BBQ
Service Manual

INTRODUCTION

This Wolf Outdoor BBQ Grills Technical Service/Parts Manual, Part #803332, has been compiled to provide the most recent technical service information about the Wolf Appliance, Inc. BBQ Grills. This information will enable the service technician to troubleshoot and diagnose malfunctions, perform necessary repairs, and return a Wolf Outdoor BBQ Grill to proper operational condition.

The service technician should read the complete instructions contained in this Training/Service Manual before initiating any repairs on a Wolf Appliance.

* *Some information in section 2 (Theory of Operation) has been provided by the American Gas Association and reprinted with their approval.*

IMPORTANT SAFETY INFORMATION

Below are the Product Safety Labels used in this manual. The "Signal Words" used are **WARNING** and **CAUTION**.

Please note that these safety labels are placed in areas where awareness of personal safety and product safety should be taken and lists the precautions to be taken when the signal word is observed.

⚠ WARNING

INDICATES THAT HAZARDOUS OR UNSAFE PRACTICES COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH

⚠ CAUTION

Indicates that hazardous or unsafe practices could result in minor personal injury or product and/or property damage

In addition, please pay attention to the signal word ***"NOTE"***, which highlights especially important information within each section.

TECHNICAL ASSISTANCE

If you should have any questions regarding a Wolf appliance and/or this manual, please contact:

Wolf Appliance, Inc.
ATTN: Service Department
P.O. Box 44988
Madison, WI 53744-4988

Customer Service
Phone #: (800) 222-7820

Technical Assistance
Phone #: (800) 919 - 8324

Parts / Warranty Claims
Phone #: (800) 332 - 9513

Customer Service E-Mail Address
customerservice@wolfappliance.com

Customer Service & Technical Assistance
Facsimile #: (608) 441 - 5887

Parts / Warranty Claims
Facsimile #: (608) 441 - 5886

Office Hours:
7:00 AM to 7:00 PM Central Standard Time
Monday through Friday

This manual is designed to be used by Authorized Service Personnel only. Wolf Appliance, Inc. assumes no responsibility for any repairs made to Wolf appliances by anyone other than Authorized Service Technicians.

WARRANTY INFORMATION

This page contains a summary of the 2 & 5 *Year Warranty* that is supplied with every Wolf product, followed by details and notes about the warranties.

TWO & FIVE YEAR Warranty Summary

- Two year TOTAL PRODUCT warranty, parts and labor.
- Limited Parts Only Warranty for the 3rd through 5th year on the following parts only:

  Gas Burners *(excluding appearance)*

LIMITED LIFETIME WARRANTY SUMMARY

- Repair or Replace any BBQ body which rust through due to defective material or workmanship.
- Repair or replace any BBQ hood which rust through due to defective material or workmanship.
- Labor to remove or replace defective parts is not covered.

Warranty Details:

The warranty applies only to products installed for normal residential use. The warranty applies only to products installed in the United States or Canada.

Warranty Notes:

- All warranties begin at the time of the units initial installation.
- All Warranty and Service information collected by Wolf Appliance, Inc. is arranged and stored under the unit serial number and/or the customer's name. Please note that Wolf Appliance, Inc. requests that you have the model and serial number available whenever contacting the factory or parts distributor.
- See Figure 1-1 for serial plate layout.
- See Figure 1-2 for serial plate location.

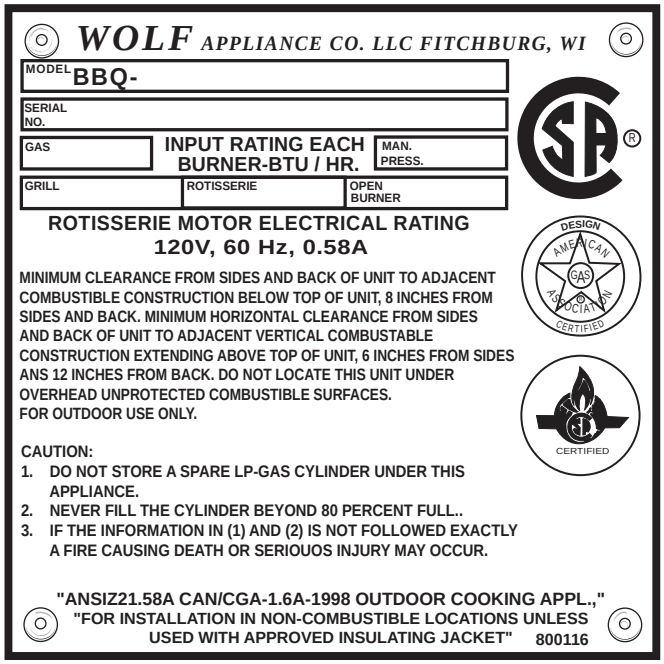


Figure 1-1 Typical Serial Plate Layout

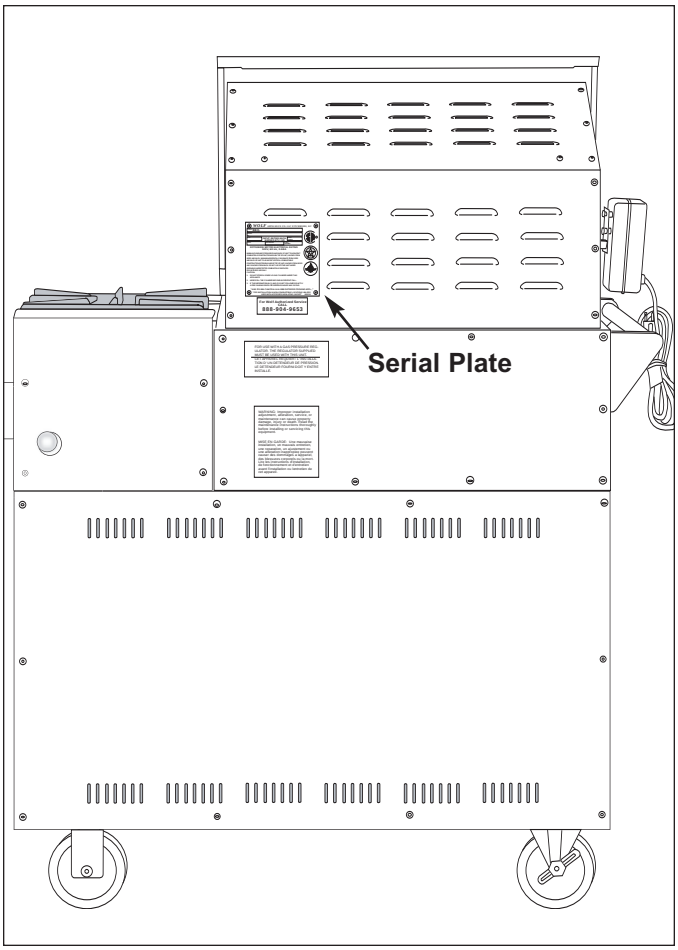


Figure 1-2 The serial plate is located on the backside of the Rear Hood Top.

MODEL FEATURES:

All Models:

Wolf BBQ grills are constructed with heavy duty 18-gauge stainless steel. The hood is a two piece stainless steel design with a handle. All grates are made from porcelainized cast iron. A grill scraper and protective cover is provided with each unit.

Wolf BBQ grills are assembled to either work with natural gas or LP gas. Converting a unit from one gas type to another is not possible. There are built-in models and freestanding cart models. Cart models are currently equipped with 5" locking swivel casters at both ends, with older models having non-swivel wheels at one end. The grill burner tubes are made of stainless steel and have a 10,000 BTU (British Thermal Unit) rating. Every Wolf BBQ grill is also equipped with a rotisserie burner, rated at 9,000 BTU's, with a 115 volt rotisserie motor for turning the rotisserie rod.

Side Burner Models:

Some models are equipped with two porcelain cast iron side step-up burners. These burners have a 16,000 BTU rating.

LP Gas Models:

LP gas units include a regulator, hose and 5-gallon LP tank.

MODEL NUMBER DESCRIPTIONS

This section briefly describes the reason for different model numbers. The BBQ's are manufactured as either natural gas or LP gas, built-in or on a free standing cart.

- The two digits "**24"**, "**36"**, "**48"** following the letters BBQ indicate the width of the grill chassis in inches.

  *Example: BBQ**24**2C = 24" chassis.*

- An additional number such as "**2"**, after the first two digits indicates there are two side step-up burners.

  *Example: BBQ24**2**C = Two side step-up burners.*

- The letter **"C"** which appears in some of the models is for cart.

  *Example: BBQ242**C** = Cart model.*

- When there is **"BI"** in the model number, it indicates that the unit will be built in.

  *Example: BBQ242**BI** = Built in unit.*

- The **"-LP"** at the end of the model number indicates the unit is manufactured to operate on LP gas.

  *Example: BBQ242C-**LP** = LP gas.*

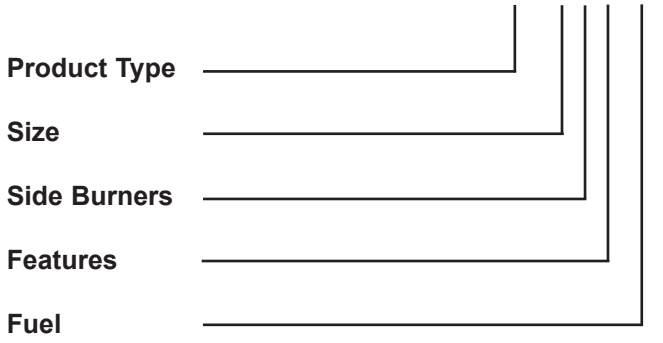
BBQ MODEL NUMBERS IN SUMMARY:

- ***BBQ*** = Grill
- **24, 36, 48** = Indicates the width in inches of the grill chassis.
- **2** = This number following the first two digits indicates two side step-up burners.
- **C** = Cart
- **BI** = Built in.
- **-LP** = Indicates LP gas. When -LP is not at the end of the model number it indicates the unit is manufactured for Natural gas.

MODEL NUMBER KEY

Refer to this key for an example of the model numbers.

Model: **BBQ362BI-LP**



Product Type

BBQ

Size

24 24 - Grill Space

36 30 - Grill Space

48 36 - Grill Space

Side Burners

2

Features

Built In

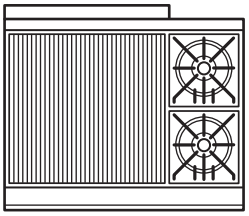
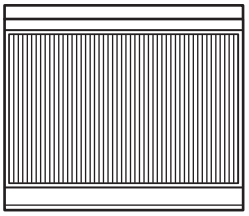
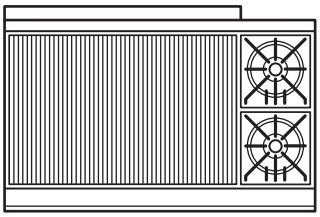
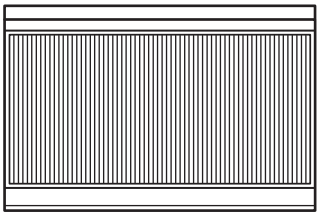
Cart

Fuel

LP Propane Gas

**** No -LP indicates the unit is manufactured for Natural gas.***

TOP CONFIGURATIONS FOR OUTDOOR BBQ GRILLS

Configuration	Model #	Description
	**BBQ242BI**	24” Grill with Two Open Burners, Built-In (Nat. Gas)
	BBQ242BI-LP	24” Grill with Two Open Burners, Built-In (LP)
	BBQ242C	24” Grill with Two Open Burners on 36” Cart (Nat. Gas)
	BBQ242C-LP	24” Grill with Two Open Burners on 36” Cart (LP)
		All 24” Grills have Four Grill Burners
	**BBQ36BI**	36” Grill, Built-In (Nat. Gas)
	BBQ36BI-LP	36” Grill, Built-In (LP)
	BBQ36C	36” Grill on 36” Cart (Nat. Gas)
	BBQ36C-LP	36” Grill on 36” Cart (LP)
		All 36” Grills have Six Grill Burners
	**BBQ362BI**	36” Grill with Two Open Burners, Built-In (Nat. Gas)
	BBQ362BI-LP	36” Grill with Two Open Burners, Built-In (LP)
	BBQ362C	36” Grill with Two Open Burners on 48” Cart (Nat. Gas)
	BBQ362C-LP	36” Grill with Two Open Burners on 48” Cart (LP)
		All 36” Grills have Six Grill Burners
	**BBQ48BI**	48” Grill, Built-In (Nat. Gas)
	BBQ48BI-LP	48” Grill, Built-In (LP)
	BBQ48C	48” Grill on 48” Cart (Nat. Gas)
	BBQ48C-LP	48” Grill on 48” Cart (LP)
		All 48” Grills have Eight Grill Burners

THEORY OF OPERATION

A service technician should understand how a gas appliance operates before attempting to service the appliance. This section provides descriptions of the different types of fuel gases and explains gas heating values. A definition of specific gravity of gas is given along with its characteristics and effects. Gas combustion principles are explained and gas burner components are described and illustrated. The end of this section contains illustrations which demonstrate basic cooking appliance theory of operation.

Types of Fuel Gas:

Gases used to supply heat energy are called fuel gases. Common fuel gases are not simply one kind of hydrocarbon, they are mixtures of hydrocarbon gases. They contain other gases as well, such as free hydrogen, carbon dioxide and nitrogen. As an example, natural gas might contain 85% methane, 12% ethane and 3% of other gases. The presence of each of these gases in the fuel gas has some effect on the nature of the gas.

Some common fuel gasses are methane [CH_4], ethane [C_2H_6], Propane [C_3H_8] and butane [C_4H_{10}]. Propane and butane are nearly odorless. Natural gas that is processed to remove condensables and moisture, has little or no odor and no color. Odorants are added to natural gas before distribution to aid in leak detection. A common odorant used is a colorless liquid containing sulfur compounds.

Heating Value of Gas:

Heat energy produced when burning a fuel gas is commonly expressed in British Thermal Units (BTU). One BTU of heat will raise the temperature of one pound of water one degree Fahrenheit.

The more carbon and hydrogen atoms in each molecule of a fuel gas, the higher its heating value. Natural gas which is high in methane has a heating value of about 950 to 1150 BTU per cubic foot. The variance is due to the various other substances found in natural gases. The more ethane, propane or butane in the gas raises the heating value. Propane, or LP gas, has a heating value of about 2500-2800 BTU per cubic foot, and butane about 3200 BTU per cubic foot.

Specific Gravity of Gas:

The specific gravity of a gas is the weight of one cubic foot, or the gas compared to one cubic foot of dry air. When stating the specific gravity of a gas, a pressure and temperature must be clearly stated. In the gas industry, the standard conditions of pressure and temperature are 30.0 inches of mercury and 60° F. A pressure of 30.0 inches of mercury will sustain a column of mercury 30 inches high in a tube with a vacuum on top of the column. Since air is used as the reference, its specific gravity is always 1.0. This value of 1.0 has no direct physical meaning with regard to air, such as its density. It is only a relative number or ratio used to express specific gravity of other gases.

The specific gravity of a gas will determine if the gas will rise or fall when released into the air. Natural gas will rise since its specific gravity is less than 1.0 at 0.4 to 0.8. Propane has a specific gravity of 1.5 and butane 2.0. These gases will fall when released into the air. They sometimes collect in low spots into pools which become a hazard if open flames are present.

In addition, specific gravity has two other characteristics. It has an important effect on the flow of gases through orifices, and hence the rating of the burners. Gas flow through an orifice is dependent upon the orifice size and the gas pressure upstream of the orifice. More of a lighter gas will flow through a given orifice size than a heavier gas at the same gas pressure. This effect is taken into account in tables and calculators used to select orifice sizes for burners.

Specific gravity also affects gas flow in pipes. A given driving pressure at a pipe inlet will move more lighter gas than heavier gas through that pipe.

Principles of Gas Combustion:

Combustion - When oxygen acts with a substance to produce large amounts of heat rapidly.

Requirements for Combustion - There are three required elements for combustion to occur; Fuel (Gas), Oxygen (Air) and Heat (Ignition Temperature, which for gas is between 1100°F/593°C and 1200°F/649°C). All must be present. Removing any one of the three and combustion will cease.

Chemistry of Combustion - Combustion of gas is a chemical reaction between fuel gas and oxygen. The basic elements of common fuel gasses are hydrogen [H] and carbon [C]. When hydrogen burns, water vapor [H_2O] is produced. Complete burning of carbon in fuel gases form carbon dioxide [CO_2] and water vapor [H_2O].

Controlled Combustion - Controlled combustion takes place when gas and air are supplied at proper rates to assure complete combustion of the gas in a steady flame. When a gas appliance is operating properly, burning starts at the burner ports. Gas flow is controlled by gas orifice size and gas pressure upstream of the orifice. Air is mixed with the gas before it passes through the burner ports. This added air is called “Primary Air”. The remaining air required for complete combustion is supplied to the burner at the point of combustion and is called “Secondary Air”.

Adjustments of the gas-to-air ratio and the secondary air supply is the key to obtaining stable blue flames at a burner. Proper amounts of primary and secondary air are required for quiet and efficient burner operation and for complete combustion of the gas. Air Shutters or other devices provide control of primary air. Inlet opening and flue outlets control Secondary Air flow.

Total air - In an ideal situation, primary and secondary air is all that is needed (for the oxygen required) to burn the gas, but some additional air is required to assure complete burning of the gas. The total air, “primary”, “secondary” and “excess” are expressed as percentages of the amount needed. About ten cubic feet of air is required to completely burn one cubic foot of gas. For this reason an appliance should not be operated in an air tight home.

Limits of Flammability - Not all air-to-gas mixtures will burn. Mixtures with 0% - 4% natural gas in air are too lean to burn. Mixtures of 4% - 14% natural gas in air can burn with a controlled flame. Flammability limits come into play when primary air adjustments are made on burners. If too much primary air is used, the mixture may become too lean and fall below flammability limits, thus preventing combustion.

Incomplete Combustion *(Causes and Effects)* - To obtain complete combustion, sufficient amounts of air must be supplied to the process. This air must have a reasonably normal oxygen content. Complete burning of gas produces harmless carbon dioxide gas and water vapor. If the air supply is insufficient, incomplete combustion occurs resulting in the formation of toxic by-products, such as carbon monoxide [CO] or aldehydes.

Carbon monoxide is colorless and odorless. Inhaling carbon monoxide in sufficient quantities could cause death by reducing oxygen levels in the blood.

Aldehydes, which are equally dangerous, have a sharp and penetrating odor which is easily detected by smell at very low concentrations. The odor caused by aldehydes should not be confused with odorants added to natural gas. The absence of aldehydes does not assure that carbon monoxide is not present. However, if the odor of aldehydes is present, then carbon monoxide is virtually always present.

Gas Burner Operation - A gas burner is a device to burn gas under control in order to produce useful heat.

Primary air is brought into the burner from outside of the appliance at atmospheric pressure. The gas jet streaming from the orifice draws primary air with it into the burner.

The gas/air mixture, combined with a spark at the burner port(s) and the secondary air creates a controlled burn.

Burner Components:

Gas Orifice - An opening or hole which regulates or limits the amount of gas flowing to a burner. Gas flow rate (volume) depends on the size of the orifice (hole) and the gas pressure at the inlet of the orifice.

Air Shutter - This is used to adjust the size of the primary air inlet area and therefore controls primary air flow.

Venturi Tube - A section of pipe at the inlet of the burner body that narrows and then flares out again. This tube helps maintain a proper and constant primary air injection.

Mixing Tube/Throat - Serves to carry the gas/air mixture from the venturi tube to the burner body.

Burner Body - The accumulation chamber below the burner base which allows the gas and air to mix together fully.

Burner Head - The component containing the burner ports where the gas/air mixture ignites. The burner ports are distributed in a useful pattern to optimize heat transfer. The flames should be spread so they can be easily reached by secondary air and provide a stable blue flame.

