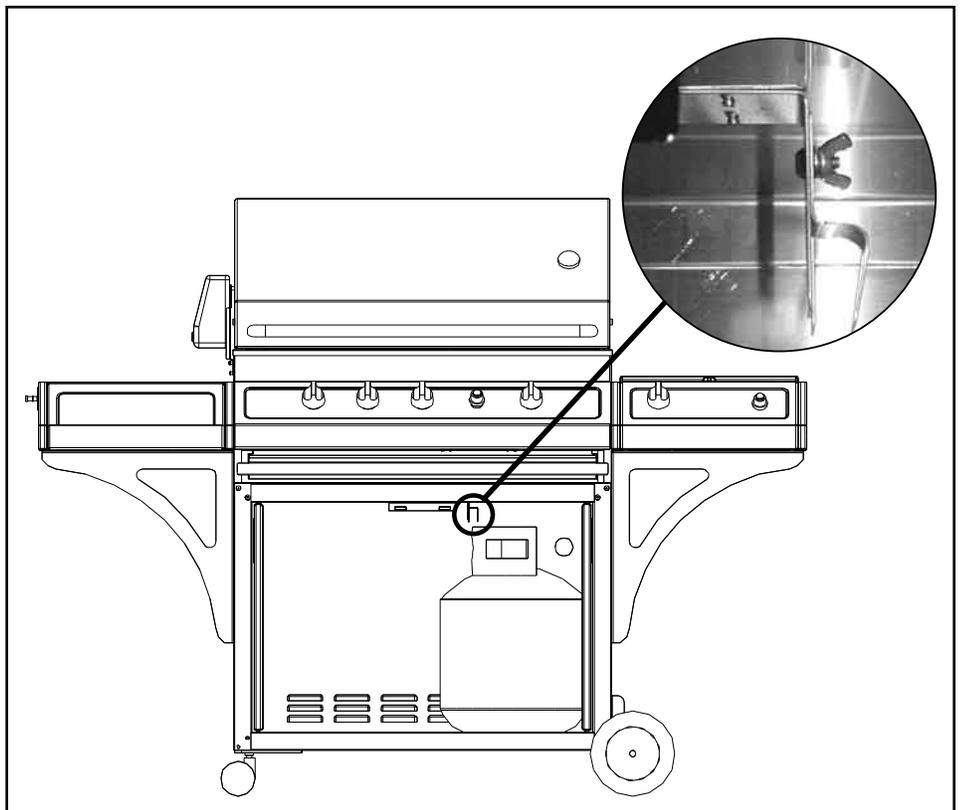


Figure 23

HOOKING UP TO GAS SUPPLY

PROPANE:

FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors in the vicinity of this or any other appliance.

Other LPG cylinders not connected to the appliance should not be stored in the vicinity of this or any other appliance.

A hose and pressure regulator must be used. If a replacement hose and regulator is required, it must be one supplied by the manufacturer. Refer to "Parts List" for product number.

Propane Gas (LPG) Connection:

1. Ensure that all the burner control knobs are in the OFF position.
2. Install the LP gas cylinder in the hole provided in the base of the gas grill. Refer to "Installing Propane Cylinder In Cabinet" section on previous page.
3. Connect the gas supply regulator. Insert the nipple of the valve coupling into the tank valve and tighten the connection by turning the connection clockwise (see Figure 24) while holding the regulator with the other hand.

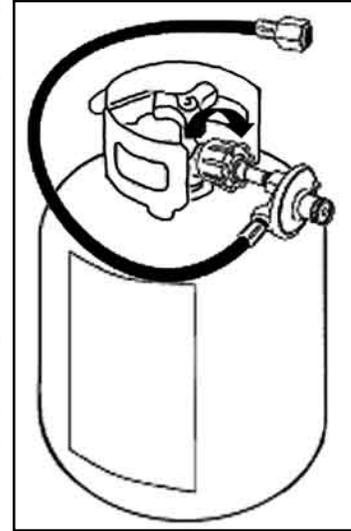


Figure 24

TEST FOR LEAKS:

Before operating the gas grill:

1. Ensure that all burner control knobs are in the OFF position.
2. Connect the gas supply hose and open the shut off valve on top of the LPG cylinder.
3. Use a spray bottle or a brush and apply a soap and water solution (half warm water and half liquid dish soap) to all gas line connections and joints.
4. Look for bubbles. The appearance of these bubbles indicates a gas leak. Turn off the gas supply and tighten the joint where the bubbling occurred. Turn the fuel supply back on and retest with the soapy solution once again. Repeat this procedure until all gas leaks have been repaired.

NATURAL GAS:

To Connect Gas Line:

1. Push back the sleeve on the socket as shown below.
2. Insert the plug and release the sleeve.
3. Push the plug until the sleeve snaps in forward to lock the plug in place.

To Disconnect Gas Line:

1. Push the sleeve back and pull the plug out of the socket.

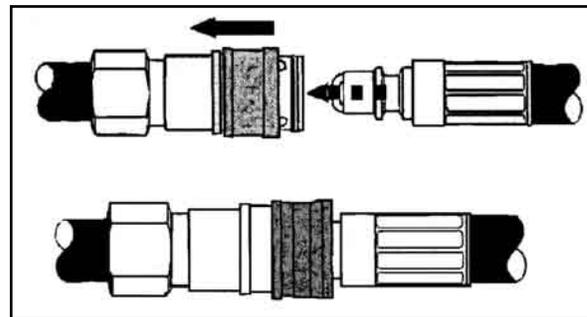


Figure 25

A qualified service agency or installer should perform all gas supply plumbing. In the U.S.A., the supply connection must be made in accordance with local codes or in the absence of local codes, with the National Fuel Gas Codes, ANSI Z233.1. In Canada, the gas supply connection should be carried out in accordance with the authority having jurisdiction and in accordance with the requirements of the CAN/CGA 1-B149.1 and 2 installation code. A manual shut off valve must be installed between the Gas Grill and the fuel supply system.

The outdoor cooking appliance must be disconnected from the fuel supply system before any pressure testing of the system exceeds ½ psi (3.5 kPa)

Check the rating label located on the back of this appliance to confirm that the burner valves and orifices are configured to burn Natural Gas. If required, install a Natural Gas conversion kit available through your ENVIRO dealer.

OPERATING INSTRUCTIONS

Please read the "**SAFETY PRECAUTIONS**" section in this manual before you start the unit for the first time, when the gas supply has been turned off, or whenever the gas cylinder has been changed.

Make sure the orifices, venturis, and main burners are free from obstructions. Perform a gas leak check as described on page 14 of this manual.

IGNITION:

1. The unit is equipped with an ignition system that will direct a spark to all burners at the same time.
2. Ensure that all burner control knobs are in the "OFF" position.
3. Turn fuel supply "ON" at the source.
4. Open the lid to the barbecue and do not put your head over gas grill before lighting. Push the center gas control knob counter clockwise to the high flame setting and depress the ignitor button until the burner lights. To light other burners turn the desired knob counter clockwise and depress ignitor button until main burner lights. Use this same procedure to ignite rear burner and side burner (hot plate) if equipped.
5. Ensure that the burner is lit and check the flame for proper appearance and operation (see Figure 28). If the electric ignitor does not operate, remove the grills from the unit and the flame diffusers beneath the grills and light the burners using a match or flame tamer.

NOTE: Each burner must have the ignition button depressed in order to ignite each burner.

This lighting operation should only take 4-6 seconds. **IF THE BURNERS DO NOT IGNITE** turn gas knobs to the "OFF" position and wait 5 minutes to clear any gas that could have accumulated in and around the barbecue.