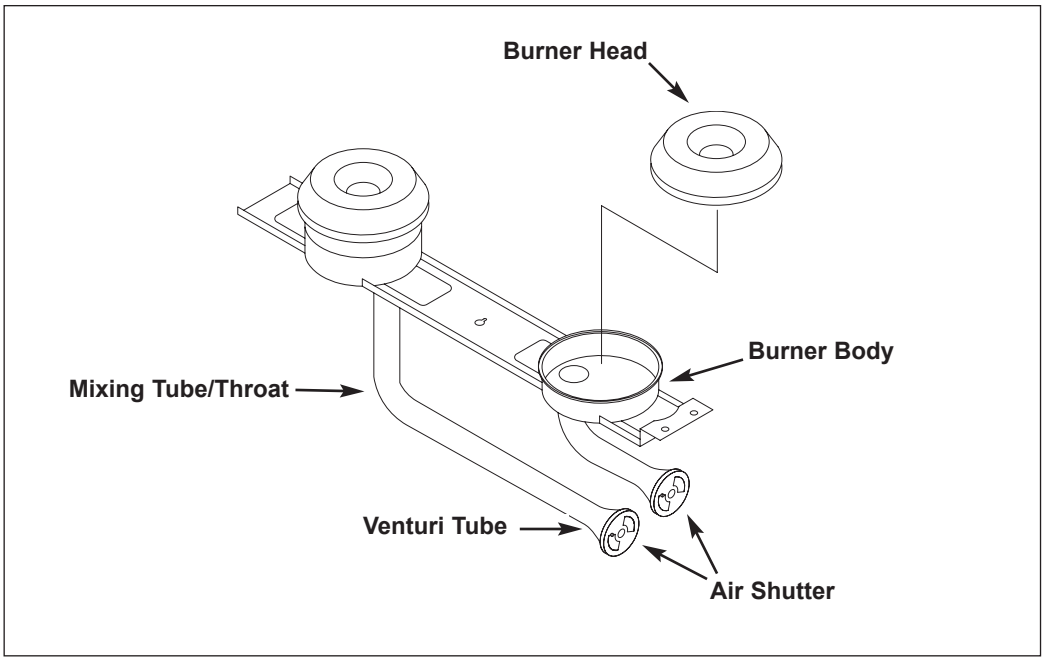


Fig. 2-1

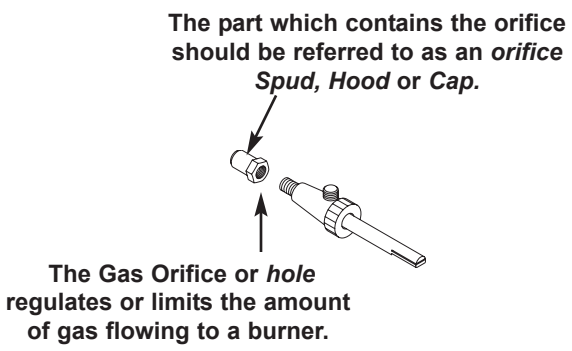


Fig. 2-2

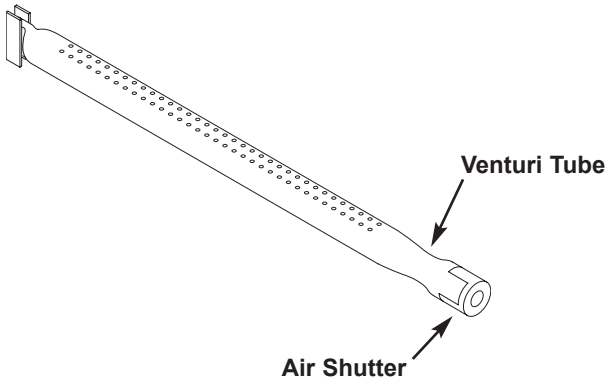


Fig. 2-3

Types of Burners:

Blue Flame Burners - All Wolf BBQ burners are blue flame burners. With this type of burner, primary air is mixed with the fuel gas before the gas reaches the burner ports. An orifice is used to regulate gas flow to the burner. Air which is mixed with the gas inside of the burner body enters through openings in the burner body. A shutter or venturi tube is used to adjust the size of these openings and control the primary air. Gas and air mix in the mixing tube or throat, which then exits the burner ports where it is ignited. Secondary air is air from around the flames. The flame produced has several zones, each represents a stage in burning of the gas. The burner tip has a thin dark blue cone called the inner or primary cone. A lighter cone called the outer cone, surrounds the inner cone. Air around the flame diffuses into the flame to burn at the outer cone. If conditions are perfect, products from the inner cone burn here. The final products of burning are carbon dioxide and water vapor. An outer mantle surrounds the outer cone where burning is usually completed. It is nearly invisible and glows only because of the high temperature of the final combustion.

Infrared Burner - All Wolf gas BBQ's use an infrared burner for the rotisserie. This infrared burner is a porous refractory ceramic tile burner, similar to the infrared burner used in the ranges and cooktops. (See Figure 2-4) With infrared heat, thermal energy is transmitted through space without heating the medium through which it travels. Infrared energy is usually not affected by air flowing between the burners and heated surfaces because of the burner's numerous and tiny flames. This type of heat is very efficient and compact. The refractory ceramic infrared burner requires 100 percent primary air and is designed to have a hot glowing burner surface. The flame burns close to the burner surface at a high temperature.

NOTE: *There is not a shutter on infrared burners for adjusting the primary air.*

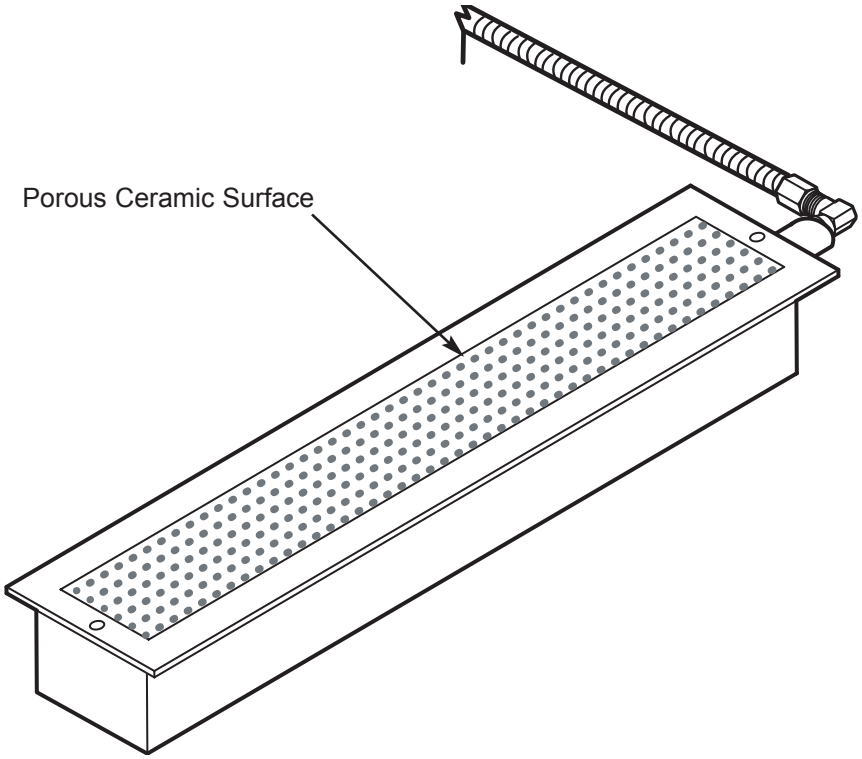


Fig.2-4

Operation of the Wolf BBQ Grill

About the Wolf BBQ

The grill grates are composed of five-inch heavy duty porcelain cast iron and are designed for easy handling and cleaning. Just below the grill surface are the stainless steel heat radiants which concentrate the heat. The Wolf BBQ design eliminates the use of briquettes or lava rock. BBQ burners produce 10,000 BTU/hr and are located every five inches across the bottom of the unit. The optional open top side burners are rated at 16,00BTU/hr and have a spark igniter for rotary knob lighting.

Lighting Instructions

The Wolf BBQ Grill is pre-set for the gas specified when the unit is purchased, either natural or LP gas. The properly adjusted flame should have a bluish-green inner cone and a dark blue outer mantle. The flame should be clean and soft with no yellow tips. Blowing or lifting of the flame should not occur. If the air shutters are not visible as in Fig. 2-5, the shutter adjustment is made by loosening the air shutter screw, setting then retightening.

(This should give you proper mixture of the air and gas.)

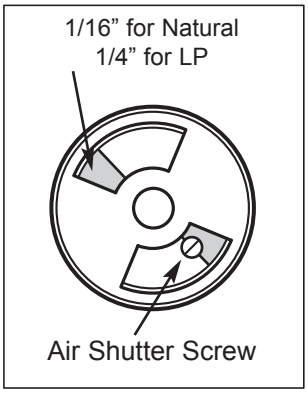


Fig. 2-5

Before Lighting

Prior to lighting, inspect the gas supply piping or hose. Look for evidence of abrasion, cuts, wear and tear, or other damage which would require replacement prior to use. Make sure all burner control knobs are in the OFF position. Do not attempt to light the burners if the smell of gas is present. Make sure there is gas in the cylinder and the cylinder is upright. Make sure all radiants are positioned properly over the grill burners.

Lighting the Grill

1. Open the hood.
2. Push in the gas control knob for the grill and turn counter clockwise to HIGH.
3. Keep your face as far away from the burners as possible.
4. Turn the black igniter knob clockwise which corresponds with the gas control knob you have turned on until you hear a loud click. Repeat immediately if the burner does not light on the first try.
5. Listen for a *"whoosh"* sound. If the burner does not light by the fourth attempt with the igniter, turn the control knob to the OFF position. Wait five minutes until the gas clears.
6. Repeat the procedure or refer to the Manual Lighting Procedure.
7. If the burner is lit, you can see flames by looking through a series of holes just above the control knob of the corresponding burner.
8. Upon successful lighting, repeat the process on the other burners as needed

Lighting the Open Burners

1. Remove the open burner cover or any utensils from the grate.
2. Follow the steps as above in lighting the grill.

NOTE: *The front and rear open burners are lit by a single electrode. The igniter knob is the same for the front and rear open burners.*

Lighting the Rotisserie Burner

The position of the infrared rotisserie burner makes it more susceptible to be blown out and should not be used if windy conditions prevail or in an unprotected area. For this reason the burner is equipped with a safety valve which will not allow the burner to operate unless the pilot is lit.

1. Open the hood and remove the rotisserie burner cover.
2. Push in and turn the rotisserie gas control knob to HIGH.
3. After 15 to 30 seconds, turn the rotary igniter knob clockwise until a clicking sound is heard. (This will give the gas enough time to travel through the tubing to the pilot at the left corner of the burner.)
4. Once the pilot is lit, the burner will light in approximately 30 seconds. The flame is not visible but will give off heat and a red-orange glow after a few minutes.

Manual Lighting Procedure

You may manually light the grill burners by inserting the match/lanyard holder or a butane lighter into the 1/2" diameter hole above the grill valve knob (Fig. 2-6). Position the match or the lighter tip near the burner ports, push and turn the knob counter clockwise to HIGH and light the burner. Repeat for the other burners.

The open burners can be lit directly from the top along the orifice holes around the burner heads. (Fig. 2-8)

The rotisserie burner must be lit at the pilot. Once the pilot is lit, the burner will light within 30 seconds. (Fig. 2-7)

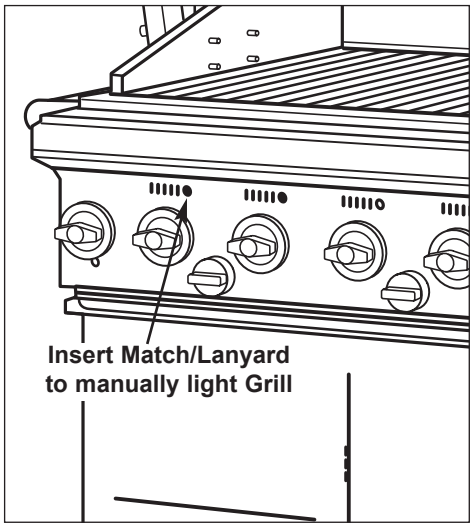


Fig. 2-6

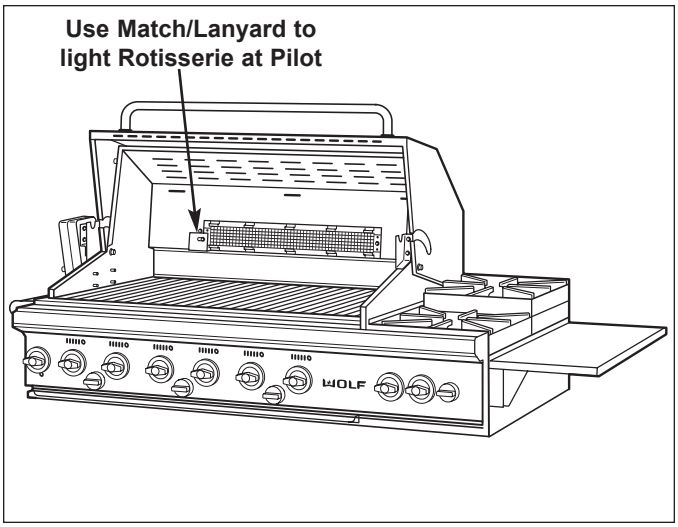


Fig. 2-7

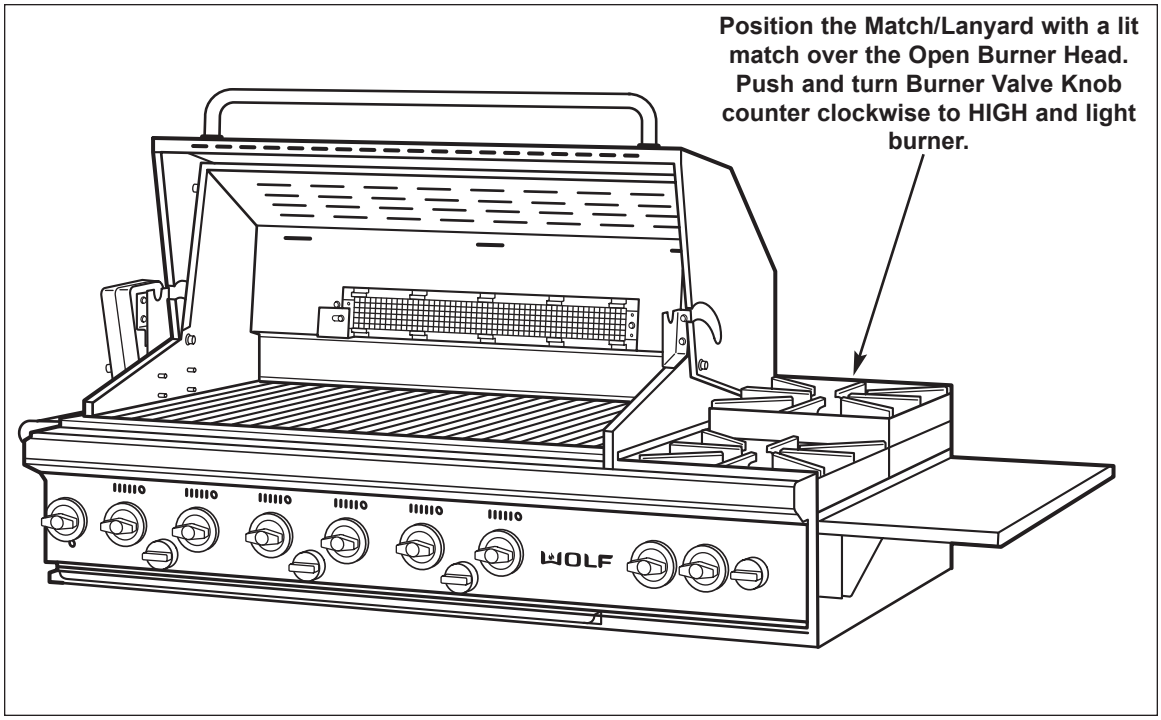


Fig. 2-8

Cleaning and Maintenance

Burner Grates
The grates are composed of durable cast iron with a porcelain enamel finish. Operating the grill on High for a few minutes after cooking will help to burn off any excess food. The wire brush included with the BBQ can be used to clean the grill grates. Once the grates have cooled, they can be lifted off and sprayed with a commercial grill and stainless cleaner. They must be rinsed and dried before they are put back into place.

Open Burner Grates
These grates are porcelain cast iron and can be wiped clean while in place. They can also be removed when cool and cleaned with warm soapy water.

Open Burner Heads
Simply lift the removable porcelain cast iron burner heads straight up. Clean clogged gas holes with an open paper clip or wire. Wash with soapy water, dry and replace.

Venturis
Spiders or small insects may spin webs or build nests inside of the venturis. This especially occurs in late summer and fall when spiders are most active. These nests can obstruct gas flow and cause a fire in and around the valve. Such a fire can cause operator injury and serious damage to the grill.

To help prevent a blockage and ensure full heat output, follow these steps to clean and inspect the venturis once or twice a month.

1. Using a flashlight, look inside of the end of the burners for webs or mud nests. See Fig. 2-9
2. Use the special venturi brush provided and push the brush through the full length of each burner several times. See Fig. 2-9
3. For the grill venturis, clean the gas holes with a paper clip if blocked. See Fig. 2-10
4. Replace the venturis and make sure the bell shaped or cylindrical end is located over the valve orifices. See Fig. 2-11
5. Test light to see if it is burning properly.

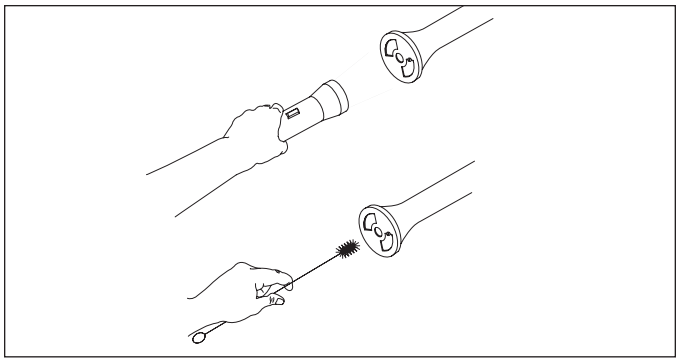


Fig. 2-9

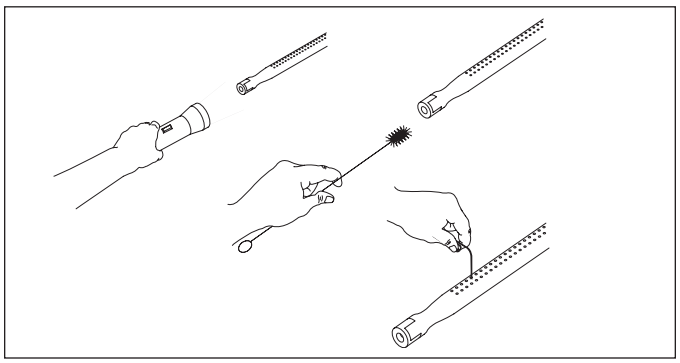


Fig. 2-10

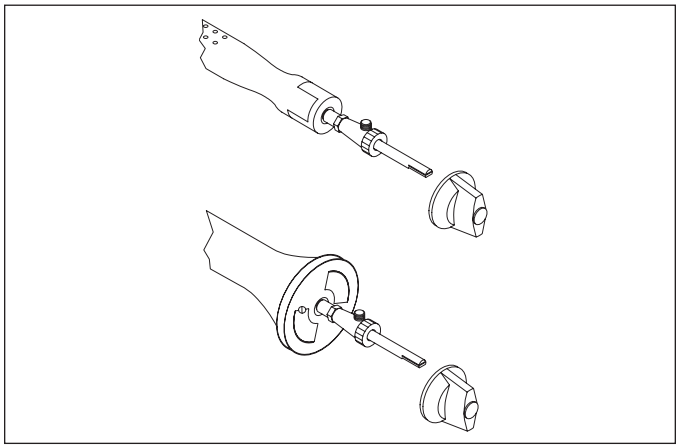


Fig. 2-11

Grill Tank Bottom
If there is an accumulation of carbon or burned food on the bottom of the grill, use a spatula or scraper to push all of the carbon and food to the front and into the drip pan to collect and dispose.

Drip Trays and Grease Cans
After cooling, the drip trays and grease cans may be removed and cleaned. The grease can should be cleaned after each use.

INSTALLATION INFORMATION

This section of the manual covers some of the installation issues that a service technician may need to know when servicing a Wolf BBQ. If additional installation information is needed after reviewing this section of the manual, please refer to the Installation Guide or contact the Wolf Appliance Customer Service Department.

Electrical Requirements:

A Wolf BBQ rotisserie motor requires 110-120 volts AC to operate. The power supply cord on the rotisserie motor is equipped with a 3-prong (grounding) plug. The installation site must be equipped with a properly grounded 3-prong receptacle. If the electric receptacle or the power cord are not properly grounded and polarized, a shock hazard could exist and the rotisserie motor may experience problems. (See Figure 3-1)

⚠ WARNING

TO AVOID SHOCK HAZARD, NEVER REMOVE THE GROUNDING PRONG FROM THE PLUG OF THE POWER SUPPLY CORD.