TEMPERATURE SETTING:

The temperature settings on this barbecue are labeled high to low flame and the control knob can be set anywhere in this temperature range on all burners. To preheat this unit, close the lid and monitor the thermometer located on the lid.

TURNING THE UNIT "OFF":

Turn the gas control knob clockwise to the "OFF" position when the unit is not being used or when you have finished cooking with the barbecue. Always turn the main gas supply "OFF" at the source when not in use.

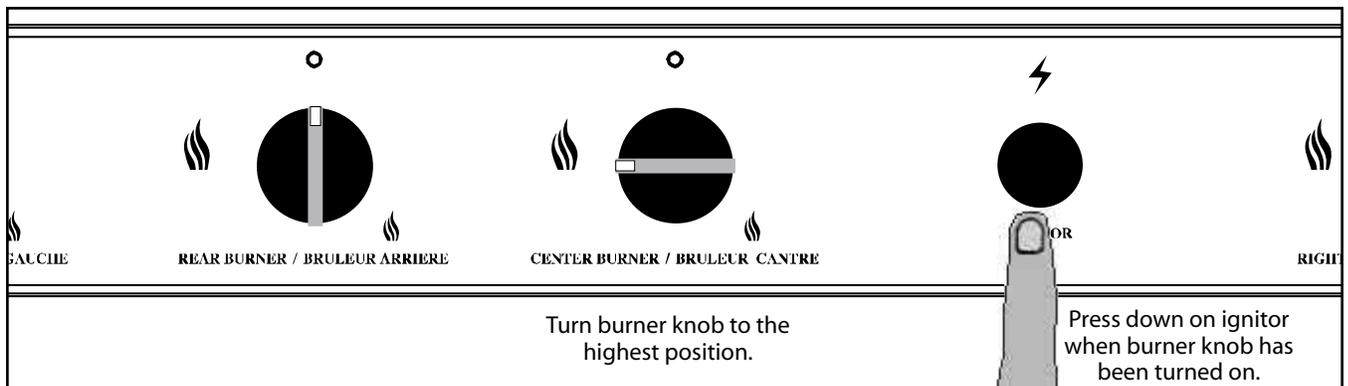


Figure 26



Figure 27

BURNER FLAME APPEARANCE AND ADJUSTMENT

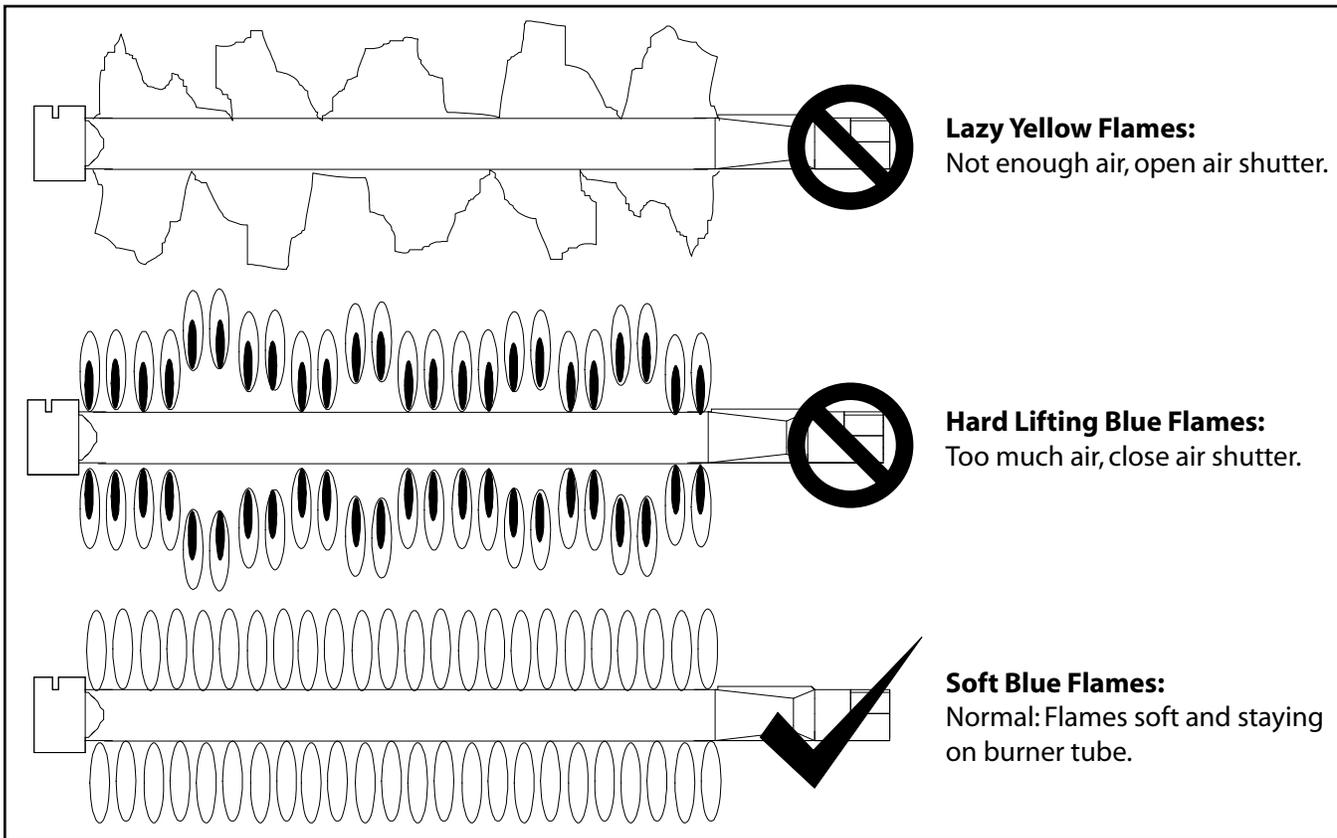


Figure 28

1. Remove the cooking grates from the gas grill.
2. Remove the flame deflectors located below the cooking grates.
3. Remove the burner tube. Undo one screw and the mounting plate on the rear of the gas grill and lift burner tube out.
4. Loosen the single setscrew that holds the venturi air shutter adjustment on the burner tube.
5. If the flame was too yellow and lazy in appearance then open the air shutter until a soft blue flame is achieved. This flame should also stay on the burner tube as shown in Figure 28.
6. Undo the setscrew and rotate the venturi cover until a soft blue flame is achieved
7. If the flame is lifting off the burner tube and the flame sounds like a blowtorch this could be that there is too much air being supplied, undo the setscrew and close the air shutter until a soft blue flame is achieved.

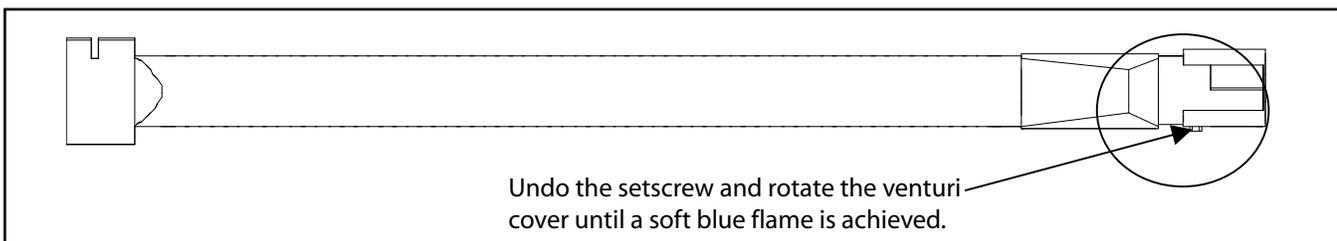


Figure 29

ROUTINE MAINTENANCE AND INSPECTION

HOSE ASSEMBLY AND SAFETY:

If the hose shows signs of deterioration or damage, use a soap and water solution to test for leaks along the entire outer surface of the hose while under pressure. Replace at the first sign of a leak or if age cracking becomes apparent. Remember to turn the gas supply off before disconnecting. The hose must remain free of kinks and sharp bends. Never puncture or put stress on the hose fittings. Replace the hose only with the manufacturer's original equipment.

BURNERS:

The location of the burners to the main orifice is vital for safe operation. Check to assure the valve orifices are inside the burner tubes before using the gas grill. If venturi of the burner is not correctly positioned over the valve orifices, explosion and/or fire may occur when lighting the gas grill. Be careful not to damage the ceramic spark electrodes.

Periodically inspect the burners for blockage or corrosion (see "Burner Cleaning"). Ensure that the aeration screw is secure and that it is set properly. Be careful not to damage the ceramic electrodes.

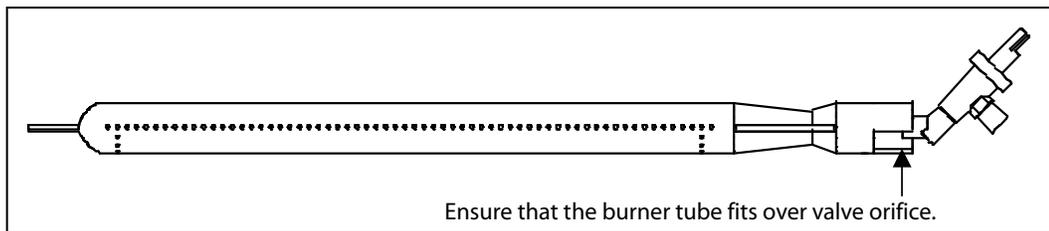


Figure 30

Remove Burners:

To remove the burners from the unit, first remove the cooking grills (see Figure 21) and the flame deflectors to access the burners. Undo the 1/4" hex head bolt located on the rear of the inside liner. Lift the back of the burner up slightly and remove from the appliance (refer to Figure 31).

Install the burner in the reverse order and ensure that the burner is placed over the orifice.

Burner Cleaning:

To keep your **BISTRO** working correctly, the burners should be checked and cleaned on a regular basis. To clean the burner tubes, first remove the burner tubes from the barbecue (refer to "Remove Burners"). Bend a stiff wire (coat hanger will work) and run the hooked end up through each venturi tube and into the burner several times. Turn the burner upside down and force water from a garden hose into the burner. Observe the water flow from the holes in the burner to make sure all holes have water coming out. If not, continue to clean the burner by cleaning each individual obstructed hole. Use a wire brush on the outside of the burner to remove any loose corrosion. Clean any holes with a stiff wire. If the burner has holes other than the factory holes, replace the burner with the manufacturer's original part. A clogged burner tube could cause a fire beneath the gas grill.

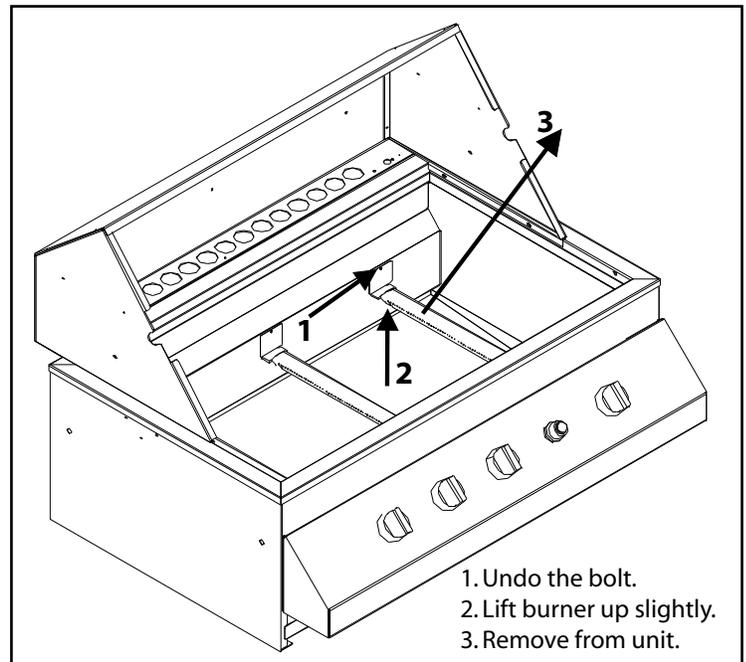


Figure 31

CARE AND CLEANING:

The BISTRO gas barbecue is designed to withstand the high temperatures achieved under normal operating conditions. If there is any excess fat or grease, it is best removed while the barbecue is still warm. Clean regularly to prevent food, grease, and fat build-up.

Never scrape or scratch the hot painted surfaces. Never douse the hot surfaces with water.

HOSE:

If the hose shows signs of deterioration or damage, use a soap and water solution to test the entire outer surface of the hose while under pressure checking for bubbles (this would indicate a leak in the hose). Replace the hose at the first sign of a leak or if age-cracking becomes apparent. Remember to turn the gas off before removing the hose.

INJECTORS / MAIN BURNER ORIFICES:

Injectors should be inspected on a regular basis to ensure they are not blocked. Cleaning can be performed on these injectors by removing the injector from the valve assembly. Using a very small wire or drill bit remove any obstruction in the orifice (**BE CAREFUL NOT TO DAMAGE THE ORIFICE**) a small pipe cleaner could also be used. When installing the injectors, an approved TEFLON or pipe thread sealant must be used before the injector is re-installed.

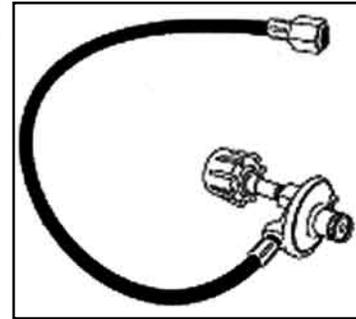


Figure 32

COOKING SURFACES:

Clean regularly to prevent food, grease, and fat build-up. The cooking grates have been porcelain enameled for durability and ease of cleaning. These grates may be cleaned with a **non-abrasive** cleaning solution designed for kitchen use.

PORCELAIN ENAMEL CASTINGS:

Clean regularly to prevent food, grease, and fat build-up. Cleaning with a dry or slightly damp cloth or soft brush will keep porcelain enamel surfaces looking new. To clean, use only a kitchen appliance cleaner or a polish designed for use on porcelain enamel surfaces.

DO NOT USE ABRASIVE CLEANERS ON THE PORCELAIN ENAMEL FINISHES AS THIS WILL PERMANENTLY SCRATCH THESE SURFACES

DRIP TRAY:

The drip tray is located under the front control panel. To remove, pull it slightly up to unhook it from its runners then pull it straight out. This device catches grease and other cooking debris.

Check the grease tray and metal foil container for accumulations after using the gas grill and clean as necessary. Use only a mild abrasive cleaner and a soft cloth to clean the drip tray. Clean the drip tray on a regular basis or fire could occur. The metal foil container is a 4 x 8 Loaf Pan EZ-Foil container that can be acquired at any supermarket or hardware store. Replace by opening cabinet doors and sliding container out of its place under the engine.