Note: *Keep electrical supply cords and the fuel supply hose away from heated surfaces.*

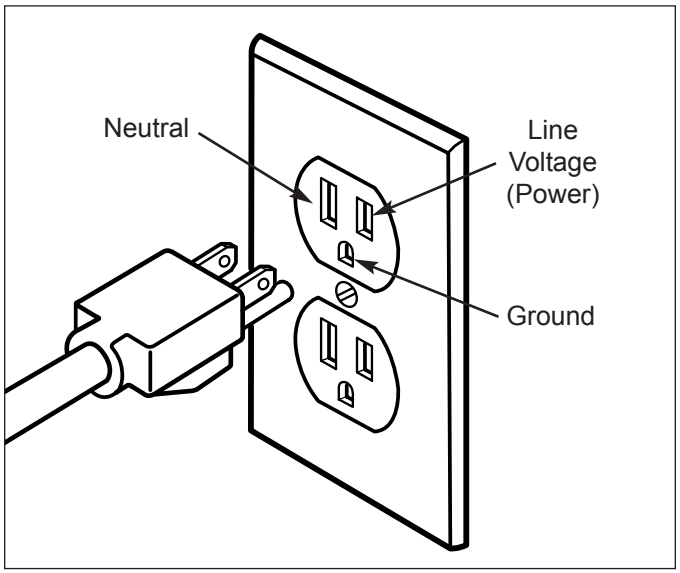


Fig. 3-1. Proper Polarity at Electric Receptacle

Insulated Jacket

The optional insulated jacket is necessary when the non cart grill is to be installed into a combustible enclosure. Use only the Wolf approved insulated jacket which has been specifically designed and tested for this purpose. See Fig. 3-2

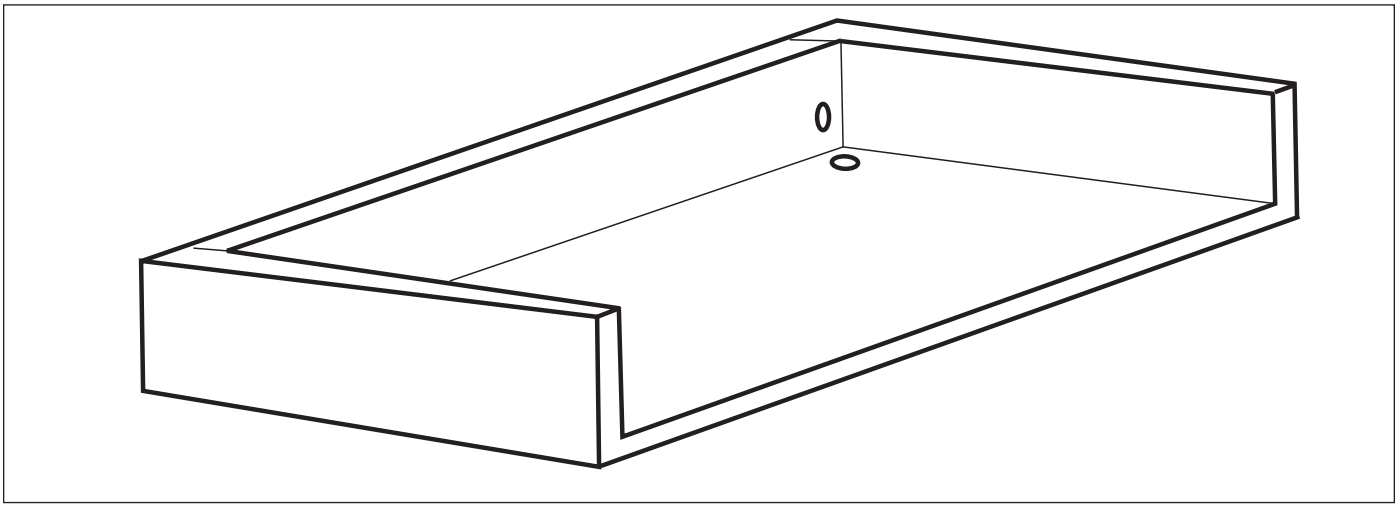


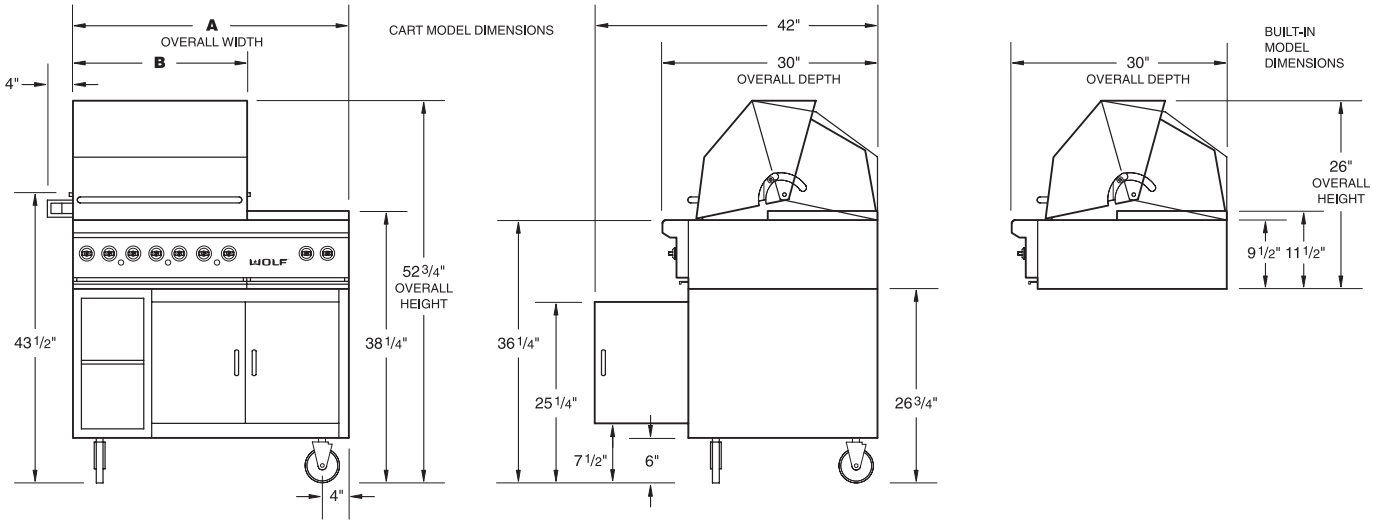
Fig. 3-2 Insulated Jacket

Clearance to Combustible Construction

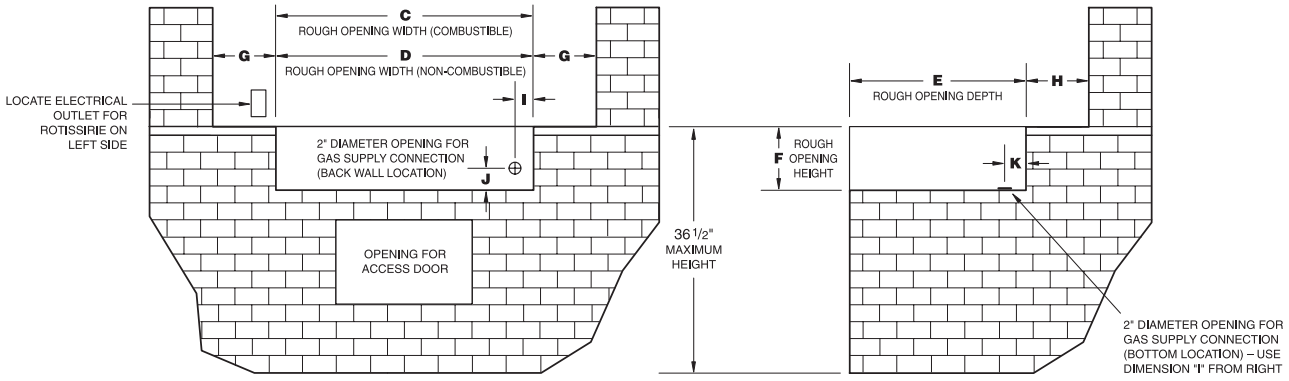
A minimum of 12” from the sides and 12” from the back is required above and below the cooking surface to adjacent vertical combustible surfaces as shown on page 3-3. A minimum of 4-1/2” from the back is required for the hood to open and 6” to the side is required for the rotisserie motor. Refer to the illustrations and chart on page 3-3.

Pre-Installation Specifications

Overall / Pre-Installation Dimensions	Model BBQ242	Model BBQ36	Model BBQ362	Model BBQ48
A Overall Width of Grill	36”	36”	48”	48”
B Width of Hood	24”	36”	36”	48”
C Rough Opening Width (Combustible Enclosure)	38 1/4”	38 1/4”	50 1/4”	50 1/4”
D Rough Opening Width (Non-Combustible Enclosure)	36 1/4”	36 1/4”	48 1/4”	48 1/4”



Pre-Installation Dimensions	Combustible Enclosure	Non-Combustible Enclosure
E Rough Opening Depth	27 3/4”	26 3/4”
F Rough Opening Height	10 1/2”	9 1/2”
G Minimum Clearance to Side Walls	12”	6”
H Minimum Clearance to Back Wall	12”	4 1/2”
I Gas Supply Location (Back Wall/Bottom Location)	3 1/8”	2 1/8”
J Gas Supply Location (Back Wall Location)	3 3/4”	2 3/4”
K Gas Supply Location (Bottom Location)	2 7/8”	1 7/8”



Gas Requirements

Gas Pressure:

NOTE: *All Wolf BBQ's are manufactured as either natural gas or LP gas.*

Natural Gas Manifold Pressure

Standard natural gas orifices on the BBQ are set for 5" WC (Water Column Pressure). A natural gas regulator is provided.

Liquid Propane (LP) Manifold Pressure

Standard LP gas orifices on the BBQ are set for 10" WC (Water Column Pressure). An LP gas regulator is provided.

Gas Supply Pressure

- Maximum line pressure for natural gas and LP is 14" WC; 1/2 psi (3.5 kPa).
- Minimum line pressure for natural gas is 7" WC.
- Minimum line pressure for LP gas is 11" WC.

Gas Pressure Regulator

To control and maintain a uniform gas pressure in the gas manifold, Wolf gas appliances must be connected to the gas supply line through a pressure regulator. The burner orifices are sized for the pressure delivered by the regulator. Never attempt to operate a Wolf gas appliance without the use of the proper pressure regulator.

⚠ CAUTION

The maximum gas supply pressure to the regulator is 14" WC (Water Column Pressure); 1/2 psi (3.5kPa) and should not be exceeded.

Natural Gas Hook-Up

Hook-up to a natural gas supply is made from the rear right side with fittings and a regulator. The coupling, pipe, nipple, street elbow and regulator are provided. To hook up the fittings refer to Fig. 3-3. Make sure the flow arrow on the regulator points in the direction of the gas flow from the gas supply to the grill. See Fig. 3-4

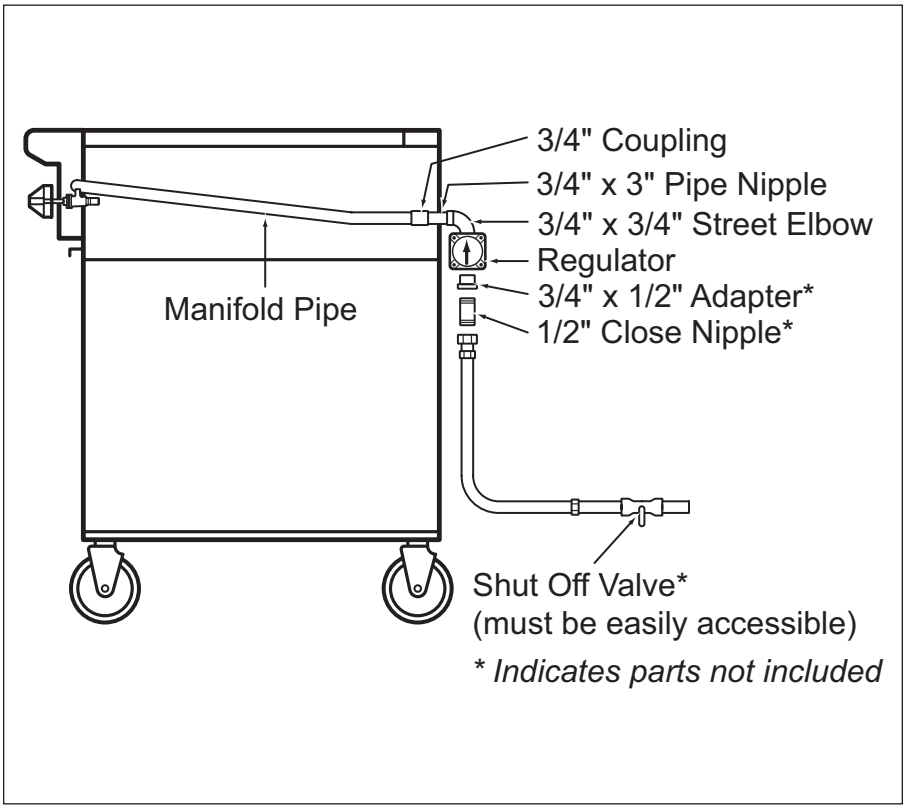


Fig. 3-3

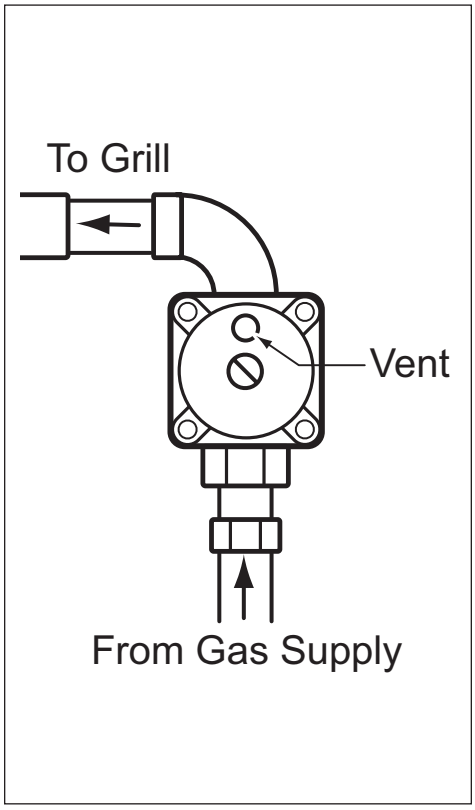


Fig. 3-4

LP Gas Hook Up

An LP Wolf BBQ is equipped with a five foot hose, regulator and unfilled 20 pound gas cylinder. This connection is done with the cylinder located inside of the cart. See Fig. 3-5 and Fig. 3-6

VENT HOLE ON REGULATOR MUST POINT DOWN TO PREVENT FREEZE UP DURING OPERATION OF GRILL

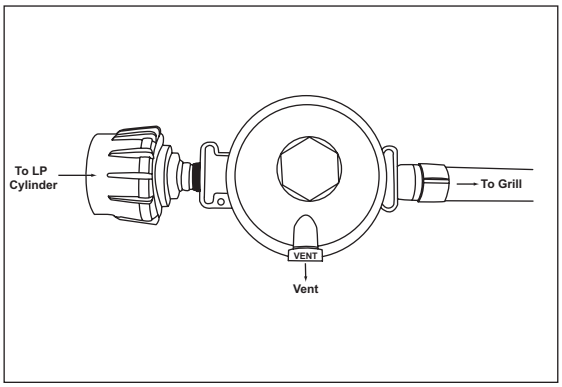
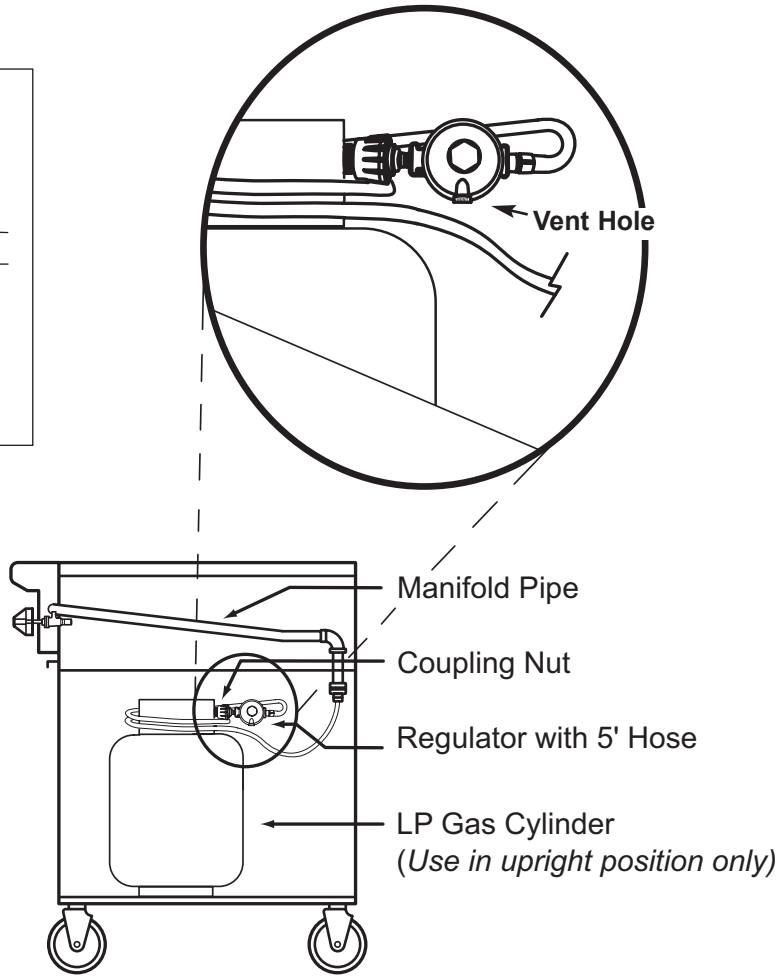


Fig. 3-6



NOTE: *When connecting the regulator with hose, you must coil excess hose around LP Cylinder. Failure to do so could result in pulsating flames or partial flame.*

Fig. 3-5

Cylinder Specifications

The LP gas supply cylinder used with this grill must be approximately 12” in diameter and 18” high. The maximum fuel capacity is 20 lbs. of propane or 5 gallons. Full cylinder weight should be approximately 38 lbs. (43.7 lbs. nominal water capacity). The LP gas supply cylinder must be provided with a listed over-filling prevention device. (DPD)

Approximate running time for a 20 pound LP tank:

BBQ Model #	BTU Rating	Running Time
BBQ36 / BBQ36C	69,000 BTU	6-1/2 hours
BBQ242 / BBQ242C	80,000 BTU	5-1/2 hours
BBQ48 / BBQ48C	89,000 BTU	5 hours
BBQ362 / BBQ362C	101,000 BTU	4-1/2 hours

Leak Testing

A leak test should be performed every time the gas cylinder is connected to the regulator, and whenever part of the gas system is disconnected or replaced. This applies to both natural and LP gas.

Test for leaks at the cylinder valve, cylinder welds, regulator (especially attached to cylinder valves), hose and connections.

NOTE: ***DO NOT*** *use a flame, such as a lighted match to test for leaks. Use only a leak testing solution of soapy water or an electronic leak detector.*

Leak Testing Procedure

1. Check that all control knobs are in the OFF position.
2. Mix a one-part soap/one-part water solution. (If not using an electronic detector.)
3. Turn the cylinder valve knob counter-clockwise one turn to open.
4. Apply the soap/water solution on the joints of the gas delivery system.
5. The appearance of blowing bubbles in the soap solution indicates that a leak is present.
6. Stop the leak by tightening the loose connection or replacing the faulty part.

DO NOT attempt to repair the cylinder valve if it should become damaged. The cylinder must be replaced.

NOTE: *It is important that there are no leaking connections on the BBQ grill. Refer to the Leak Testing Procedure.*

Installation Checklist

- All internal packaging has been removed.
- All shipping restraints have been removed from the burners.
- Specified clearances to any combustible materials have been maintained.
- All burners light properly, individually and simultaneously.
- All flames appear normal
- The drip pan slides freely. The grease can is properly placed.
- The pressure regulator is connected.
- The LP cylinder is in an upright position and the hose is not kinked.
- The unit has been tested and is free of leaks.
- The customer has been informed of the gas supply shut off valve locations.
- Radiants are located properly over the grill burners.

COMPONENT ACCESS AND REMOVAL

This section explains how to access and remove components from a Wolf Outdoor BBQ Grill. Depending on which component you are going to access or remove in the following sections, you may have to remove some components first. Refer to the appropriate section in this manual that explains how to access and remove those various components. When reassembling, just reverse the steps that were used to acces and remove the components.

NOTE: *Before attempting to access or remove any components from a Wolf Appliance, take note of the following warnings.*

⚠ WARNING

- **TO AVOID SERIOUS BURNS AND/OR EXPLOSIONS, KEEP COMBUSTIBLES AWAY FROM THE APPLIANCE WHENEVER A FLAME IS PRESENT. KEEP IN MIND THAT SURFACES AND COMPONENTS GET HOT DURING THE USE OF THE APPLIANCE.**

- **TO AVOID ELECTRICAL SHOCK, POWER TO THE UNIT MUST BE DISCONNECTED WHENEVER ACCESSING AND/OR REMOVING COMPONENTS POWERED BY ELECTRICITY OR COMPONENTS NEAR OTHER ELECTRICAL COMPONENTS.**

- **IF IT IS NECESSARY TO REMOVE A UNIT FROM ITS INSTALLATION, REMEMBER THAT THE UNIT COULD TIP FORWARD WHEN PULLED FORWARD, RESULTING IN SERIOUS INJURY OR DEATH. PULLING A UNIT FROM ITS INSTALLATION SHOULD ONLY BE DONE BY AN AUTHORIZED SERVICE TECHNICIAN OR INSTALLER.**

OPEN BURNER COMPONENTS:

Components include; Open Burner Cover, Open Top Grates, Step Up Frame, Burner Head, Front & Rear Venturi, Spark Ground Strap, Spark Electrode, Spark Electrode Mounting Bracket and Pilot Tube Bracket, Burner Support Bracket

Open Burner Cover

The stainless steel open burner cover protects the open burners from the weather when the open burners are not is use. To remove the open burner cover, lift the cover off. See Fig. 4-1

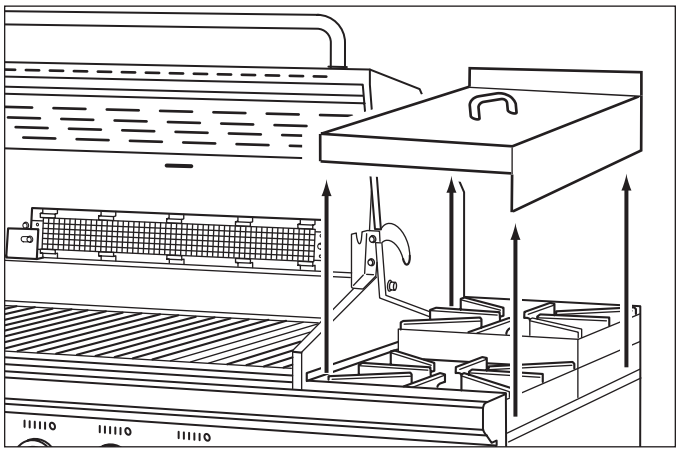


Fig. 4-1

Open Top Grates

The open top grates are used to place pots and pans on the open top burners for cooking. To remove the open top grates, lift them off of the open top frame. See Fig. 4-2

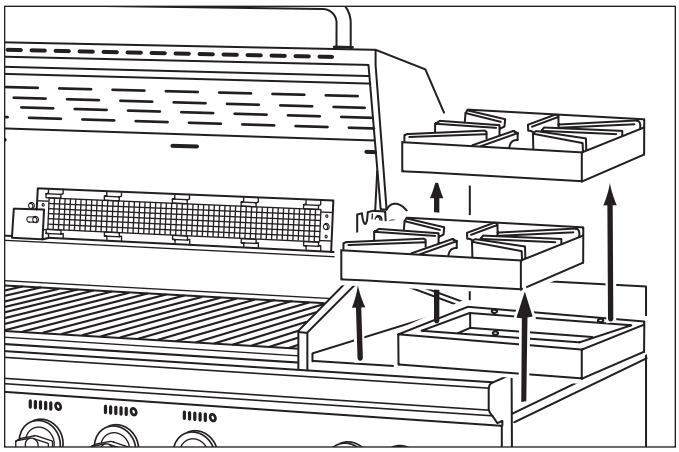


Fig. 4-2

Step-Up Frame

The step-up frame is stainless steel and is used to elevate the rear open top burner. To remove the step-up frame you will need to extract the screws at the back of the frame which mount it to the BBQ chassis. Now, lift off the step-up frame from the chassis. See Fig. 4-3