STAINLESS STEEL PANELS:

Stainless steel is a very durable material and should last indefinitely with minimal care. Due to the nature of the brushed surface, minor scratches could appear with normal use and handling. These scratches can be removed with the use of a medium or fine grade SCOTCH BRITE® PAD or similar polishing pad. Apply even, gentle pressure and always rub with the grain of the steel. **DO NOT** rub against the grain as damage could result. **DO NOT** use steel wool as pieces will be left behind and these pieces will rust.

STORAGE:

When this barbecue is not in use, the gas must be turned off at the gas supply. It is recommended that the barbecue be stored in a dry place. Failure to do so could cause problems with the ignition system. Disconnect the tank and store the tank outside in a well-ventilated area away from children. If the barbecue is to be stored outdoors, a weatherproof cover should be used. Contact your local dealer for part availability.

Ignition System:

The **BISTRO** is operated with an electronic battery operated ignition system.

If, at any time when lighting the gas grill, a sparking sound is not heard it could be that the battery requires replacing.

If the battery has been replaced and spark is still not present, check all wiring and spark electrode for breakage or corrosion (see "Troubleshooting").

Battery Removal:

Unscrew ignitor button and remove battery.

To remove the battery, unscrew the ignitor button located on the control panel front. Remove ignitor button and pull spring out of ignitor body; the "AA" will come out with the spring attached (refer to Figure 33).

Replace the battery and install in the reverse order.

Ignitor Module Removal:

Undo the two (2) # 8 sheet metal screws and drop ignitor module straight down.

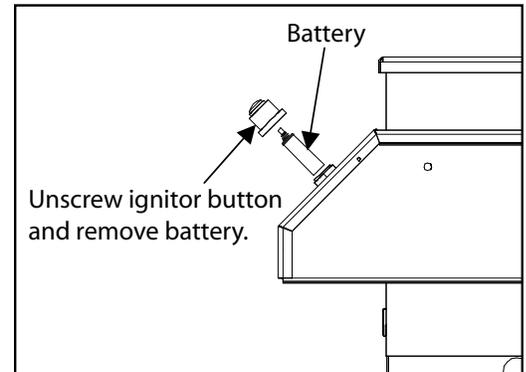


Figure 33

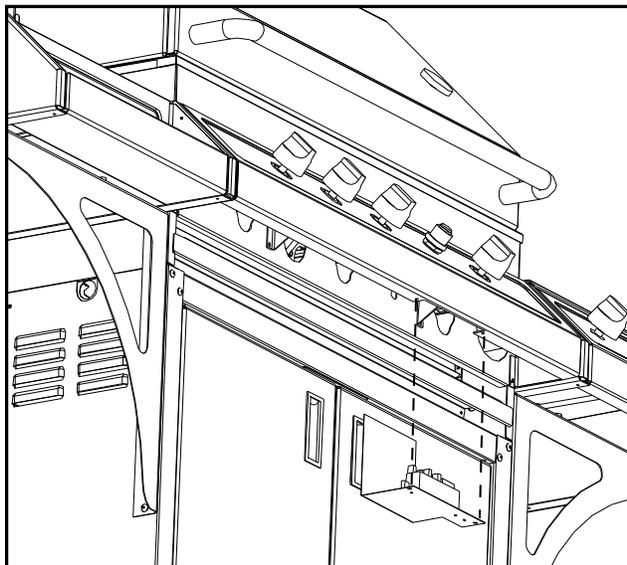


Figure 34

When removing the ignitor module from under the control panel, first remove the two 1/4" stainless steel sheet metal screws and drop the module and the heat shield straight down (as shown in Figure 34). Remove one of the short wires that comes from the ignition module that is connected to ground. Install any new wires where the shorted wire was removed from the ignition module for the extra components that could be added to the **BISTRO**.

NOTE: When installing the ignitor module and the heat shield, please take special care not to damage any of the wires as failure in the ignition system could occur.

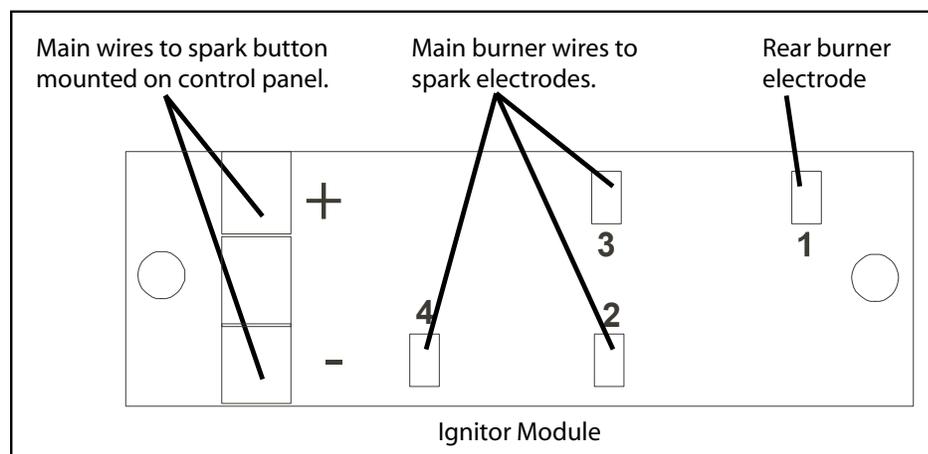


Figure 35

COOKING ON YOUR GRILL

METHODS OF COOKING:

Your **BISTRO** gas grill is designed for a multiple of cooking methods.

1. The **MAIN BURNER** allows for traditional barbecuing. This burner can achieve low to high temperatures for searing and finishing steaks, hamburgers, pork chops and grilling chicken parts, sausages, or kebabs with more moderate heat.
2. The **ROTISSERIE BURNER** gives a self-basted flavor like none other. Great for chickens, hams, pork or beef roasts. Also the tube-type burner ensures quicker cooking times.
3. The **SIDE BURNER** sautés, boils liquids and warms all other foods. This high-performance burner will allow you to deep fry seafood, vegetables and meats and hard boiling soups, lobsters or corn on the cob.
4. The **GRIDDLE PAN** gives more versatility. This item can pan fry eggs and bacon, potatoes or seafood. Or it can grill any other food such as seafood steaks or pork chops.
5. The **SMOKER TRAY**: as an optional feature, this box will enhance the flavor of some foods with either wood or herbs for that smoky flavor.

PREPARING FOOD FOR THE BISTRO:

Some precautions should be taken to ensure proper preparation for health safety.

1. Preheat the gas grill for 5-10 minutes before cooking. Clean off any excess grease or food residue deposited on the cooking surfaces.
2. Remove food from the refrigerator shortly before cooking
3. Always marinate meats in the refrigerator. Dispose of any excess marinade. **NEVER REUSE THE MARINADE.**
4. Use different plates to handle raw food and cooked food. Wash any plates and utensils that handle raw food before using for cooked food.
5. Wash all vegetables, seafood and poultry before cooking.
6. Cook foods adequately. Undercooked food can retain a lot of bacteria, especially if it is thawed or exposed to warm conditions prior to cooking.
7. Use a meat thermometer to check the interior temperature of the food, to ensure it has been thoroughly cooked.
8. Keep all cooking surfaces clean of any food debris.

GRILLING TIPS:

Here are few helpful hints to ensure that you grill your foods to perfection.

- Apply a light coating of cooking oil to grills and griddle plate before grilling to stop food from sticking to them.
- Cook similar size portions together as they will cook more evenly
- Use tongs to flip food over on the grill.