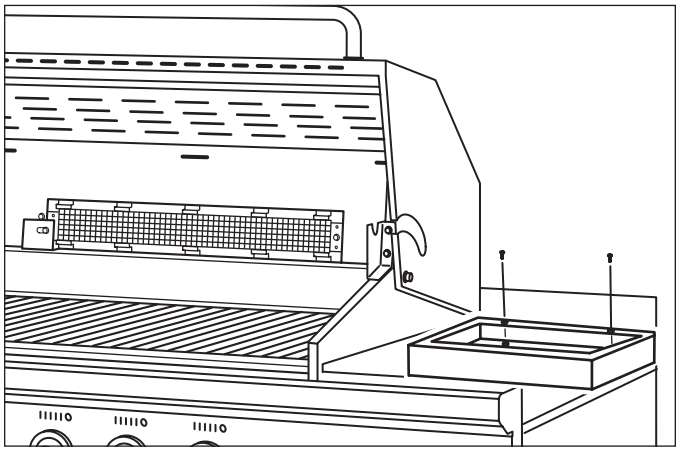


Fig. 4-3

Burner Head

The burner head is made of cast iron and consists of numerous holes that the gas and flame come out of. To remove the burner head, lift the burner head off of the burner venturi. See Fig. 4-4

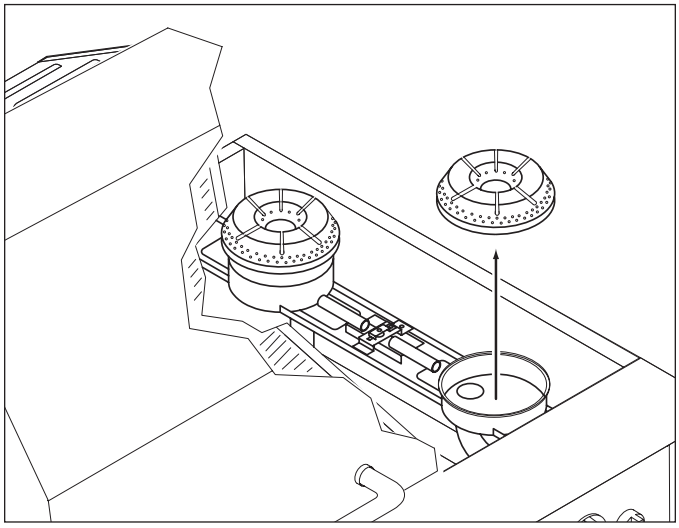


Fig. 4-4

Front Venturi

The burner head sits on top of the front venturi. The front venturi sits on the burner support bracket and slides over the burner valve orifice. To remove the front venturi you must remove the open top grate. Now lift the venturi up and off of the burner support bracket and slide it off of the burner valve orifice. Now lift the front venturi out through the burner support bracket.
See Fig. 4-5

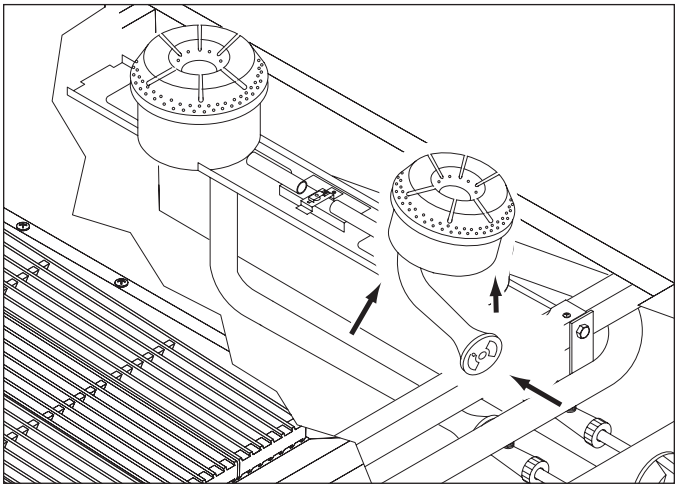


Fig. 4-5

Rear Venturi

The burner head sits on top of the rear venturi. The rear venturi sits on the burner support bracket and slides over the burner valve orifice. To remove the rear venturi you must remove the open top grate. Now lift the venturi up off of the burner support bracket and slide it off of the burner valve orifice. Lift the rear venturi out through the burner support bracket.
See Fig. 4-6

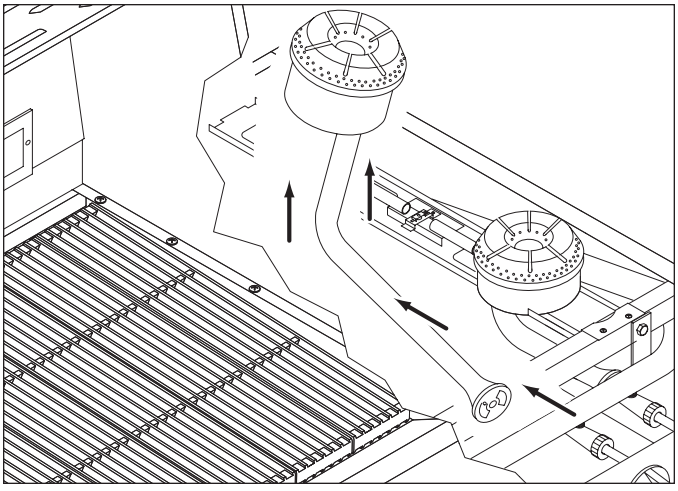


Fig. 4-6

Spark Ground Strap

The spark ground strap is mounted over the spark electrode and is secured to the spark electrode mounting bracket. To remove the spark electrode ground strap you will first need to remove the open top grates. Now extract the screw that mounts the ground strap to the spark electrode mounting bracket and remove the ground strap. See Fig. 4-7

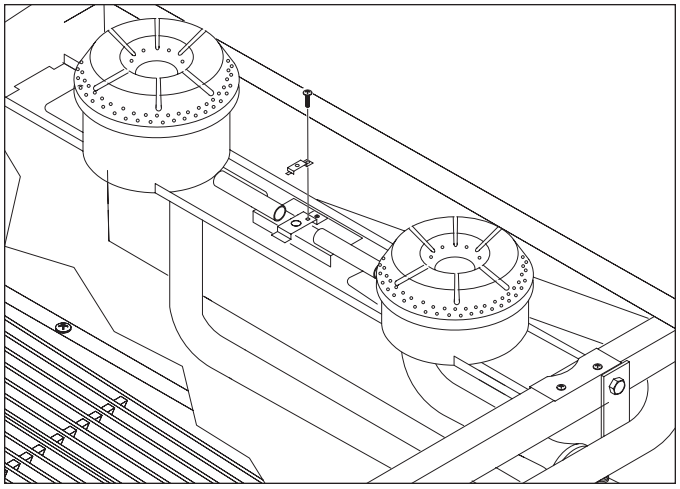


Fig. 4-7

Spark Electrode

The spark electrode emits the spark produced by the rotary igniter to the open top burners. To remove the spark electrode you will need to remove the open top burner grates. Now unplug the spark electrode from the rotary igniter by reaching down along the open top burner valve and unplugging it from the rotary igniter. Cut any wire ties that secure the electrode wire. Now extract the screw from the ground strap and remove the ground strap. Now remove the spark electrode by pulling it through the hole in the burner support bracket.
See Fig. 4-8

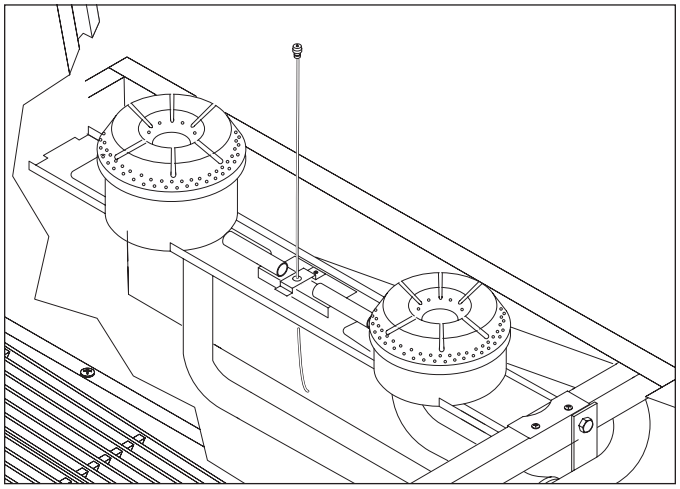


Fig. 4-8

Spark Electrode Mounting Bracket

The spark electrode mounting bracket is used to mount the spark electrode to the pilot burner tube. To remove the spark electrode mounting bracket you will need to remove the open top burner grates, spark electrode ground strap and spark electrode. Now extract the screw for the spark electrode mounting bracket and remove the spark electrode mounting bracket from the pilot tube and the burner support bracket.
See Fig. 4-9

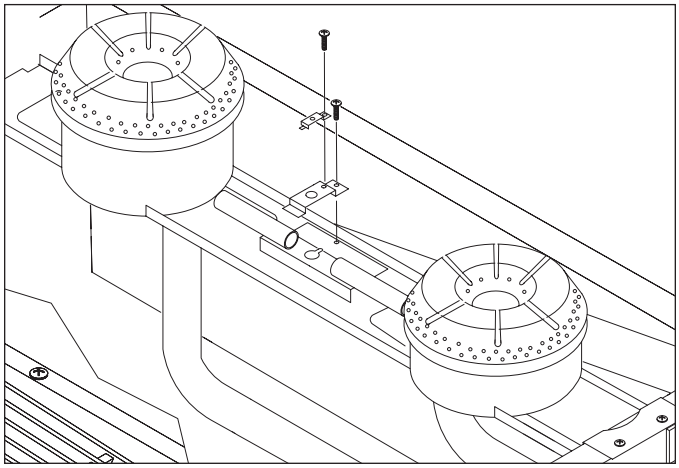


Fig. 4-9

Pilot Tube and Bracket

The pilot tube bracket allows gas to flow from the front and rear open top burners to the spark electrode, which will produce the flame for the burners once a spark has been produced from the rotary igniters. To remove the pilot tube bracket you will need to remove the open top burner grates and the spark electrode with mounting bracket. Now extract the screw that mounts the pilot tube to the support bracket and remove the pilot tube.
See Fig. 4-10

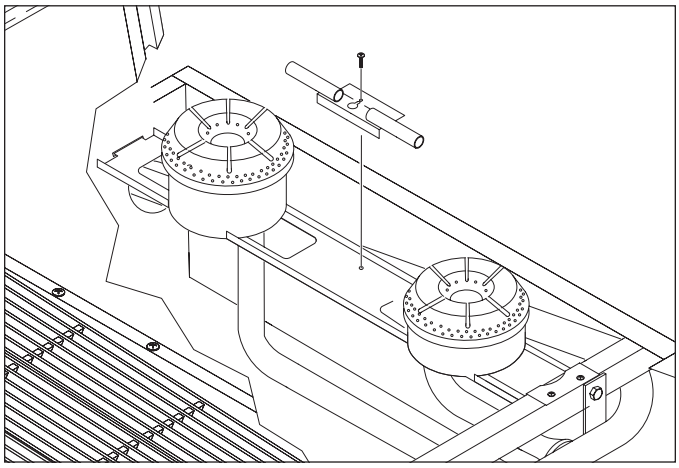


Fig. 4-10

Burner Support Bracket

The burner support bracket is used to support the open top burners. To remove the burner support bracket you will need to remove the open top grates, the front and rear venturi and the step-up frame. Now unplug the spark electrode from the rotary igniter by reaching down along the open top burner valve and unplugging it from the rotary igniter. Cut any wire ties that secure the electrode wire and extract the two screws at the front of the burner support bracket and remove. Now lift the bracket up while pulling the bracket forward to disengage the tab of the support bracket from slot in the open top frame. See Fig. 4-11

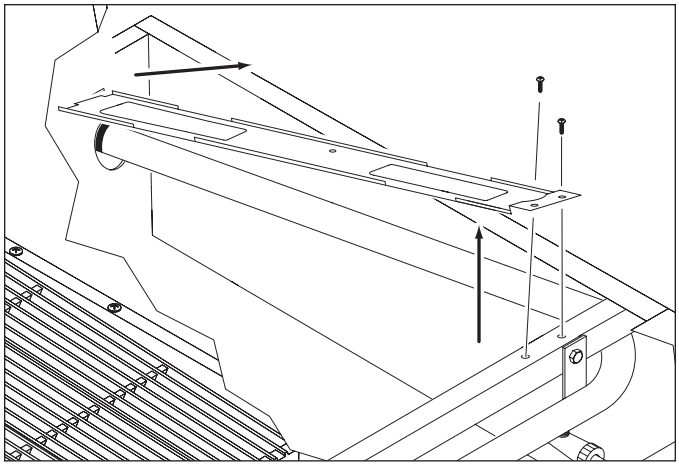


Fig. 4-11

GRILL COMPONENTS:

Components include; Broiler Grates, Radiant, Stainless Steel Burner, Spark Electrode Ground Strap, Spark Electrode Mounting Bracket and Spark Electrode.

NOTE: *To remove the following components, you must first raise the front hood.*

Broiler Grates

The grilling surface is composed of numerous broiler grates. To remove the broiler grates, lift them from the grill chassis. See Fig.4-12

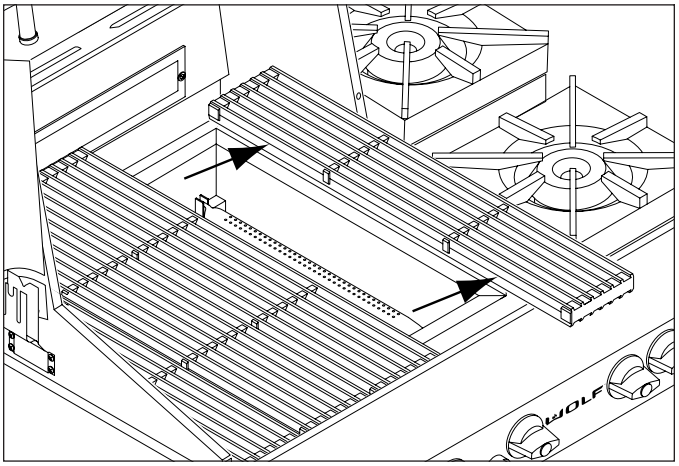


Fig. 4-12

Radiant

The radiant is placed on pins that are welded to the grill chassis, at both the front and back. When the radiant is placed on top of the holding pins, it is raised just above the burner tube. The flame from the burner tube is directed onto the underside of the radiant, distributing the heat to the sides, rather than directly onto the food being prepared. To remove the radiant you need to remove the broiler grates from the grill chassis and then lift the radiant off of the radiant pin holders.
See Fig. 4-13

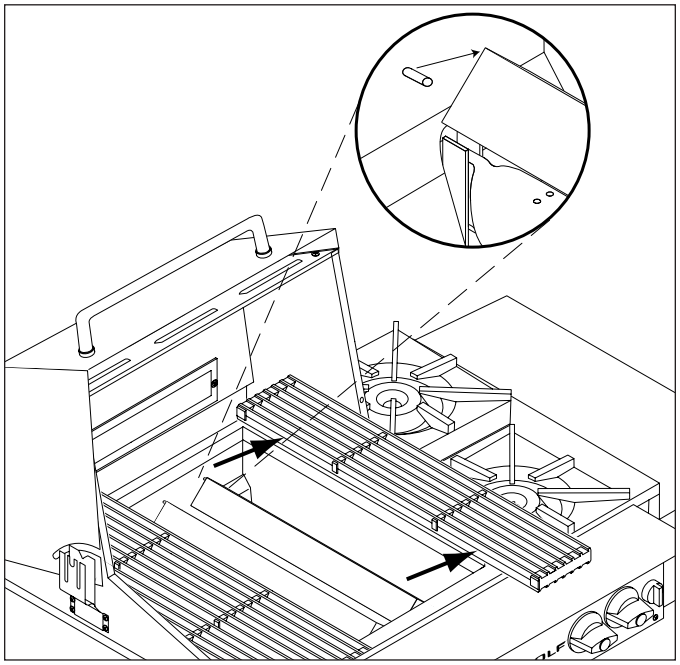


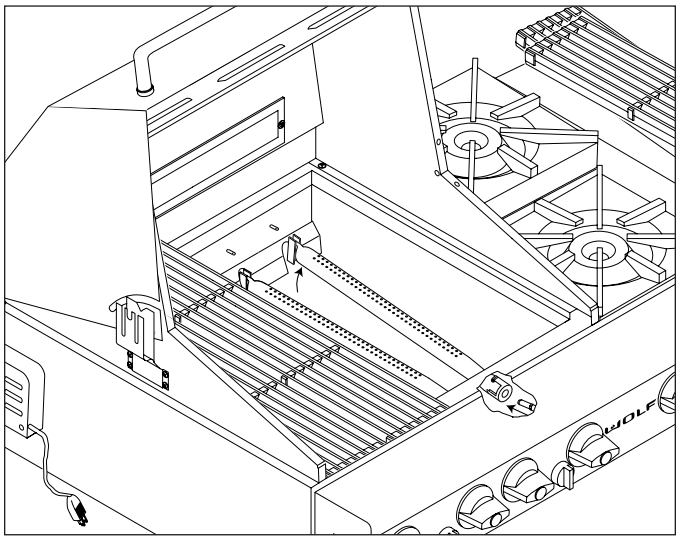
Fig. 4-13

Stainless Steel Burner

The stainless steel burner tubes are located under the broiler grates and the radiant. They are long stainless steel tubes with various holes along the entire length of the tube.

NOTE: *The size of the BBQ unit will determine the number of burner tubes.*

The burner tube fits into a slot on the rear of the grill chassis. The front of the burner tubes slides over the orifice on the burner valve. To remove the stainless steel burner tubes you need to first remove the broiler grates and the radiant. Then lift the back of burner tube out of the slot and slide the burner tube off of the burner valve orifice and out. See Fig. 4-14



Spark Electrode Ground Strap

The spark electrode ground strap secures the spark electrode to the spark electrode mounting bracket. To remove the spark electrode ground strap you will need to remove the broiler grates and radiant. Now extract the screw that secures the ground strap to the mounting bracket and remove ground strap. See Fig. 4-15

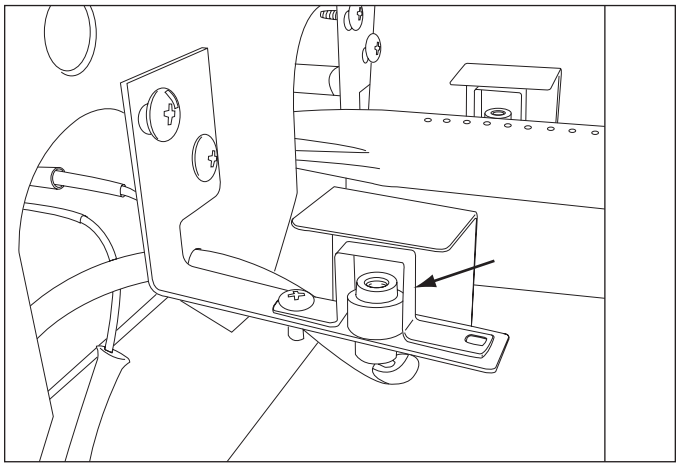


Fig. 4-15

Spark Electrode Mounting Bracket

The spark electrode mounting bracket holds the spark electrode and ground strap. To remove the spark electrode mounting bracket you will need to remove the broiler grates and radiant. Lower the control panel and unplug the spark electrode from the rotary igniter and cut any wire ties that secure the electrode wire. Pull the electrode wire with sleeve through the hole in the BBQ chassis. Then remove the ground strap and spark electrode. Now extract the screws that secure the mounting bracket to the BBQ chassis and remove the spark electrode mounting bracket. See Fig. 4-16

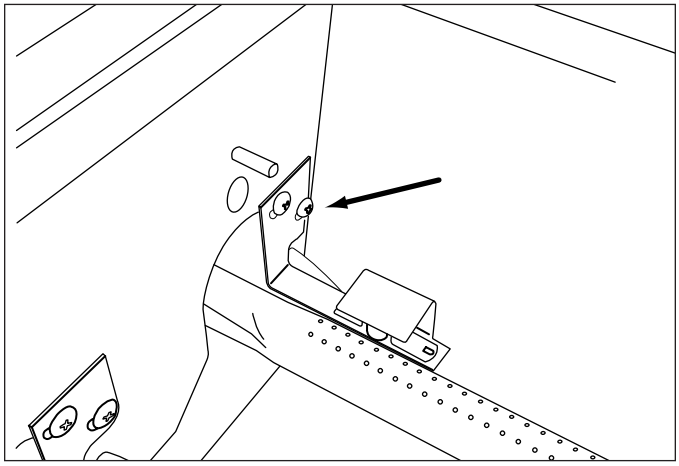


Fig. 4-16

Spark Electrode

The spark electrode emits the spark supplied from the rotary igniter to light the gas in the burner tube. To remove the spark electrode you will need to remove the front control panel. Once the control panel has been removed, unplug the spark electrode wire from the rotary igniter. Remove the broiler grates, radiant, ground strap and spark electrode mounting bracket. Now pull the spark electrode and sleeve through the hole and out of the grill chassis. See Fig. 4-17

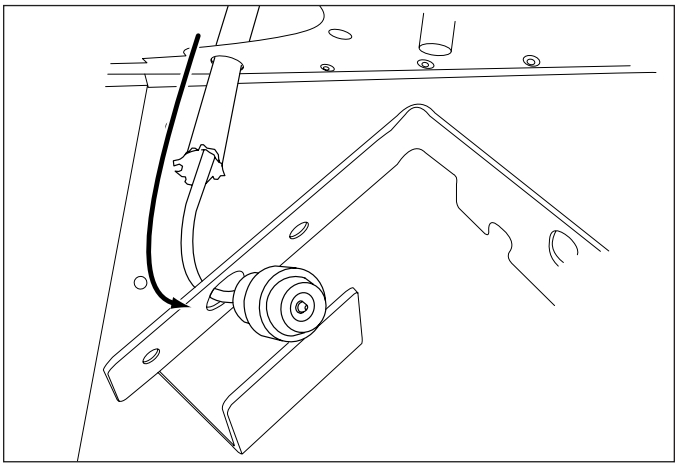


Fig. 4-17

FRONT CONTROL PANEL COMPONENTS:

Components include; Control Knob, Igniter Knob, Control Panel, Rotary Igniter and Match Holder with Lanyard.