- Never pierce foods that are grilling, as this will dry them out.
- Trim off excess fat from the foods to prevent flare ups during the grilling.
- On such foods as pork and steaks, slit the fat with a knife to prevent the foods from curling while grilling.
- Do not flip foods. It is better to only flip your food once as chefs say this is best.
- Apply sugar-based barbecue sauces only in the later stages of cooking to prevent charring.
- Soak strings and skewers for kebabs in water beforehand to prevent them from burning. It is recommended that these be soaked for 15 minutes prior to cooking.

• When using your rotisserie it is a good idea to place an aluminum tray below the food with water or fruit juice, wine or marinade, for slow cooking foods. This will add more flavors to the food that is being cooked. Place the aluminum tray on the flame deflectors; this will catch any grease or droppings and also deflect the heat around and swirl the heat for more even cooking. Do not let this liquid boil as grease could drop into this pan and catch fire due to excessive temperatures that could result in property or personal injury.

FOR YOU CONVENIENCE

On the lid of this gas grill there is a thermometer. Simply pull thermometer out and stick into food that you are cooking to ensure the internal temperature of the food is correct for your desired taste.

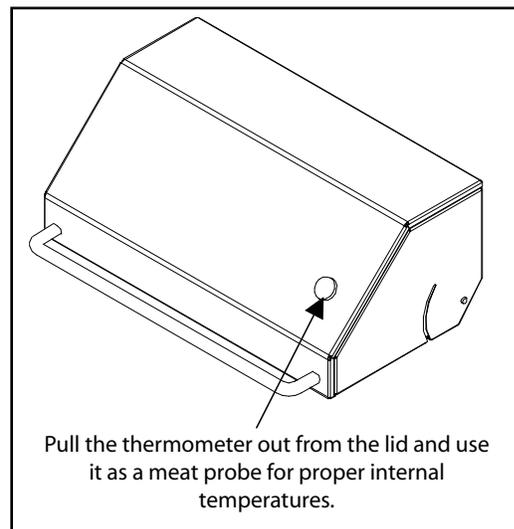


Figure 36

TEMPERATURE COOKING CHART:

Vegetables

Type of Food	Cooking Temperature	Cooking Time	Comments
Asparagus	325-350°F	6-8 minutes	Cut off ends of stems. Lay across grill.
Beans	325-350°F	30-35 minutes	Wrap in foil with butter. Turn over once.
Carrots	325-350°F	20-30 minutes	Cook directly on the grill.
Corn on the Cob	325-350°F	25-35 minutes	Soak in cold water for 15 minutes before cooking.
Eggplant	325-350°F	6-8 minutes per side	Cut into slices and coat with cooking oil.
Mushrooms	325-350°F	6-8 minutes	Cook directly on the grill.
Onions	325-350°F	40-45 minutes	Wrap in foil with butter. Turn over once.
Peppers	400-450°F	15-20 minutes	Remove charred skin before eating.
Potatoes	325-350°F	50-60 minutes	Wrap in foil with butter. Turn over once.
Roasted Garlic	325-350°F	30-40 minutes	Cut off top bud and lightly coat in olive oil. Wrap in foil.
Tomatoes	325-350°F	5-7 minutes	Cut in half and coat in olive oil.
Zucchini	325-350°F	6-8 minutes per side	Cut into slices and coat with cooking oil.