Control Knob

To remove, pull the knob straight off of the burner valve shaft. See Fig. 4-18

Igniter Knob

To remove, pull the knob straight off of the rotary igniter shaft. See Fig. 4-18

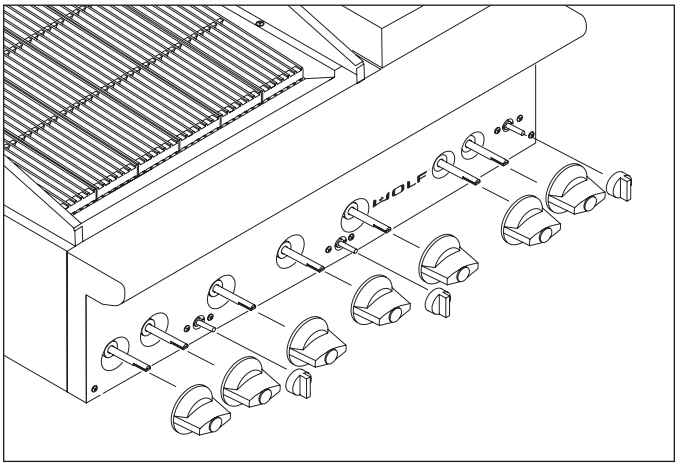


Fig. 4-18

Control Panel

Begin by removing all of the control panel knobs. Extract the screws from the bottom left and right corners of the panel. Pull the bottom of the panel out about 30 degrees and lift slightly to disengage the top flange of the panel from its mounting. Then lift the top forward. See Fig. 4-19

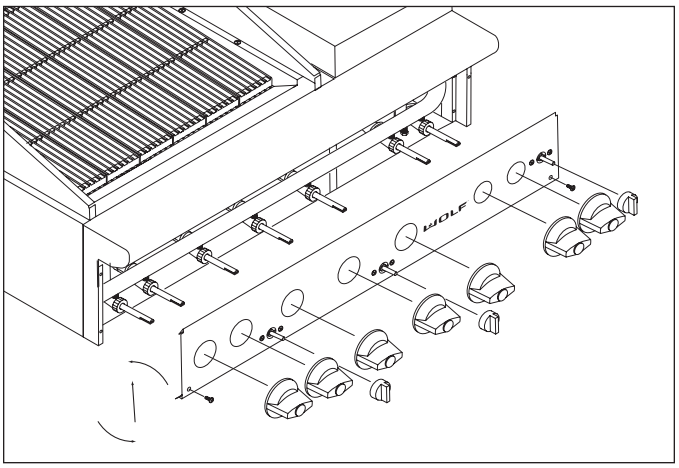


Fig. 4-19

Rotary Igniter

To remove the rotary igniter, first remove the rotary igniter knobs and the control knobs. Remove the control panel and unplug the electrode wire from the rotary igniter. Next extract the two screws that mount the rotary igniter to the control panel. Then pull the rotary igniter from the control panel. See Fig. 4-20

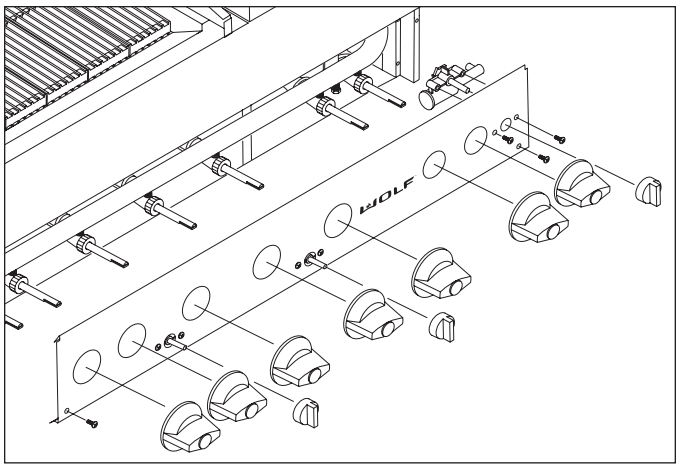


Fig. 4-20

Match Holder with Lanyard

The match holder is used to secure a lighted match to light the burner if the rotary igniter fails to produce a spark. It is riveted to the bottom of the control panel. To replace it, you will have to drill out the rivet. See Fig. 4-21

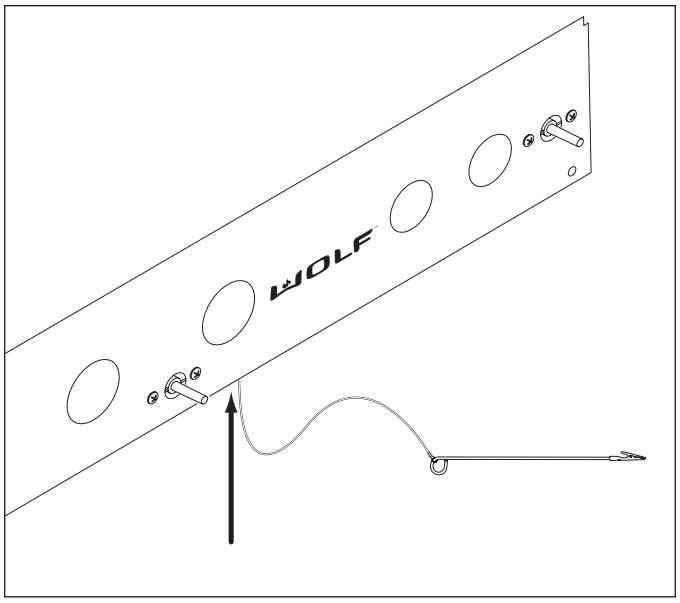


Fig. 4-21

COMPONENTS BELOW THE BULL NOSE:

Components include; Bull Nose, Burner Valve, Burner Valve Orifice Hood, Valve Adapter, Tee, Nipple, Connector, Pilot Valve and the Manifold Pipe.

Bull Nose Removal

To remove the bull nose, extract the two screws from the left and right legs of the bull nose and lift the bull nose from the unit. See Fig. 4-22

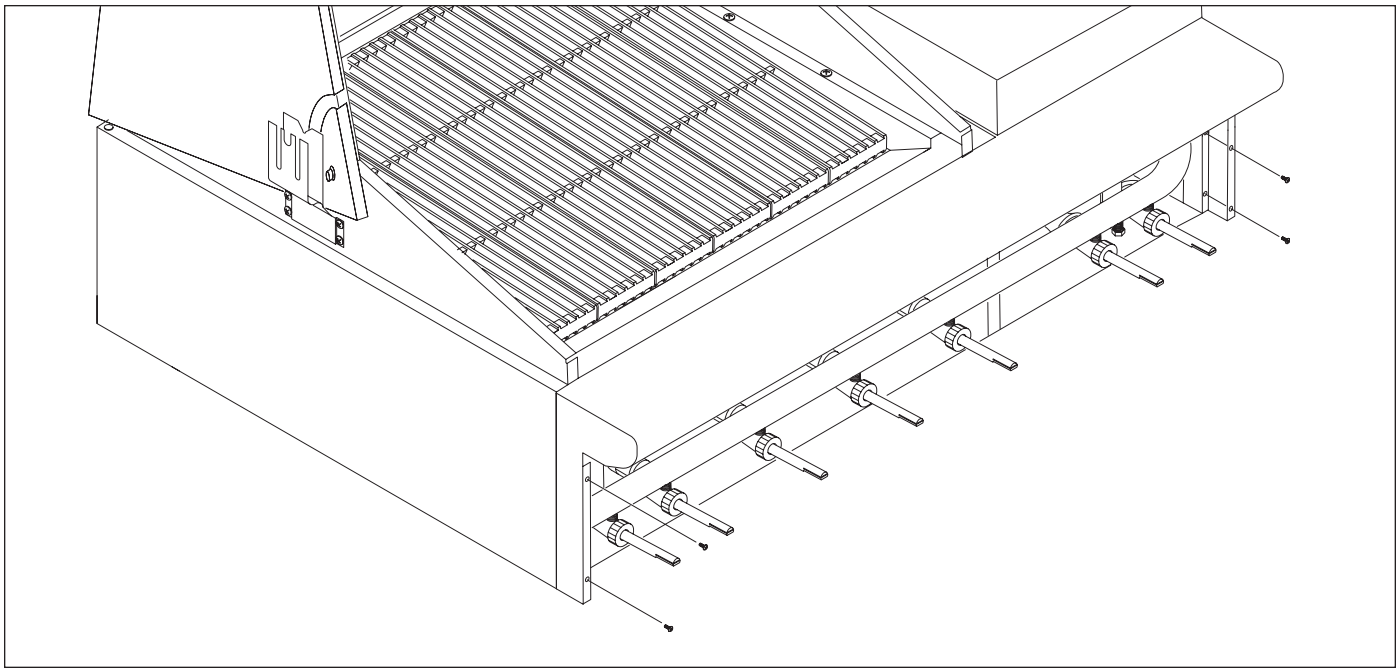


Fig. 4-22

Burner Valve

The burner valves are threaded into the underside of the manifold assembly. To remove a burner valve, you will need to turn off the gas supply, remove the broiler grates, radiant, stainless steel burner tube, control knobs, control panel and unplug the spark electrode wires from the rotary igniters. Now using a wrench, loosen and remove the burner valve. See Fig. 4-23

Burner Valve Orifice Hood

The burner valve orifice is threaded onto the end of the burner valve. To remove the burner valve orifice you will need to turn off the gas supply, remove the broiler grates, radiant, stainless steel burner tube, control knobs, control panel and unplug the spark. Now using a wrench, loosen and remove the burner valve orifices hood. See Fig. 4-23

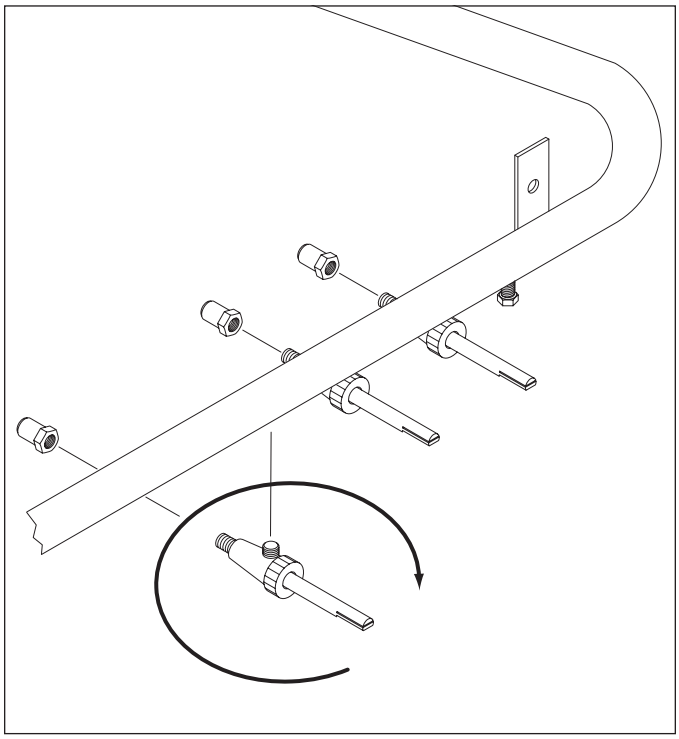


Fig. 4-23

Valve Adapter and Tee

The valve adapter is threaded onto the end of the infrared rotisserie burner valve. It allows the tee adapter to be threaded on, so the rotisserie burner valve can supply gas to the pilot valve and the safety valve for the infrared burner. To remove the valve adapter you will need to turn off the gas supply, remove the control knobs, control panel and unplug the spark electrode wires from the rotary igniter. Now, loosen and remove the pilot valve gas tubing from the pilot valve and loosen and remove the gas tubing from the safety valve to the connector on the tee adapter. Then loosen and remove the entire valve adapter/tee assembly as one unit. Once the assembly has been removed from the unit, remove the valve adapter from the tee. See Fig. 4-24

Nipple and Connector

The nipple is threaded on the end of the tee, which allows the connector for the flexible gas tubing to be threaded on. This flexible gas tubing goes to the safety valve which supplies gas to the infrared burner. To remove the nipple you will need to turn off the gas supply, remove the control knobs, control panel and unplug the spark electrode wires from the rotary igniter. Now you will need to loosen and remove the pilot valve gas tubing from the pilot valve and loosen and remove the gas tubing from the safety valve to the connector on the tee adapter. Now loosen and remove the entire valve adapter/tee assembly as one unit. Once the assembly is removed from the unit, you can remove the nipple from the connector and the tee. See Fig. 4-24

Pilot Valve

The pilot valve is threaded into the bottom of the tee. It allows for a separate gas supply to go to the pilot light for the infrared burner. To remove the pilot valve you need to turn off the gas supply, remove the control knobs, control panel and unplug the spark electrode wires from the rotary igniter. Now you will need to loosen and remove the pilot valve gas tubing from the pilot valve and loosen and remove the flexible gas tubing from the safety valve to the connector on the tee adapter. Now loosen and remove the entire valve adapter/tee assembly as one unit. You can now loosen and remove the pilot valve from the tee. See Fig. 4-24

Manifold Pipe

The manifold pipe is connected to the gas source at one end and is sealed at the other end. It supplies gas to the burner valves, pilot valve and safety valve. To remove the manifold you need to turn off the gas supply, remove the control knobs, control panel and unplug the spark electrode wires from the rotary igniter. Now you will need to loosen and remove the pilot valve gas tubing from the pilot valve and loosen and remove the flexible gas tubing from the safety valve to the connector on the tee adapter. Now disconnect the manifold from the gas source. Extract the screws that secure the manifold to the grill chassis and remove the manifold by pulling straight out of the grill chassis. See Fig. 4-24

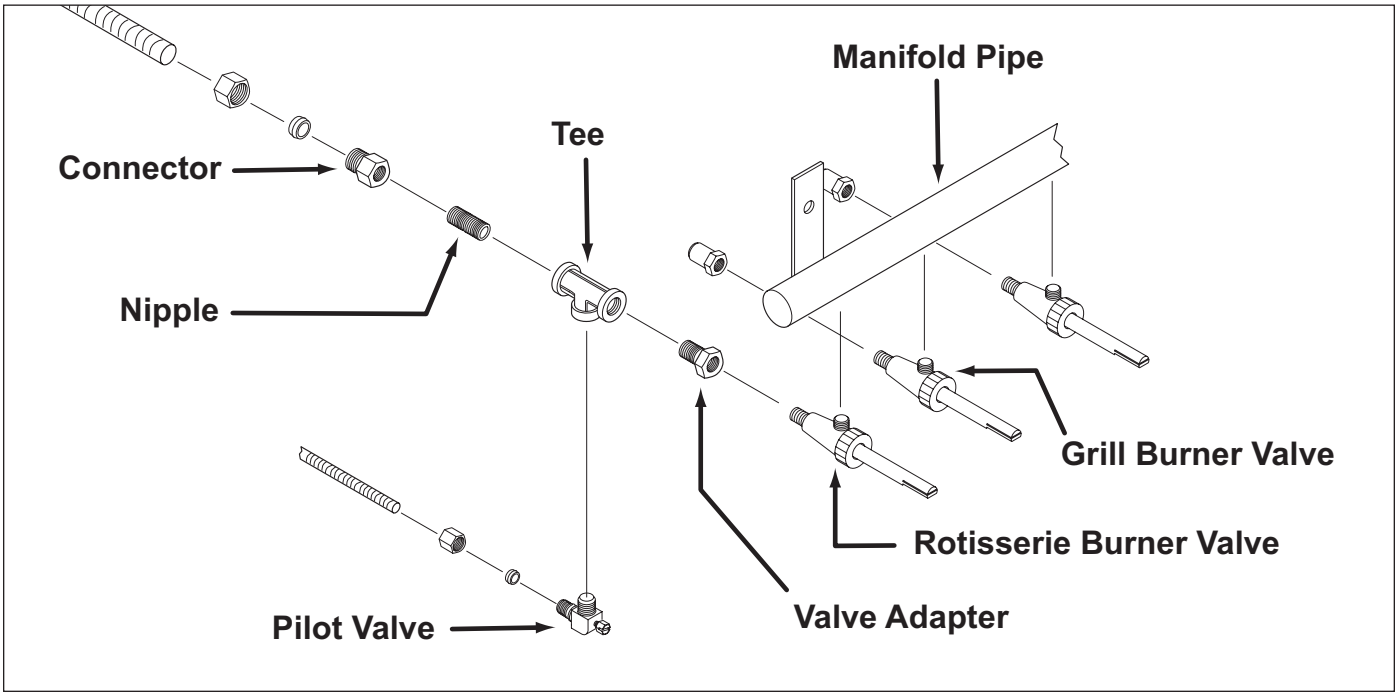


Fig. 4-24

HOOD COMPONENTS:

Components include; Rotisserie Rod with Fork, Rotisserie Motor, Motor/Rod Support, Hood Handle, Front Hood, Rear Hood Top, Rear Hood Left and Right, IR Burner Cover with Handle, Pilot Shield, Infrared Burner, Pilot Burner, Spark Electrode, Rear Splash Panel, Side Plate Shelf, Side Plate Shelf Brackets and Belly Bar with Brackets.

Rotisserie Rod with Fork

The rod for the rotisserie system is assembled into the motor by placing the pointed end into the motor and resting the threaded end on the support at the right side of the grill. Once the rod is pushed as far as possible into the motor, the grooved end of the rod should rest on the right side bracket. The removable rotisserie handle should be removed when using the open burners. To remove the rotisserie rod with fork, lift the rod out of the support bracket on the right side. Now pull the rod out of the rotisserie motor. See Fig. 4-25

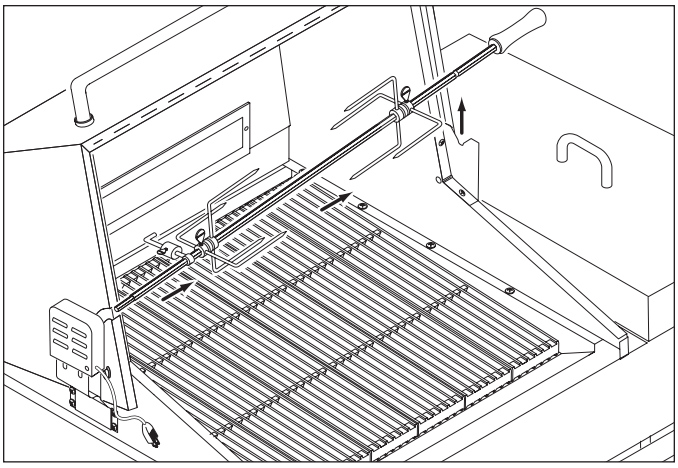


Fig. 4-25

Rotisserie Motor

The rotisserie motor is equipped with metal gears and is capable of turning a balanced 25 lb. cut of meat or poultry. The motor is mounted to a metal bracket, which attaches to the sides of the grill and must be electrically grounded. To remove the rotisserie motor you first need to unplug the rotisserie motor from the electrical source. Remove the rotisserie rod with fork, now lift the rotisserie motor straight up and out of the motor support bracket. See Fig. 4-26

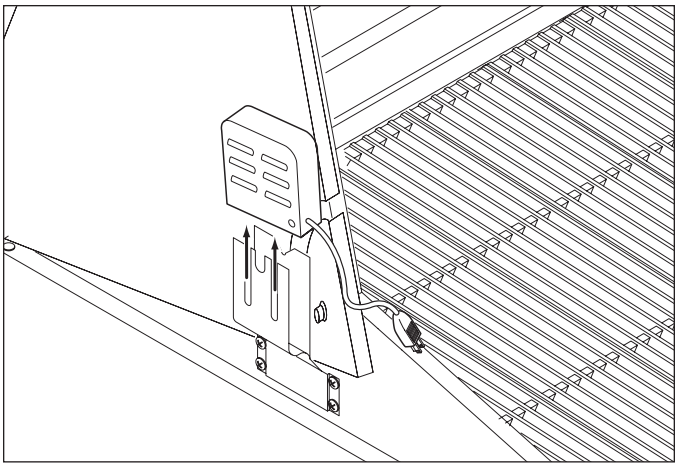


Fig. 4-26

Rotisserie Motor/Rod Support

The motor support holds the rotisserie motor in place and is mounted to the left side hood. To remove the motor support bracket you need to extract the acorn nuts from screws. Then extract the mounting screws from the bracket. Now lift the bracket off of the left side of the hood.