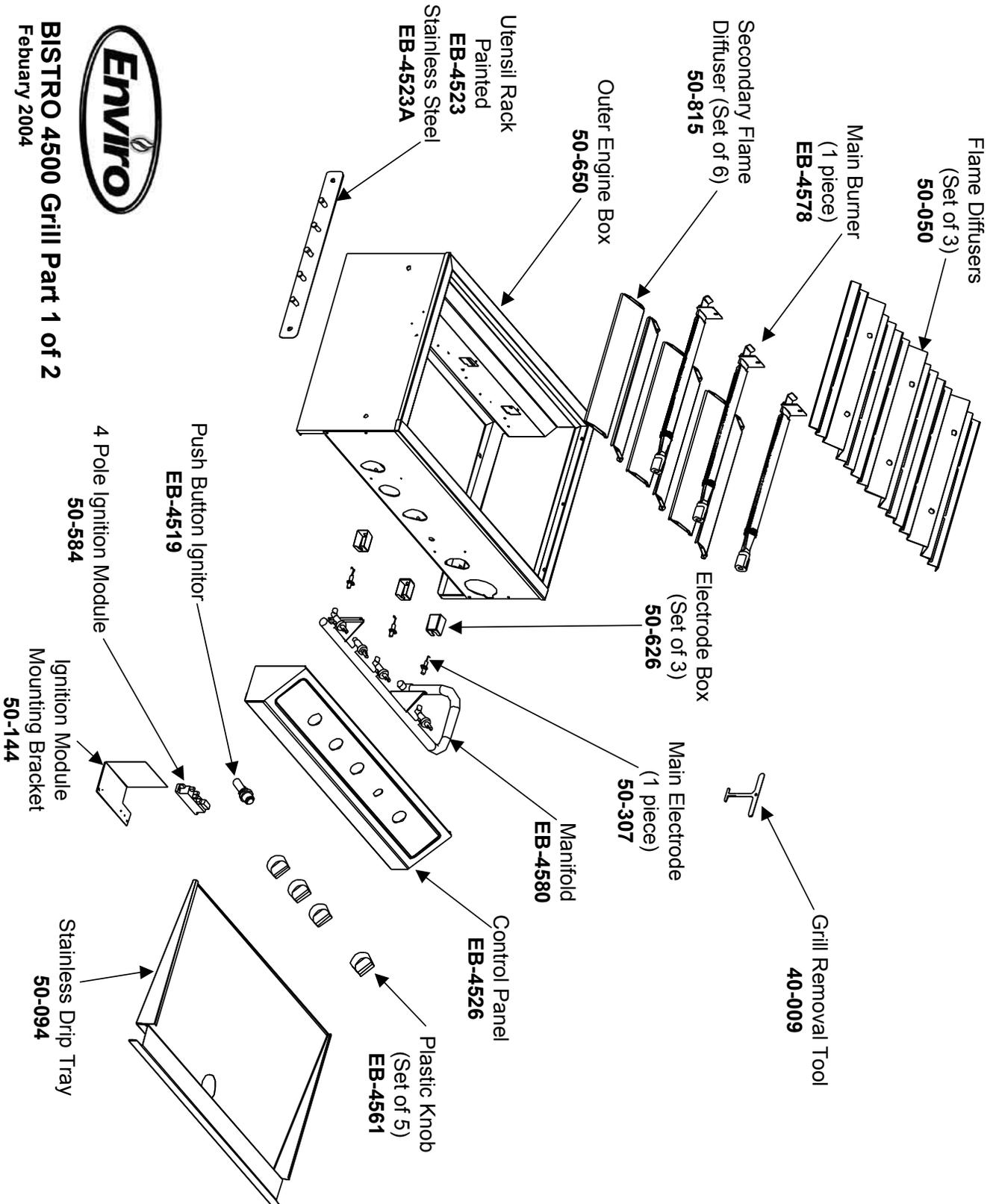
Meat

Type of Food	Weight or Thickness	Cooking Temperature	Cooking Time
Beef			
Burgers	1 inch	400-450°F	Rare: 4-7 minutes Medium: 7-10 minutes Well Done: 10-12 minutes
Roasts; Blade, Sirloin tip	----	350°F	Rare: 18-20 minutes/lb Medium: 20-25 minutes/lb Well Done: 25-30 minutes/lb
Steaks; Porterhouse, Rib, Ribeye, Sirloin, T-bone	1 inch	550-600°F (to sear) 400-450°F (to finish)	Rare: 4-7 minutes Medium: 7-10 minutes Well Done: 10-12 minutes
Filet Mignon	2 inches	550-600°F (to sear) 400-450°F (to finish)	Rare: 15-17 minutes Medium: 17-19 minutes Well Done: 19-22 minutes
Poultry			
Chicken; Parts	----	325-350°F	30-45 minutes
Chicken; Whole	3-4 lbs	325-350°F	20 min/lb
Chicken; Breast, Boneless	1-2 lbs	325-350°F	12-15 minutes
Cornish Hen	1-1½ lbs	325-350°F	45-60 minutes
Turkey	13-25 lbs	325-350°F	20 min/lb
Pork			
Chops	1 inch	400-450°F	25-30 minutes
Ham; Steaks	1 inch	400-450°F	12-15 minutes
Ham; Whole (Bone in)	12-14 lbs	325-350°F	Medium: 20-25 minutes/lb Well Done: 25-30 minutes/lb
Ham; Whole, Boneless	4-5 lbs	325-350°F	50-60 minutes
Ribs; Back, Side	5-6 lbs	325-350°F	Medium: 25-27 minutes/lb Well Done: 27-30 minutes/lb
Roasts; Butt, Loin Shoulder	3-5 lbs	325-350°F	1-1½ hours
Tender Loin	----	375-400°F	Medium: 30-35 minutes/lb Well Done: 35-40 minutes/lb
Sausages	----	----	12-20 minutes
Fish, Seafood			
Fish; Fillets	1-1½ inch	400-450°F	10-15 minutes
Fish; Steaks	1-2 lbs	325-350°F	20-30 minutes
Fish; Whole	2-4 lbs	325-350°F	30-50 minutes
Lobster	½-1 lb	400-450°F	15 minutes
Shrimp	Large	325-350°F	5-6 minutes

TROUBLESHOOTING

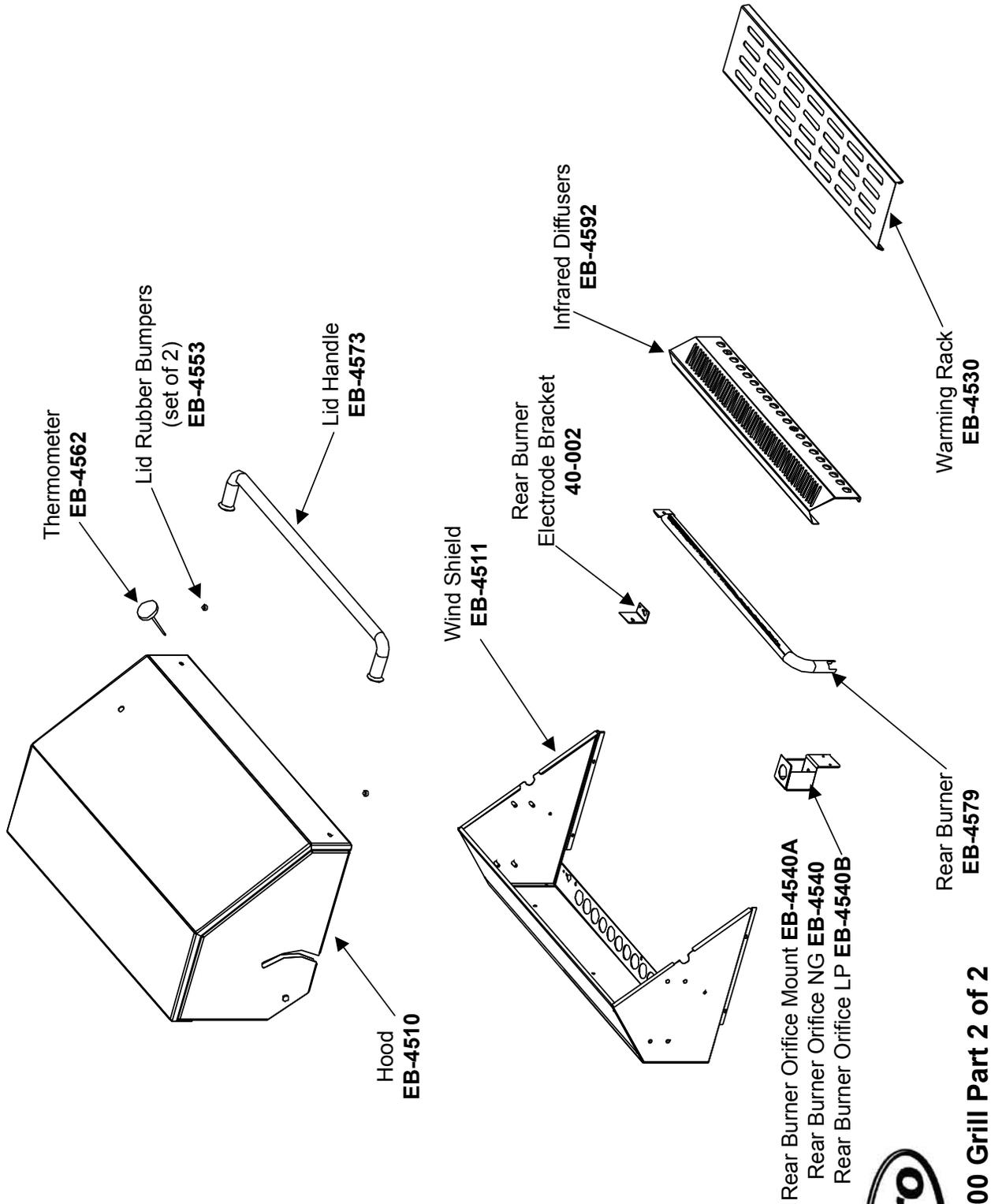
Ignitor does not spark.	Electrode fouled.	Wipe the electrode with a soft clean cloth.
	Electrode improperly gapped.	The electrode should be $\frac{1}{8}$ " to $\frac{3}{16}$ " away from the burner tube and positioned close to the gas ports. Gently bend the electrode tip into position (BE CAREFUL NOT TO BREAK THE CERAMIC INSULATOR).
	Electrode cracked.	If the ceramic insulator on the electrode is cracked it may short out. Replace the electrode.
	Lead wire is disconnected.	Ensure that all leads are connected to the spark box and to the electrode.
	Lead wire is cracked.	Split insulation on the wire could cause the ignitor to short out. Replace the wire lead.
	No spark.	Replace the "AA" battery located in the ignitor button.
Burners will not light.	Gas supply turned off or out of propane.	Turn the fuel supply ON and try again. Detect the flow of gas by sound or smell for gas being omitted. Allow gas to clear before trying to re-light.
	Blockage in gas system.	Check to ensure no insects or debris are blocking the venturi tubes. Use a special venturi brush to clean.
	Misarranged burner tube onto the main orifice.	Check under the flame deflectors to ensure that the burner is properly installed the main orifices.
	Improper gas line or propane hose connection.	Tighten the gas connection at the propane tank, HAND TIGHTEN ONLY.
Unit will not stay lit.	Wind.	Try to shelter your gas grill from strong winds. DO NOT USE IN ENCLOSED AREAS.
	Running out of fuel.	Detect the flow of gas by smell or by listening for the hiss of gas being omitted.
Uneven burn pattern or flashback.	Blockage in the burner or gas system.	Ensure no insects or debris are blocking the venturi tubes. Use a special venturi brush to clean. Use a pin or a toothpick to clean the orifice on the gas valve. DO NOT ENLARGE THE HOLE.
	Corroded burner.	Corrosion of the burner can cause the solid material between gas ports to deteriorate, resulting in uneven burning. See your BISTRO dealer for replacement burner tube.
Excessive yellow flame.	Improper air adjustment.	Your BISTRO should burn with mostly a blue flame. If the flame is mostly yellow, adjust the opening on the air shutter on the burner tube. Open the air shutter.
Flare ups	Excessive fatty foods.	Trim all excess fat from meat before cooking.
	Grease build up.	Ensure that the flame deflectors are clean of excess grease and that they are located in the correct location. Remove any excess grease from the burn chamber.

PARTS DIAGRAM - GRILL



BISTRO 4500 Grill Part 1 of 2
 February 2004

PARTS DIAGRAM - HOOD

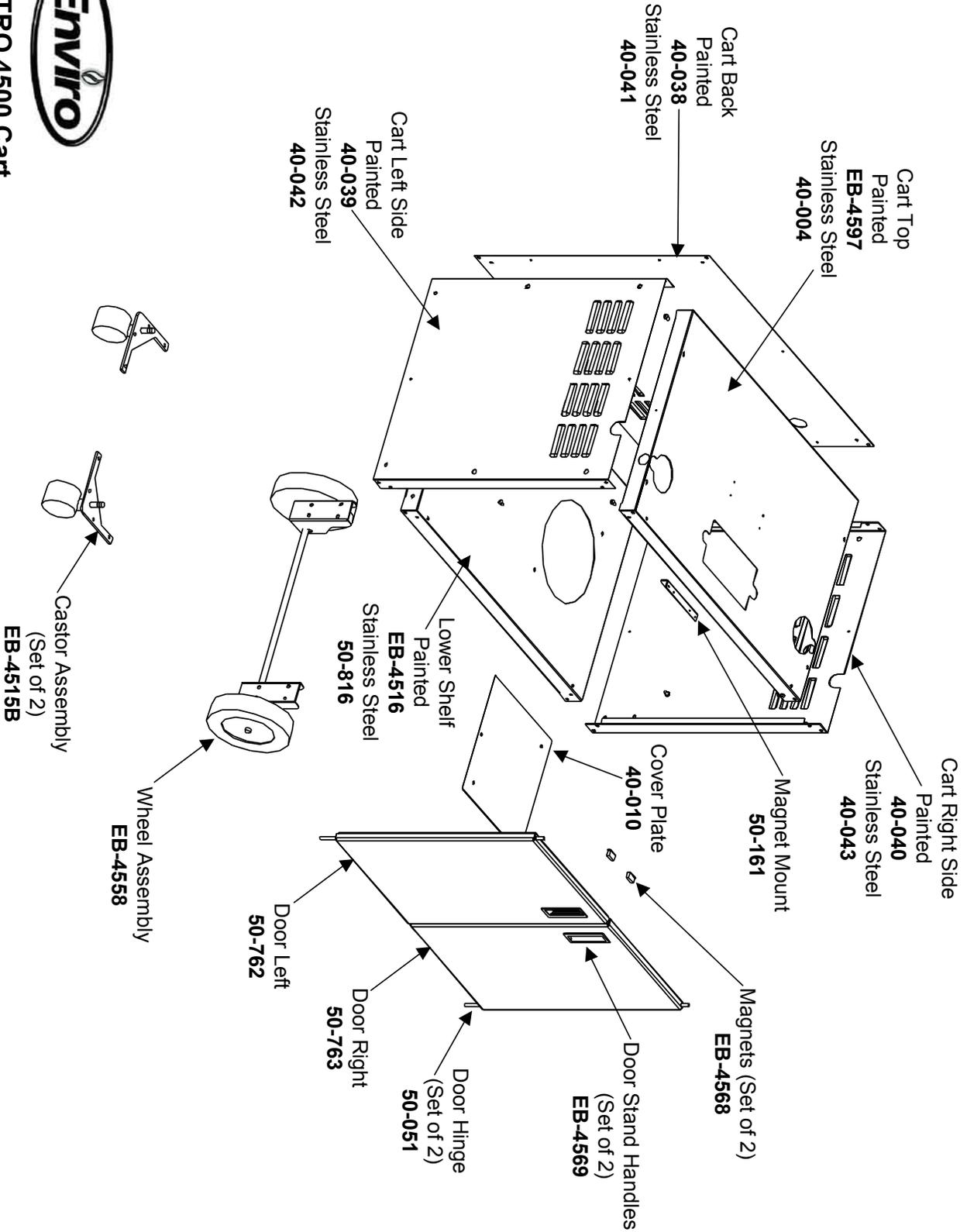


BISTRO 4500 Grill Part 2 of 2
 Febuary 2004

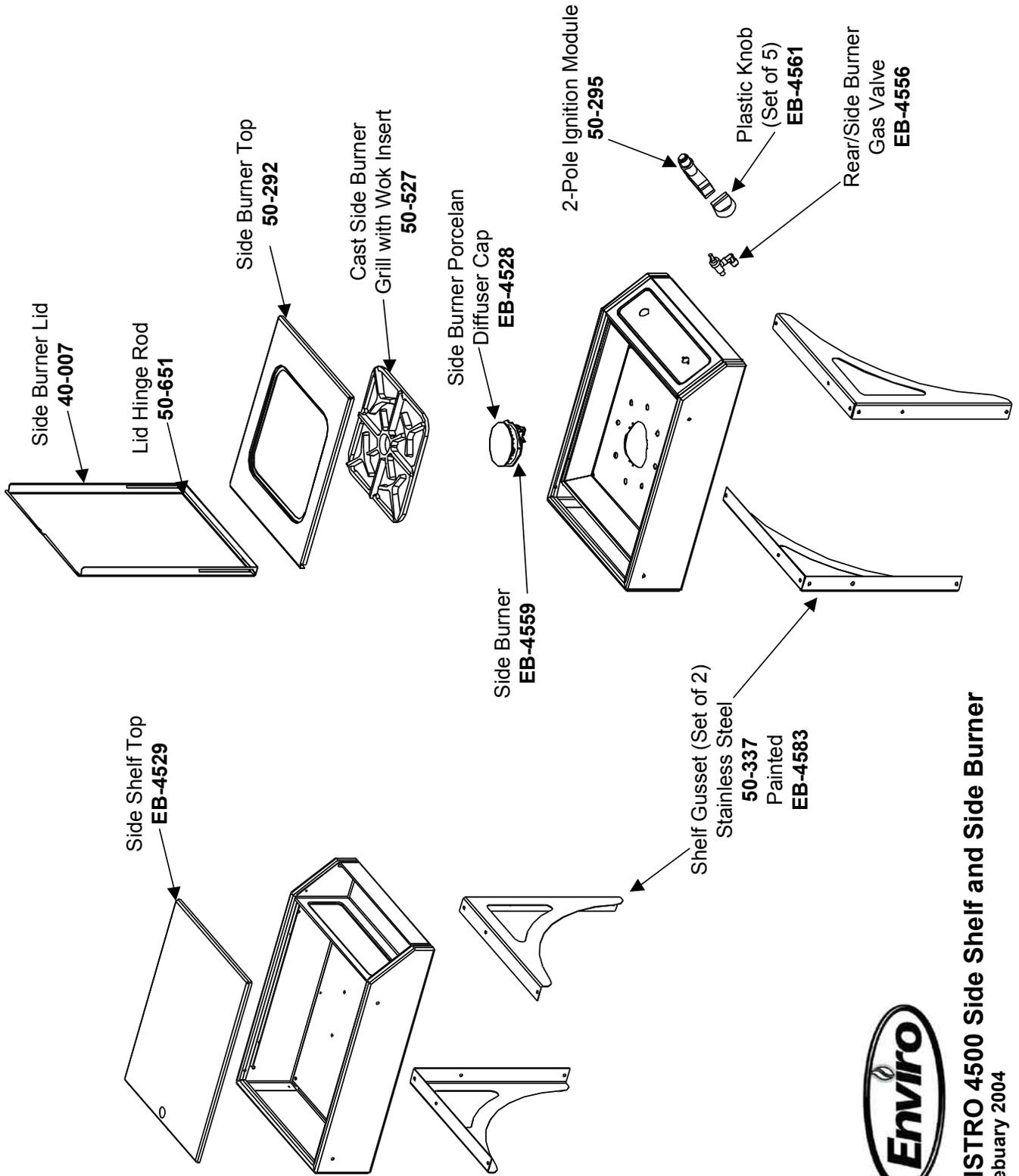
PARTS DIAGRAM - CART



BISTRO 4500 Cart
October 2003



PARTS DIAGRAM - SIDE SHELF & BURNER



BISTRO 4500 Side Shelf and Side Burner
February 2004

PARTS LIST

40-000	Barbecue Cover	50-650	Outer Engine Box
40-002	Rear Burner Electrode Mount	50-651	Lid Hinge Rod
40-004	Cart Top - Stainless Steel	50-686	BBQ 3 Piece Stainless Steel Utensil Set
40-007	Side Burner Lid	50-762	Cart Door Left
40-009	Grill Removal Tool	50-763	Cart Door Right
40-010	Cover Plate - Stainless Steel	50-810	Rotisserie Rod Bushing
40-014	Cart Assembled With 1 Side Shelf - Painted	50-815	Secondary Flame Diffuser (Set of 6)
40-017	Side Shelf - Painted	50-816	Lower Shelf Stainless Steel
40-018	Side Burner LP with NG Conversion Kit - Painted	EB-4509	Harmony Cutting Board
40-019	Rotisserie Kit	EB-4510	Hood - Stainless Steel
40-021	Cart Assembled with 1 Side Shelf - Stainless Steel	EB-4511	Windshield
40-024	Side Shelf - Stainless Steel	EB-4515B	Caster Assembly
40-025	Side Burner LP with NG Conversion Kit - Stainless Steel	EB-4516	Lower Shelf - Painted
40-038	Cart Back Panel - Painted	EB-4519	Push Button Ignitor
40-039	Cart Left Side Panel - Painted	EB-4523	Utensil Rack - Painted
40-040	Cart Right Side Panel - Painted	EB-4523A	Utensil Rack - Stainless Steel
40-041	Cart Back Panel - Stainless Steel	EB-4526	Control Panel
40-042	Cart Left Side Panel - Stainless Steel	EB-4528	Side Burner Porcelain Diffuser Cap
40-043	Cart Right Side Panel - Stainless Steel	EB-4529	Side Shelf Top
40-067	Stainless Steel Cleaner	EB-4530	Warming Rack
40-071	NG to LP Conversion Kit	EB-4532	Owner's Manual
50-050	Flame diffuser (set of 3)	EB-4540	Rear Burner Orifice NG
50-051	Door Hinge (set of 2)	EB-4540A	Rear Burner Orifice Mount
50-094	Stainless Steel Drip Tray	EB-4540B	Rear Burner Orifice LP
50-144	Ignition Module Mounting Bracket	EB-4547	Propane Hose & Regulator
50-161	Magnet Mount	EB-4553	Rubber Bumpers (Set of 2)
50-291	Rotisserie Mounting Bracket	EB-4556	Rear / Side Burner Gas Valve - NG/LP
50-292	Side Burner Top	EB-4558	Wheel Assembly
50-295	Two Pole Ignition Module	EB-4559	Side Burner
50-306	Rear Electrode (Burner Ignitor)	EB-4561	Plastic Knobs (Set of 5)
50-307	Main Electrode (Burner Ignitor)	EB-4562	Thermometer
50-337	Shelf Gusset - Stainless Steel	EB-4568	Door Magnets (Set of 2)
50-351	Cast Iron Griddle	EB-4569	Door Stand Handles (Set of 2)
50-358	BBQ NG Quick Disconnect Hose & Fittings	EB-4573	Lid Handle - Stainless Steel
50-498	Rotisserie Forks	EB-4578	Main Burner
50-500	Rotisserie Rod (Spit)	EB-4579	Rear Burner
50-502	Rotisserie Motor	EB-4580	Manifold
50-522	Stainless Steel Smoker Box	EB-4583	Side Shelf Gusset (Set of 2) - Painted
50-527	Cast Side Burner Grill With Wok Insert	EB-4586	Stainless Steel Grills (Set of 3)