The rod support bracket holds one end of the rotisserie rod and is mounted on the right side hood. To remove the rod support, extract the mounting screws and lift bracket off right side hood. See Fig. 4-27

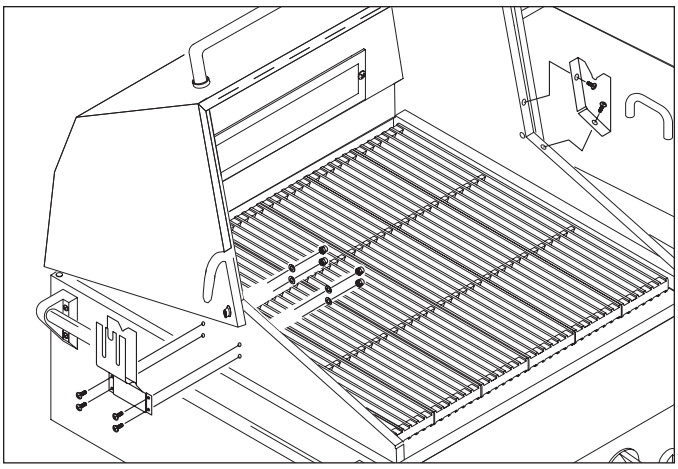


Fig. 4-27

Hood Handle

The hood handle is attached to the hood from the inside. To remove the hood handle you need to remove the plug buttons from the inner hood liner to gain access to the mounting bolts for the handle. Now extract the bolts from the handle and lift the handle from the front hood. See Fig. 4-28

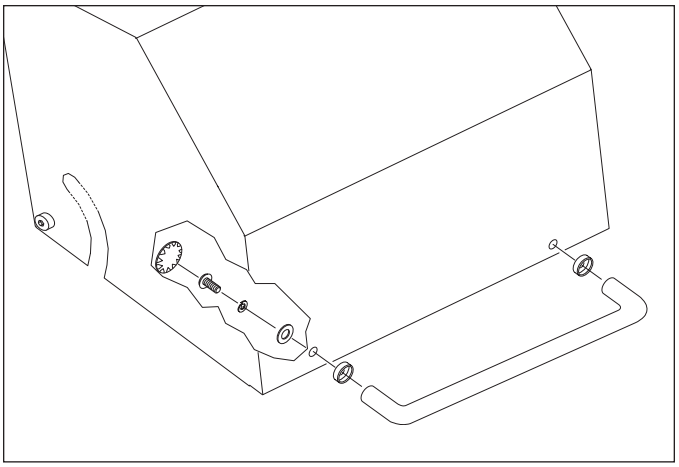


Fig. 4-28

Front Hood

The hood is used to provide an even temperature, conserve fuel, lessen flare-up and improve food flavor. To remove the hood you will first need to remove the rotary motor rod support bracket. Now extract the shoulder screw and nut from the flanged bushing on the left and right side of the hood. Lift off the front hood. See Fig. 4-29

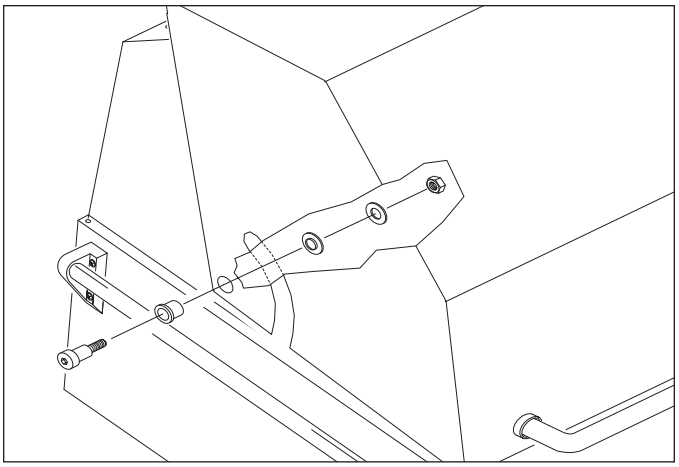


Fig. 4-29

Rear Hood Top

The rear hood top is connected to the right and left side hood, and is slotted for ventilation. It covers the infrared burner and gas tubing. In order to remove the rear hood, the front hood will need to be removed. To remove the rear hood, remove the screws along the right and left side hood. Remove the screws along the middle of the rear hood. The middle screws mount the rear hood to the rear splash panel. Now lift off the rear hood. See Fig. 4-30

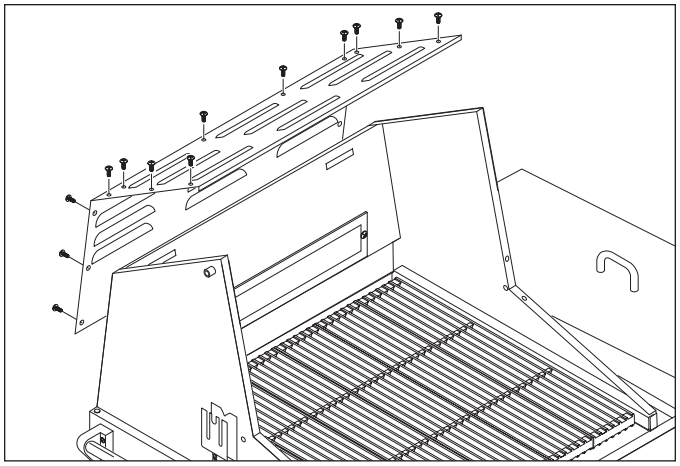


Fig. 4-30

Rear Hood Right and Left

The rear hood right and left makes-up the side of the hood. In order to remove the rear hood right and left, the front hood and rear top hood need to be removed. Remove the screws that are located inside the grill chassis for each side hood. Once that is done, lift out the side hoods. See Fig. 4-31

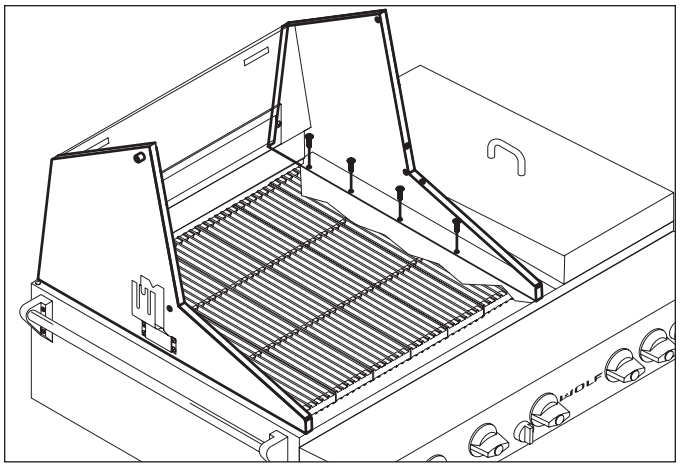


Fig. 4-31

Infrared (IR) Burner Cover with Pull

The infrared burner has a stainless steel cover that protects it when not in use. The cover has two tabs that fit into grooves which are cut into the rear splash panel. When the tabs are inserted into the grooves the cover hangs onto the rear splash panel. To remove the infrared burner cover, just lift off and remove.
The cover also has a handle, known as a pull. To remove the pull, lift the infrared burner cover off of the rear splash panel, then remove the screws that mount the pull to the cover. See Fig. 4-32

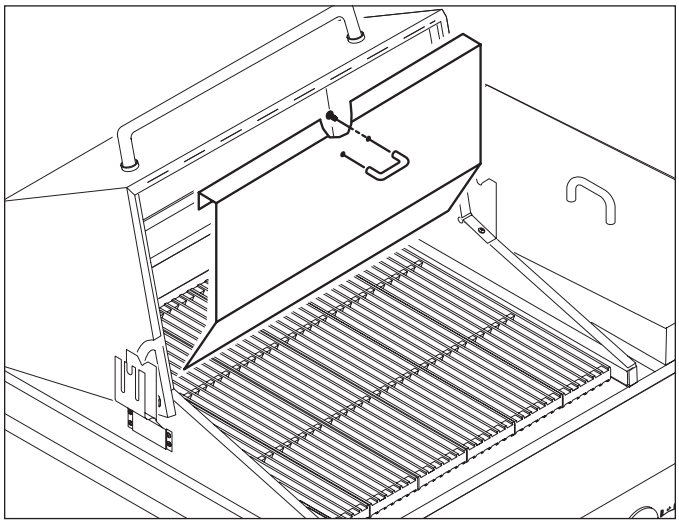


Fig. 4-32

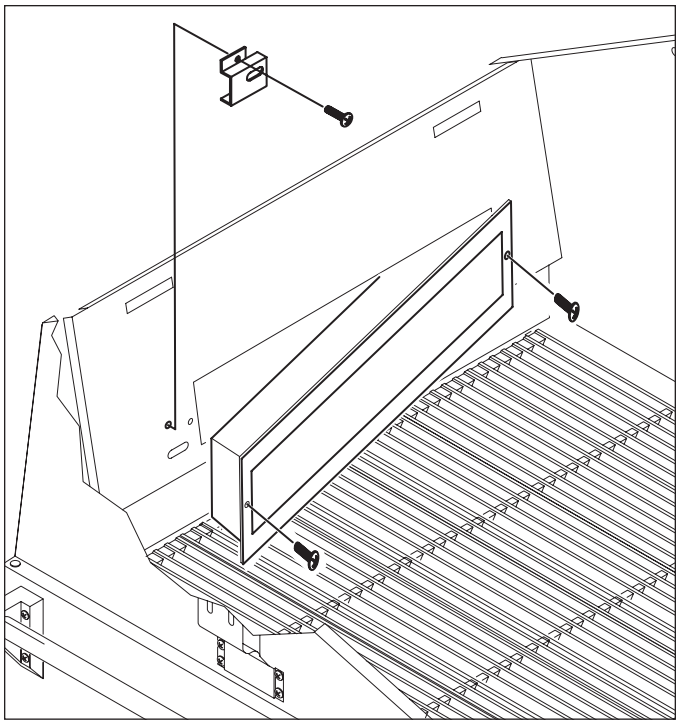


Fig. 4-33

Pilot Shield

The pilot shield protects the pilot burner assembly for the infrared burner. To remove the pilot shield, extract the screw that mounts the shield to the rear splash panel and lift the pilot shield off. See Fig. 4-33

Infrared Burner

The infrared burner is used for rotisserie cooking. The intensity of this radiant heat is preferred over other methods because of its ability to sear the natural juices and nutrients into the food. The location of the burner allows for the placement of a basting pan beneath the food to collect all juices and drippings. To remove the infrared burner, make sure you have the gas supply turned off. If the rotisserie motor and rod are in place, remove them. Now remove the rear hood top. Now that the rear hood top is removed, disconnect the flexible gas tubing from the infrared burner. Disconnect the gas tubing that is connected to the pilot burner (See Fig. 4-34). Then remove the screw that mounts the sparker to the pilot burner and remove the sparker and pilot burner from the mounting bracket . Now you can extract the two screws that secure the infrared burner to the rear splash panel and pull the infrared burner towards the front of the unit to remove. See Fig. 4-33

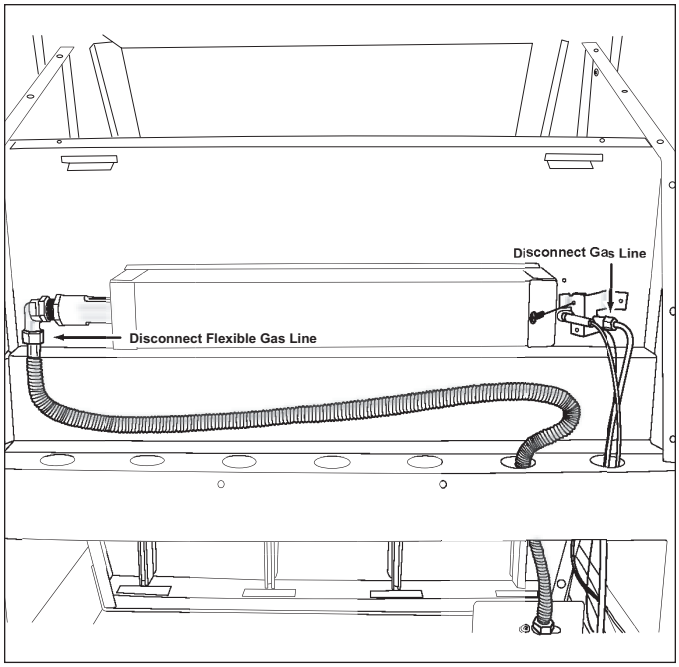


Fig. 4-34

Pilot Burner

The pilot burner is lit by a sparker and maintains a standing pilot light for the infrared burner and flame sensor as long as the infrared burner valve is in the on position. The pilot burner must maintain a standing pilot light on the flame sensor in order to keep the safety valve open and allow gas to flow to the infrared burner. To remove the pilot burner, make sure the gas supply is turned off. If the rotisserie motor and rod are in place, remove them. Remove the infrared cover. Remove the pilot shield from the rear splash panel. Loosen the screw that holds the flame sensor in place on the pilot burner. Slide the flame sensor down and out of the pilot burner. Remove the rear hood top. Disconnect the gas line to the pilot burner. Remove the screw that mounts the sparker and pilot burner to the mounting bracket. Now move the sparker out of the way and slide the pilot burner through the slot in the rear splash panel towards the back of the unit and out.
See Fig. 4-35

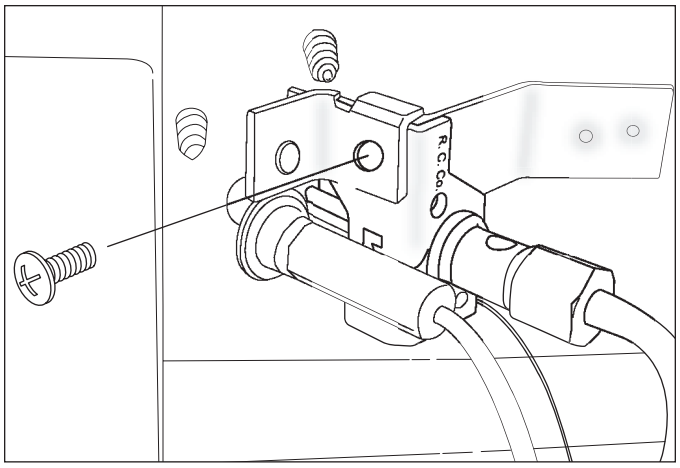


Fig. 4-35

Spark Electrode

The spark electrode provides the spark for the pilot burner, which in turn allows the safety valve to open and supply gas to the infrared burner for the rotisserie. The spark electrode is a one-piece electrode with a wire, which is plugged into the rotary igniter on the control panel. When you turn the rotary igniter, you create a spark from the electrode, which lights the gas to the pilot burner supplied from the pilot valve. To remove the spark electrode, remove the rear hood top. Disconnect the nut from the screw that mounts the sparker to the pilot burner on the mounting bracket. Now remove the control panel and disconnect the sparker wire from the rotary igniter. Remove the spark electrode and wire from the unit out the rear of the grill.
See Fig.4-36

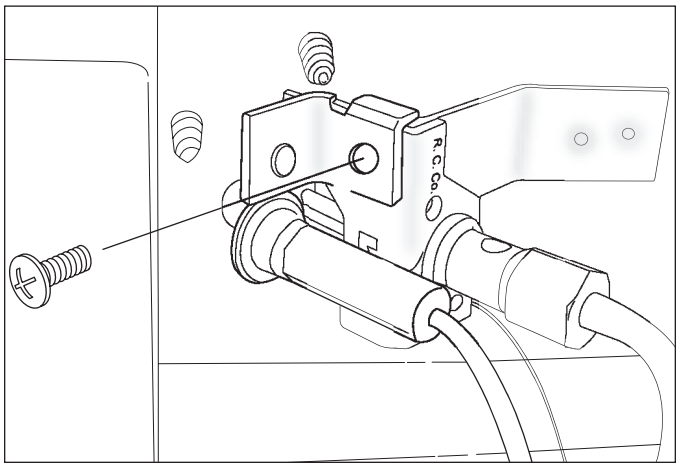


Fig. 4-36

Rear Splash Panel

The rear splash panel is located at the back of the grill. The infrared burner, pilot shield, pilot valve and sparker are mounted to it as well as the rear hood top. To remove the rear splash panel you need to make sure the gas supply is turned off. Remove the rear hood top. Disconnect the gas line to the pilot burner and infrared burner. Remove the pilot shield. Remove the spark electrode and pilot burner from the mounting bracket. Remove the infrared burner. Now extract the screws from the bottom of the rear splash panel from the grill chassis and lift the rear splash panel off.
See Fig. 4-37

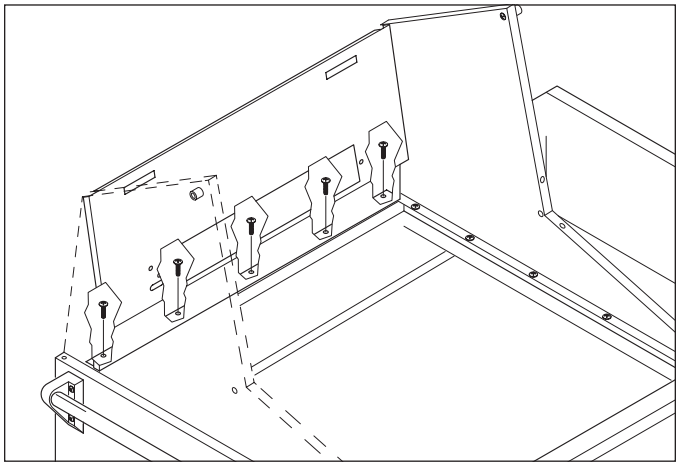


Fig. 4-37

Side Plate Shelf

The Side Plate Shelf is a stainless steel fold down shelf that is mounted to the side of the unit. It can be lifted up for holding a variety of items during cooking or it can be folded down when not in use. To remove the side plate shelf you will need to have it in the folded position. Now push the side of the shelf in slightly, along the oblong mounting holes on the sides. Lift the shelf off of the mounting pin brackets. See Fig. 4-38

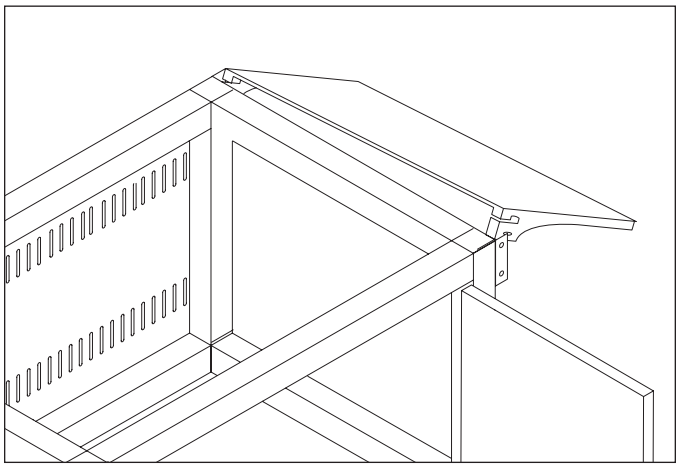


Fig. 4-38

Side Plate Shelf Brackets

These brackets provide the support for mounting the side plate shelf. To remove the brackets, first remove the plate shelf. Now extract the two screws from the bracket and remove the bracket. Repeat this process for each bracket. See Fig. 4-39

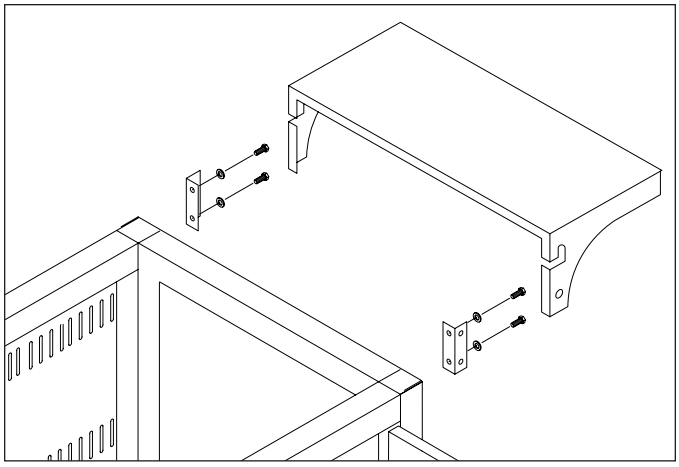


Fig. 4-39

Belly Bar and Brackets

The belly bar is a stainless steel tube that is mounted to the side of the unit with two mounting brackets. It can be used to push or pull the unit from one position to another. To remove the belly bar you will need to remove one of the mounting brackets first. To remove the mounting bracket, extract the two screws that mount the bracket to the unit. Now lift the bracket off and slide the belly bar from its mounting position on the other bracket. Now you can remove the other belly bar bracket by extracting the two screws that mount the bracket to the unit. See Fig. 4-40

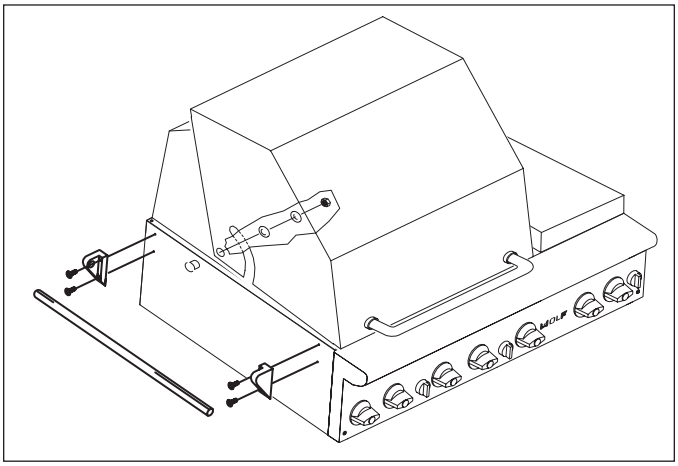


Fig. 4-40

REAR PANEL COMPONENTS:

Components include; Rear Panel, Safety Valve and Gas Tubing

Rear Panel

The rear panel is on the back of the grill chassis. Once the rear panel is removed you have access to the safety valve and related gas tubing. If the grill is in a built in installation, it will have to be pulled out to gain access to the rear panel screws. To remove the rear panel, extract the screws around the rear and lift the panel off. See Fig. 4-41

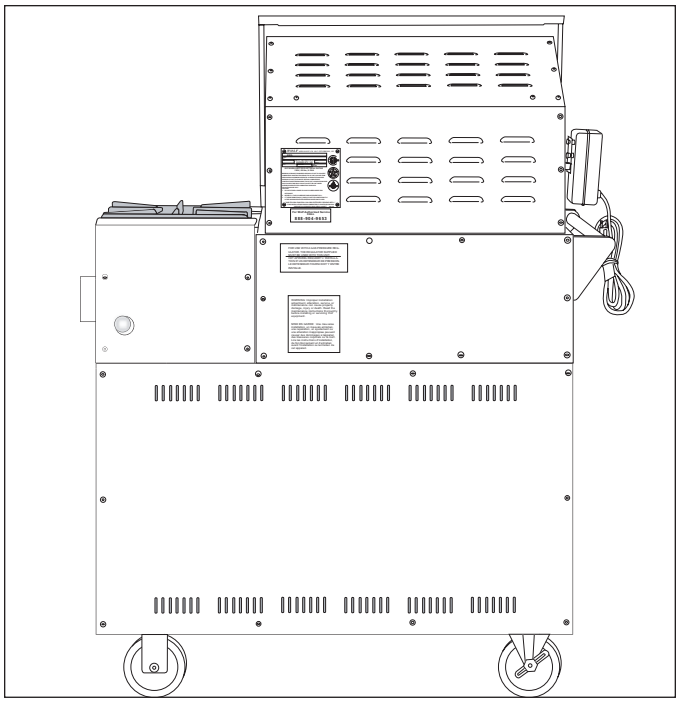


Fig. 4-41

Safety Valve

The safety valve allows the gas to flow to the infrared burner via the gas tubing. The safety valve has a flame sensor attached to it, which is mounted on the pilot burner. Once the pilot is lit, the flame goes over the flame sensor. When the flame sensor gets hot enough it opens the safety valve and the gas is allowed to flow through the tubing and to the infrared burner. The flame at the pilot burner then lights the infrared burner. If the flame on the pilot light goes out for any reason, the safety valve closes and shuts off the gas supply to the infrared burner. To remove the safety valve you need to turn off the gas supply and remove the rear panel. If the grill is in a built-in installation, it will have to be pulled forward to gain access to the rear panel and screws. Disconnect the flexible gas tubing from the safety valve. Now remove the two screws that secure the safety valve to the bracket and lift out the safety valve. See Fig. 4-42

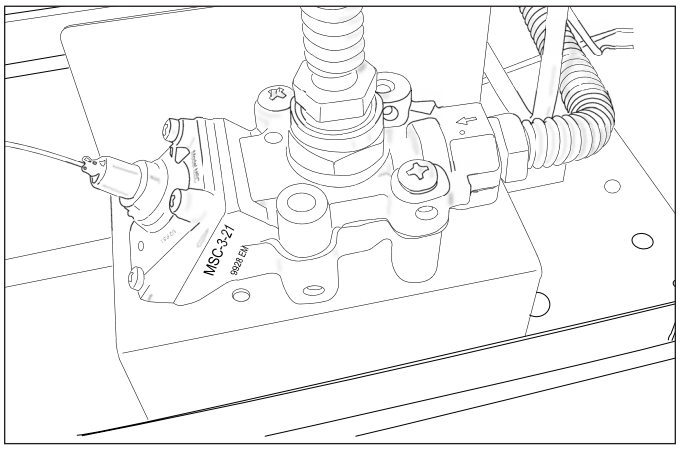


Fig. 4-42

Safety Valve Gas Tubing

This is a flexible gas line that goes between the Tee connector at the manifold and the safety valve. It supplies gas to the safety valve. To remove this flexible gas tube you will have to turn off the gas supply. If the unit is in a built-in installation, it will have to be pulled out. Remove the rear panel. Then disconnect the flexible gas line on the side of the safety valve and at the Tee connector at the manifold. In order to do this you will have to remove the control panel and disconnect the spark electrodes from the rotary igniters. Now remove the flexible gas tube from the unit. See Fig. 4-43

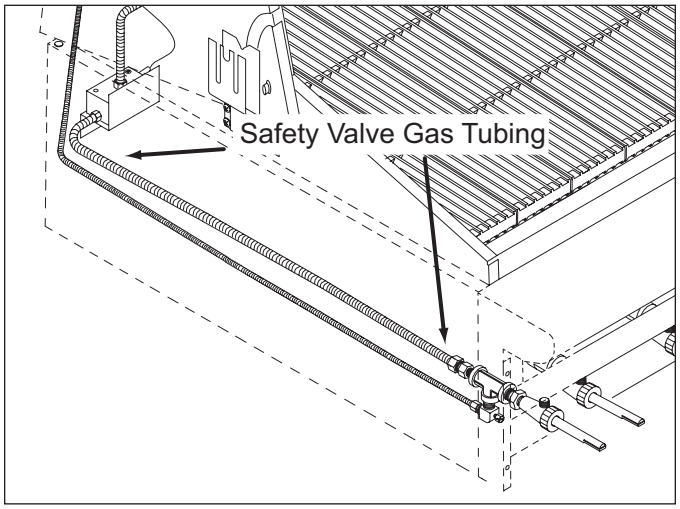


Fig. 4-43

Infrared Gas Tubing

This is a flexible gas line that goes between the safety valve and the infrared burner. Once the flame sensor on the pilot burner is hot enough to open the safety valve, it will supply the gas from the safety valve to the infrared burner. To remove this flexible gas tube you will have to turn off the gas supply. If the unit is in a built-in installation, it will have to be pulled out. Extract the screws and remove the rear hood top. Disconnect the flexible gas tube from the infrared burner and the top of the safety valve and remove the flexible gas tube from the unit. See Fig. 4-44

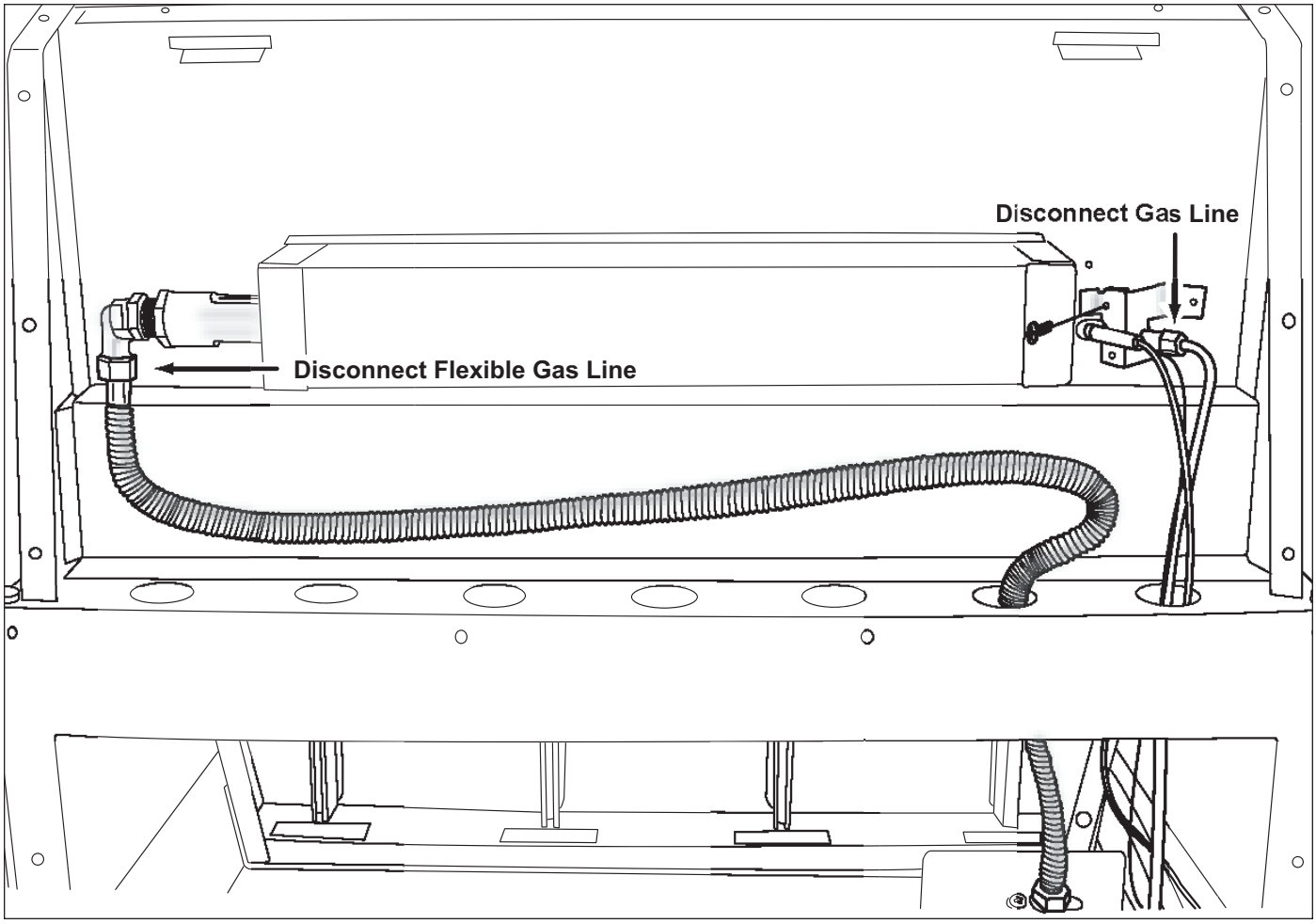


Fig. 4-44

Pilot Valve Gas Tubing

This is a gas tube that goes between the pilot valve at the Tee connector on the manifold and to the pilot burner at the infrared burner. Once the infrared burner valve is turned on, it supplies gas for the pilot light at the pilot burner. To remove this gas tube you will have to turn off the gas supply. If the unit is in a built-in installation, it will have to be pulled out. Extract the screws and remove the rear hood top. Disconnect the gas tube at the pilot burner. Remove the control panel and disconnect the gas tube from the pilot valve. Now remove the gas tubing from the unit. See Fig. 4-45

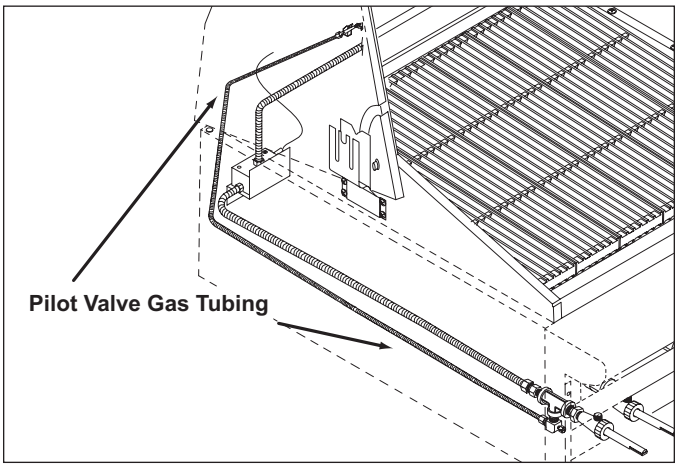


Fig. 4-45

CART COMPONENTS:

Components include; BBQ Chassis, Door Handles, Door Assembly, Doorstops, Top Catch Holder, Magnetic Catch, Bottom Panel, Rear Panel, Side Panel, Top Trim, Swivel Caster w/Brake, Caster Locking Bracket, Non-Swivel Caster, 48" Cart Shelf, 48" Cart Partition and Cart Frame Assembly

BBQ Chassis

To remove the entire BBQ chassis from the cart you will need to turn off and disconnect the gas supply. Then remove the control panel, rear panel and extract the mounting bolts from the cart frame to the BBQ chassis. Now lift the BBQ chassis from the cart assembly. See Fig. 4-46

Door Handles

To remove the stainless steel cart door handles you will need to open the door and extract the two screws from the inside of the door that mount the handle to the door. See Fig. 4-47

Door Assembly

To remove the stainless steel door assembly you will need to open the door and extract the two screws that mount the door hinge to the inside of the cart frame.
NOTE: *If replacing the door, the door handles will have to be removed and reinstalled on the new door.*
NOTE: *The door hinges are not replaceable. They are welded to the door assembly and to replace them you will replace the entire door assembly.*
See Fig. 4-48

Doorstops with Screw and Spacer

The doorstops are located inside of the cart, behind the doors, at the bottom front. They are to keep the door from closing too far into the cart. The doorstop is simply a screw inserted into a spacer, then screwed as one piece to the bottom panel. To remove the doorstop you will need to open the door, extract the screw and then remove the screw from the spacer. See Fig. 4-49

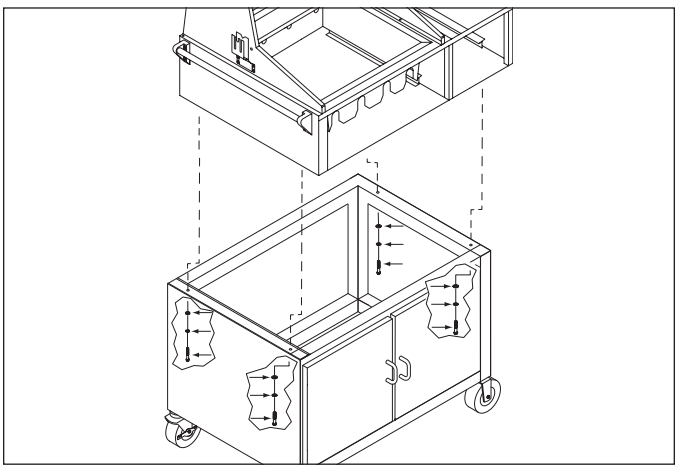


Fig. 4-46

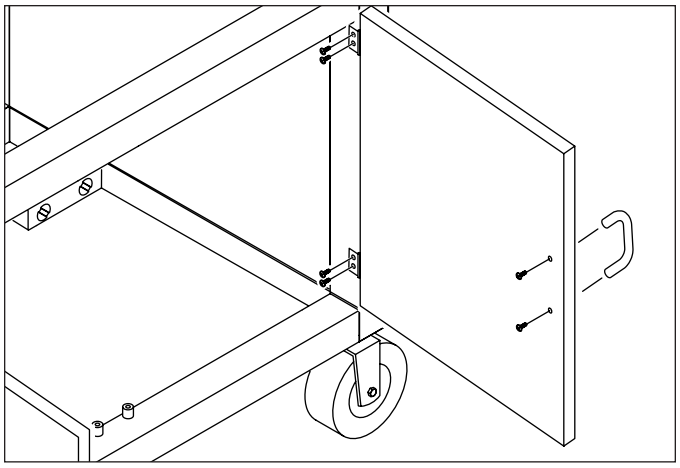


Fig. 4-47

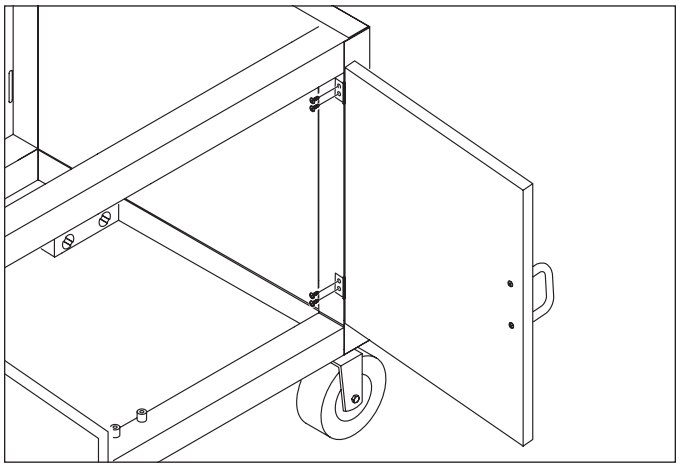


Fig. 4-48

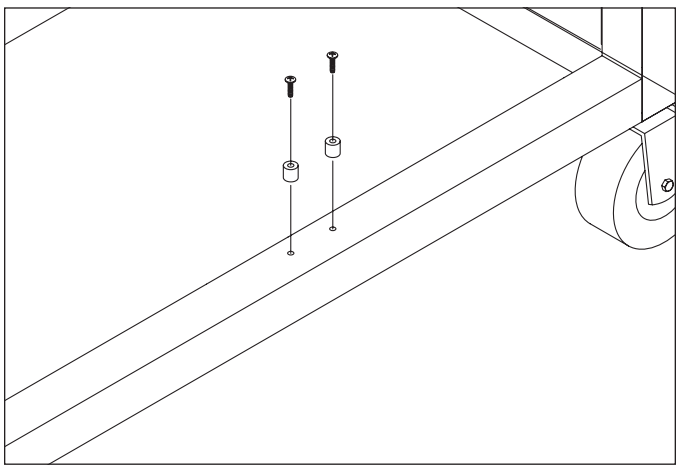


Fig. 4-49

Top Catch Holder

The top catch holder is located behind the cart doors and centered at the top of the cart frame. It is a bracket that houses the magnetic catch for the doors. To remove this you will need to open the doors. Now extract the two screws that mount the top catch holder to the cart frame and remove the top catch holder. See Fig. 4-50

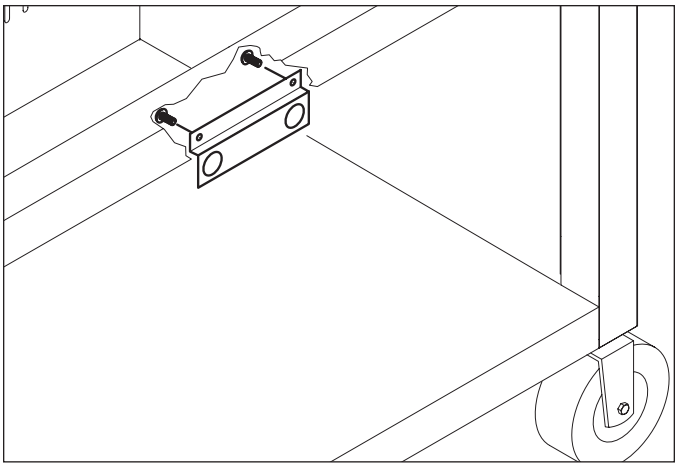


Fig. 4-50

Magnetic Catch

The magnetic catch is a round plastic grommet with locking tabs that contain a magnet. The magnetic catch is installed into the top catch holder. To remove the magnetic catch you need to open the cart door. Reach around the back of top catch holder and push in the two locking tabs on each side of the magnetic catch. Now push the magnetic catch towards the front and out of the top catch holder and remove. See Fig. 4-51

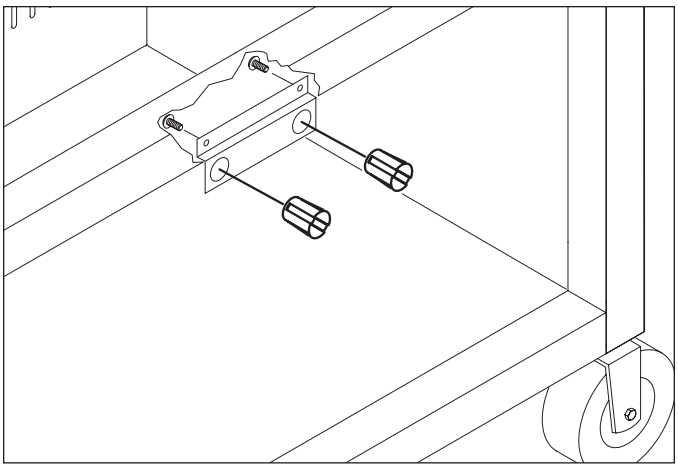


Fig. 4-51

Bottom Panel

To remove the bottom panel inside the cart you will first need to open the cart doors. Now extract the doorstops and extract the screws around the perimeter of the bottom panel. Reach under the cart frame on one side and push up on the bottom panel at an angle. Now you can remove the bottom panel from the inside of the cart by angling the bottom panel as you lift the panel out of the cart.