50-584	4 Pole Ignition Module	EB-4592	Infrared Diffusers
50-626	Electrode Box (Set of 3)	EB-4597	Cart Top - Stainless Steel

WARRANTY

Limited Lifetime Warranty

Covers manufacturer's defects on exterior stainless steel components, namely the cart panelling & doors, the hood, condiment bins and handles against perforation (excluding surface corrosion); for part replacement or repair and labour for the first year and part replacement from then on to the original purchaser. It also covers the stainless steel burners for part replacement or repair and labour for the first year and part replacement from then on to the original purchaser.

10 Year Warranty

Covers manufacturer's defects on steel components, namely the cart, panelling & doors, the hood, condiment bins and handles, against manufacturers defect; for part replacement or repair and labour for the first year and part replacement for the remainder of the ten years to the original purchaser. It also covers manufacturer's defects on manifold and valves, knobs and burner housing, for part replacement or repair and labour for the first year and part replacement for the remainder of the ten years to the original purchaser.

5 Year Warranty

Covers manufacturer's defects on axle, hinges, magnets etc.; for part replacement or repair and labour for the first year and part replacement for the remainder of the five years to the original purchaser.

1 Year Warranty

Covers manufacturer's defects on painted surfaces, Rotisserie, Electronic ignition system, Casters and Wheels Porcelain coating on cooking grills and griddle and all remaining parts for part replacement or repair and labour for the first year to the original purchaser.

Exclusions

Sear Plates are not covered by this warranty.

Labour: costs are controlled. Please see the Schedule of warranty labour rates sheet.

All materials if damage is caused by scratching, marring, abrasive cleaners, over-firing, grease pan fire, commercial use, surface corrosion, misuse, lack of maintenance and any discoloration due to heat or with age. On painted steel surfaces, any surface corrosion should be removed and all surfaces coated to prevent further corrosion, as part of a normal maintenance procedure. Failure to do so will result in loss of any further warranty on these parts.

INSTALLATION DATA SHEET

The following information must be recorded by the installer for warranty purposes and future reference.

NAME OF OWNER:

ADDRESS:

PHONE: _____

NAME OF DEALER:

ADDRESS:

PHONE: _____

MODEL: _____
SERIAL NUMBER: _____
DATE OF PURCHASE: _____ (dd/mm/yyyy)
DATE OF INSTALLATION: _____ (dd/mm/yyyy)

 NATURAL GAS (NAT) PROPANE(LPG)

INSTALLER'S SIGNATURE:

NAME OF GAS INSTALLER:

ADDRESS:

PHONE: _____

MANUFACTURED BY:
SHERWOOD INDUSTRIES LTD.
6782 OLDFIELD RD. SAANICHTON, BC, CANADA V8M 2A3
www.envirofire.biz
April 12, 2004
C-10124