NOTE: *For the 48" cart you will need to remove the left cart door, the cart shelf and the cart partition before you remove the bottom panel.*

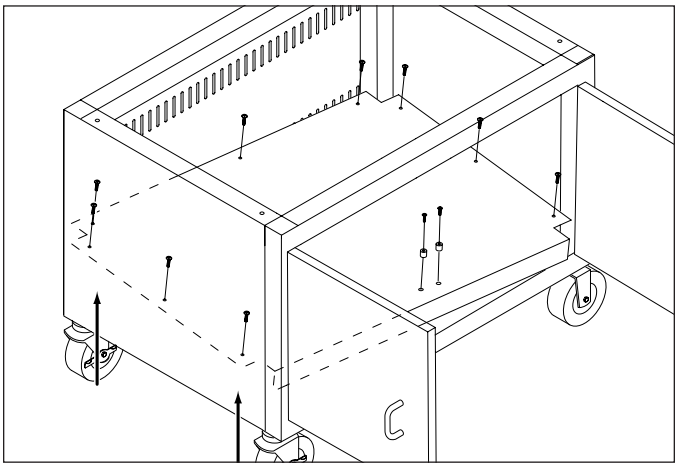


Fig. 4-52

Rear Panel

To remove the rear panel you will need to pull the cart out so you have access to the rear of the unit. Now extract the screw from the rear panel and lift the rear panel off of the cart. See Fig. 4-53

Side Panel

To remove the side panels you will need to remove the rear panel and the control panel. Now extract and remove the mounting bolts from the cart frame that mount the BBQ chassis to the cart both front and back on one side. Now prop the BBQ chassis up from the cart slightly. Using a putty knife, separate the double-sided tape from the bottom of the side panel to the cart frame. Now lift the back flange of the side panel off of the cart frame and slide the side panel towards the front and off of the cart frame. See Fig. 4-54

Top Trim

The top trim is the center strip of stainless steel that runs the entire length of the cart just above the cart doors. To remove the top trim you will need to turn off and disconnect the gas supply. Remove the rear panel, control panel, side panels and the mounting bolts from the frame to the BBQ chassis. Now open the cart doors and slide the BBQ chassis back towards the rear of the cart to expose the whole top trim. Drill out the rivets that secure the top trim to the cart assembly and remove the top trim. See Fig. 4-55

NOTE: *You must rivet the top trim back onto the unit. Using screws will raise the BBQ chassis too high off of the cart frame in the front.*

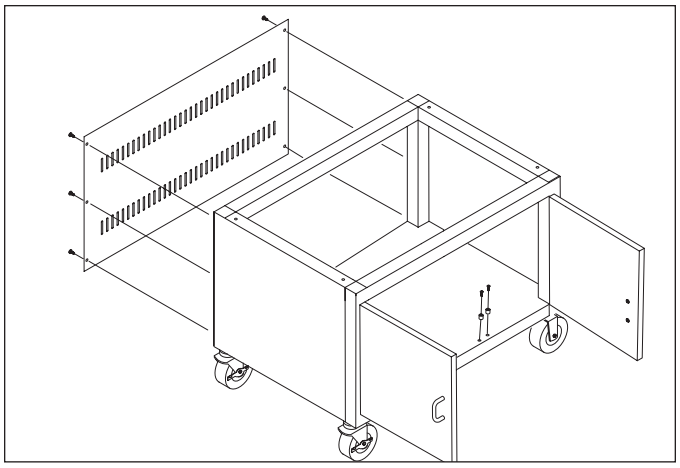


Fig. 4-53

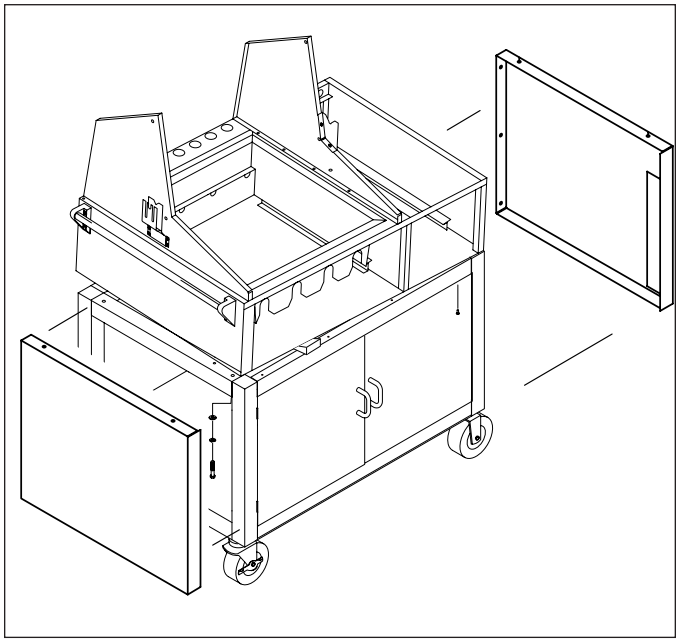


Fig. 4-54

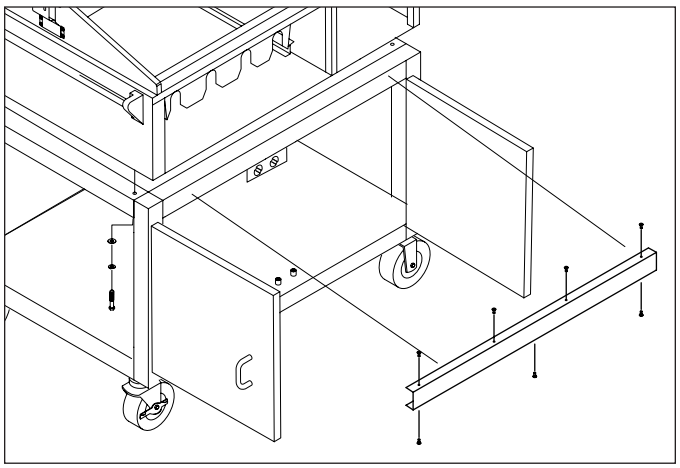


Fig. 4-55

Swivel Caster with Brake

There are two swivel casters mounted on one end of the cart assembly. These casters swivel 360 degrees and allow the cart to be turned in any direction. To remove the swivel casters you will need to prop the unit up on one end so you have access to the swivel caster under the cart. Now unthread the caster mounting bolt from the mounting nut that is welded to the cart assembly and remove the swivel caster.

Caster Locking Bracket

The caster locking bracket locks the non-swivel caster into place and keeps it from turning. To remove the caster locking bracket you will need to prop the unit up on one end so you have access to the locking bracket under the cart. Now extract the two screws that mount the caster locking bracket to the cart assembly and remove it.

Non-swivel Caster

There are two of these casters mounted on one end of the cart assembly. They are stationary and do not swivel. To remove the non-swivel caster you will need to prop the unit up on one end so you have access to the caster locking bracket under the cart. Now extract the two screws that mount the caster locking bracket to the cart assembly and remove. Turn the caster to unthread it from the nut that is welded to the cart assembly and remove the caster.

NOTE: *Newer cart models will have all four swivel casters. They will not have the caster locking bracket.*

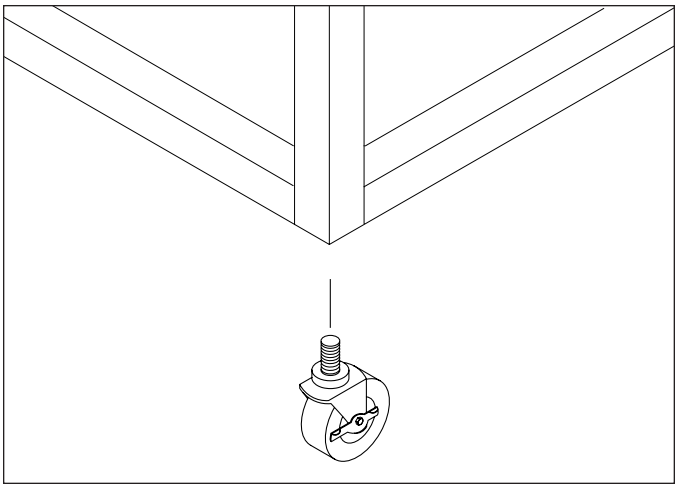


Fig. 4-56

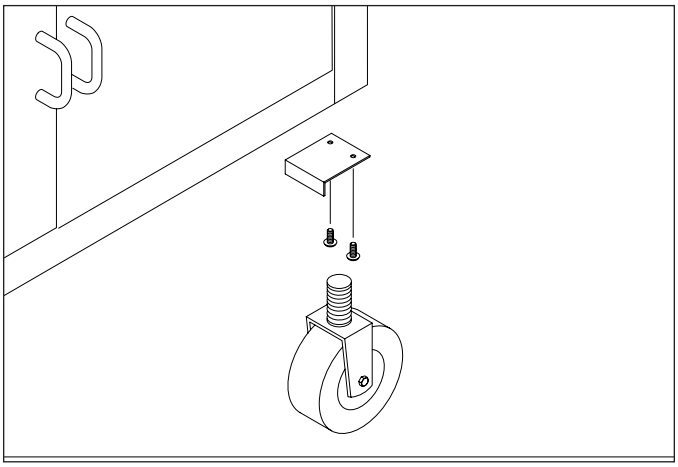


Fig. 4-57

Cart Shelf ***(48"Cart Only)***

To remove the shelf you will need to open the cart doors. Now extract the screws that mount the shelf to the cart partition. Lift the left side of the shelf off of the tabs on the side panel and pull the shelf out of the cart assembly. See Fig. 4-58

Cart Partition ***(48"Cart Only)***

The cart partition separates the side shelf from the enclosed portion of the cart assembly. To remove the cart partition you will need to remove the shelf and the left door assembly. Now extract the screw at the top back and top front of the partition to the cart frame. Extract the screws at the bottom of the cart partition from the bottom panel and cart frame assembly. Now slide the cart partition forward and out of the cart assembly. See Fig. 4-59

Cart Frame Assembly

The cart frame is a square tubular design and is the structural support for the entire cart assembly. To replace the cart frame assembly you will need to remove the BBQ chassis, door assembly, doorstops, top catch holder, bottom panel, rear panel, side panel, top trim, swivel caster w/brake, caster locking bracket and non-swivel caster. See Fig. 4-60

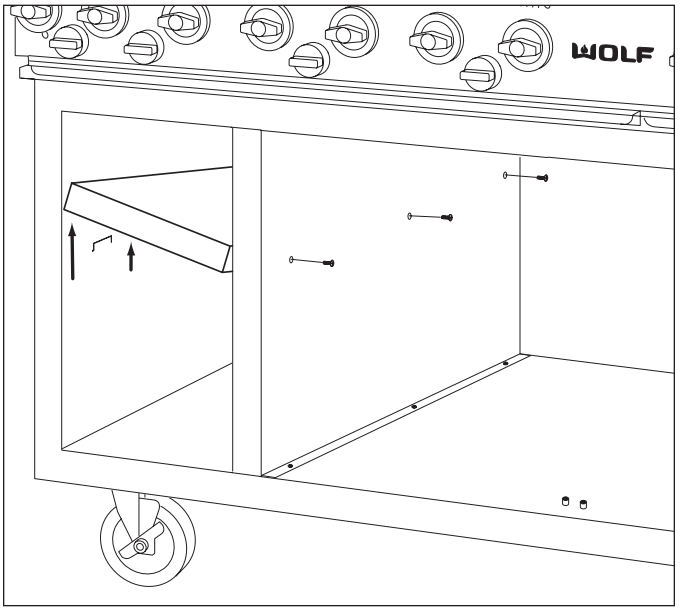


Fig. 4-58

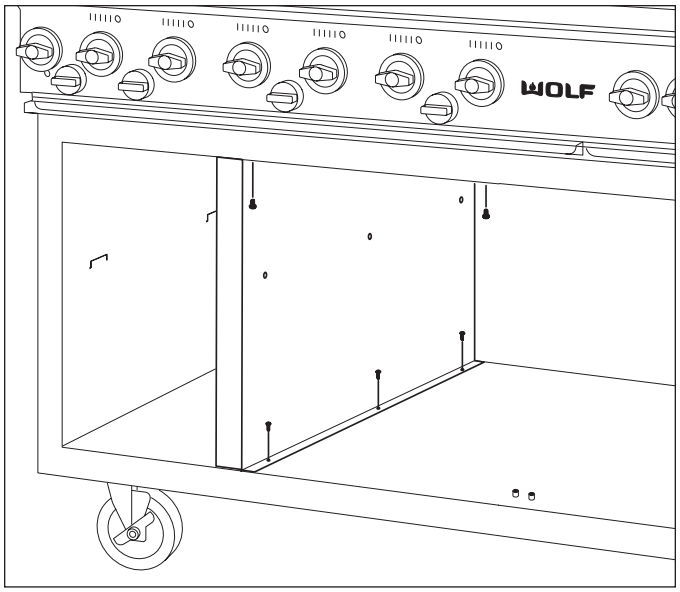


Fig. 4-59

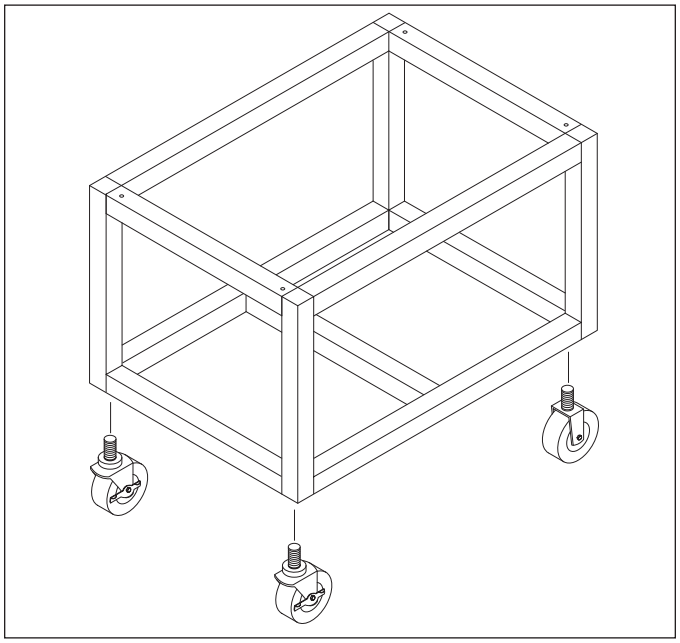


Fig. 4-60

TROUBLESHOOTING GUIDE

This section of the manual contains the General Troubleshooting Guide which will help the Service Technician troubleshoot a Wolf BBQ Grill.

How to Use the Troubleshooting Guide

The troubleshooting guide table of contents shows how the troubleshooting guide is laid out. The troubleshooting guide is organized into component areas with the most common problems listed first.

On the table of contents below, identify the description of the problem that the unit is experiencing. To the left of the problem description is a letter. Locate that letter in the left column of the Troubleshooting Guide. The center column of the troubleshooting guide will identify the possible causes for the problem. The information to the right of the possible causes will explain what tests to perform in order to determine if what you are checking is the cause, and/or what action to take to correct the problem.

Troubleshooting Guide Table of Contents

PROBLEM	POSSIBLE CAUSE	TEST / ACTION
A. NO SPARK	Defective rotary igniter	Replace rotary igniter
	Defective or dirty spark electrode	Replace or clean spark electrode
	Spark electrode wire unplugged from rotary igniter	Reconnect spark electrode, may need to crimp end of electrode for tighter connection
B. NO IGNITION	Burner knobs are in the on position	Knobs need to be off when supply gas is first turned on
	Lack of fuel	Turn gas on or fill LP tank
	Vent hole on regulator is frosted/frozen up	Turn regulator so vent hole is pointing down (See page 3-5, figures 3-5 & 3-6)
	Blockage in venturi, burner ports, orifice or hose	Clean venturi, burner ports, orifice, unkink hose
	Air shutter plugged or needs adjustment	Clean air shutter opening or adjust air mixture
	Improper burner location/venturi not over orifice	Install venturi over orifice
	Regulator failure	Check gas pressure with manometer, replace regulator if defective
C. POOR IGNITION	Dirty/plugged burner ports, orifice, venturi or air shutter	Clean burner ports, orifice, venturi or air shutter
	Improper burner position on support bracket	Engaged burner at the front notch of the support bracket. Rear burner should be engaged at the back notch of the support bracket.
	Burner head not properly installed on burner venturi	Position burner head properly
	Air shutter not properly adjusted	Adjust air shutter
	Pilot tube improper length	Measure length of tube (refer to tech data)
	Incorrect gas orifice	Check orifice stamp number (refer to tech data)
	Gas pressure	Check gas pressure with manometer/replace regulator if defective
D. BURNER NOISE OR WHISTLE	Air shutter out of adjustment	Adjust air shutter
	Incorrect gas orifice	Check orifice stamp number (refer to tech data)
	Gas pressure	Check gas pressure with manometer
E. YELLOW FLAME	Air shutter out of adjustment	Adjust air shutter
	Incorrect gas orifice	Check orifice stamp number (refer to tech data)
	Incorrect gas type	Check gas type with type of BBQ

PROBLEM	POSSIBLE CAUSE	TEST / ACTION
F. INCOMPLETE FLAME	LP regulator hose dropping	Coil hose around Cylinder (See pg. 3-5)
	Clogged, broken or worn out burner	Check, clean and/or replace burner
	Plugged orifice	Clean orifice
	Air shutter out of adjustment	Adjust air shutter
G.. FLAME BLOWS OUT IN WIND	Lack of fuel	Check fuel supply
	Partially plugged orifice or venturi tube	Clean orifice or venturi tube
	Strong wind blew out flame	If cart model, reposition/do not use burners when extremely windy
H. LACK OF HEAT	Partially plugged orifice or venturi	Clean orifice or venturi
	Low fuel	Fill LP tank
	Dirty regulator vent	Clean vent on regulator
I. TOO MUCH HEAT	Damage orifice or no orifice	Check orifice/install orifice
	Unauthorized regulator adjustment	Replace regulator
J. EXCESSIVE FLARE-UP (Grill Burners Only)	Dirty broiler grates	Clean broiler grates
	Overload from fatty meats	Clean grill tank bottom
	Excessive cooking temperatures	Decrease cooking temperature
K. ROTISSERIE MOTOR DOES NOT TURN	Motor not plugged into receptacle	Plug cord in
	On/Off switch in Off position	Turn switch to On position
	No power at receptacle	Check receptacle/breaker
	GFCI receptacle tripped	Reset GFCI receptacle
L. ROTISSERIE MOTOR TURNS BUT NOT ROD	Rotisserie rod not seated into motor	Push rotisserie rod into motor
M. ROTISSERIE MOTOR AND ROD TURN BUT NOT FOOD	Rotisserie forks not pushed into food	Push rotisserie forks into food
	Rotisserie fork thumb screws not tight or missing	Tighten thumb screws/install thumb screws
N. ROTISSERIE MOTOR IS NOISY	Food is too heavy for motor	Food weight is over 25lbs
	Not using counter weight with rotisserie rod	Install counter weight onto rotisserie rod to counter balance food
	Defective motor	Replace motor

PROBLEM	POSSIBLE CAUSE	TEST / ACTION
O. ROTISSERIE HANDLE MELTED	Open top burners used when using rotisserie	Handle needs to be removed when using open top burners
P. HOOD IS DIFFICULT TO RAISE AFTER HEATED	Inner hood liner warping from heat	Replace hood assembly
Q. HOOD INTERIOR DISCOLORS AFTER USE	Discoloration from heat	This is normal. Always test cleaning solutions on a non conspicuous stainless steel spot first.
R. RADIANTS DISCOLOR AFTER USE	Discoloration from heat	This is normal. Always test cleaning solutions on a non conspicuous stainless steel spot first.
S. BURNER TUBES DISCOLOR AFTER USE	Discoloration from heat	This is normal. Always test cleaning solutions on a non conspicuous stainless steel spot first

GAS PRESSURE

Gas Supply Line Pressure	*Natural Gas and Liquid Propane Maximum*	14” WC
	Natural Gas Minimum	7” WC
	Liquid Propane Minimum	11” WC
Natural Gas Manifold Pressure, with Standard Orifice		5” WC
Liquid Propane Manifold Pressure, with Standard Orifice		10” WC

ORIFICE CHART

Natural Gas 5” WC			
Description	**BTU**	**Stamp No.**	**Part No.**
Valve, Burner Side Orifice	16,000	**49*	720510 800805
Valve, Burner Grill Orifice	16,000	**53*	720510 800806
Infrared Burner, Small Orifice	9,000	**55*	715554 800800
Infrared Burner, Large Orifice	9,000	**50*	714555 800048
Pilot Burner w/Orifice			720513

Liquid Propane Gas 10” WC			
Description	**BTU**	**Stamp No.**	**Part No.**
Valve, Burner Side Orifice,	16,000	**56*	720484 800807
Valve, Burner Grill Orifice	16,000	**63*	720484 800808
Infrared Burner, Small Orifice	9,000	**65*	715554 800804
Infrared Burner Large Orifice	9,000	**64*	714555 800803
Pilot Burner w/Orifice			720511

**** Standard Orifice Size Supplied with Unit.***

For Units Installed Over 6,000 Ft. Contact the Factory for High Altitude Conversion Kit.

LP TANK RUNNING TIMES

BBQ Model #	BTU	Running Time (hours)
BBQ36/BBQ36C	69,000	*6-1/2*
BBQ242/BBQ242C	80,000	5-1/2
BBQ48/BBQ48C	89,000	5
BBQ362/BBQ362C	101,000	4-1/2

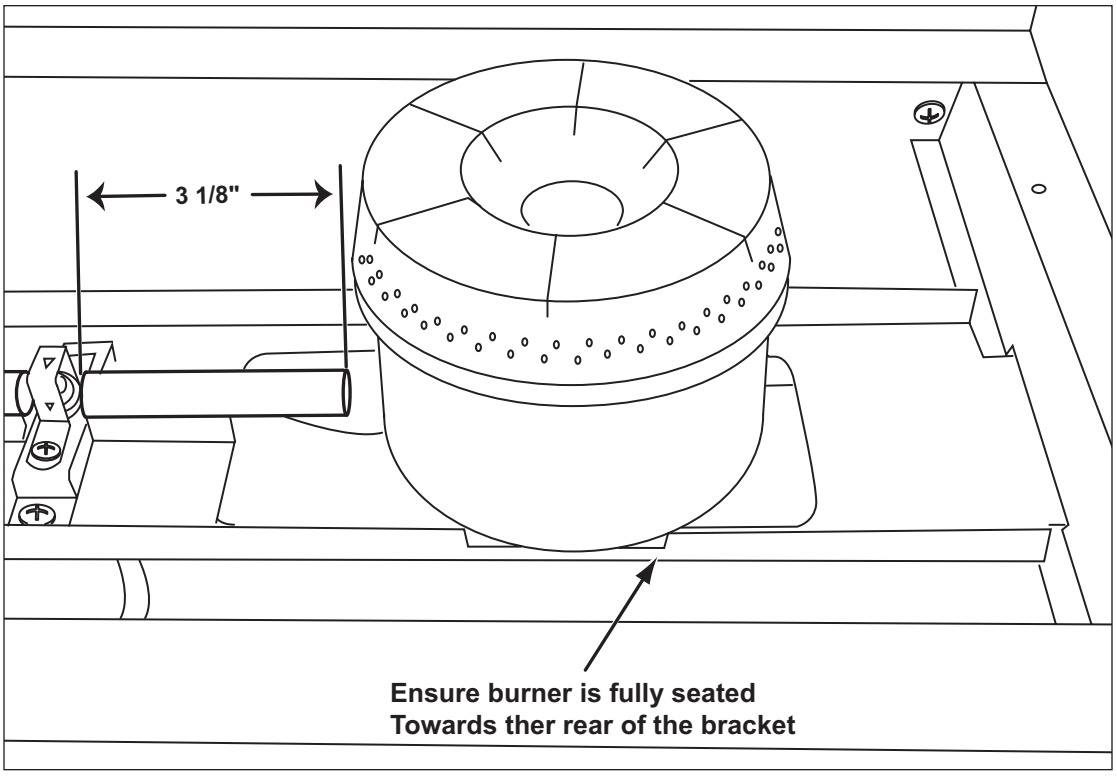


Fig. 6-1 **Proper Charge Tube Length is 3 1/8”**

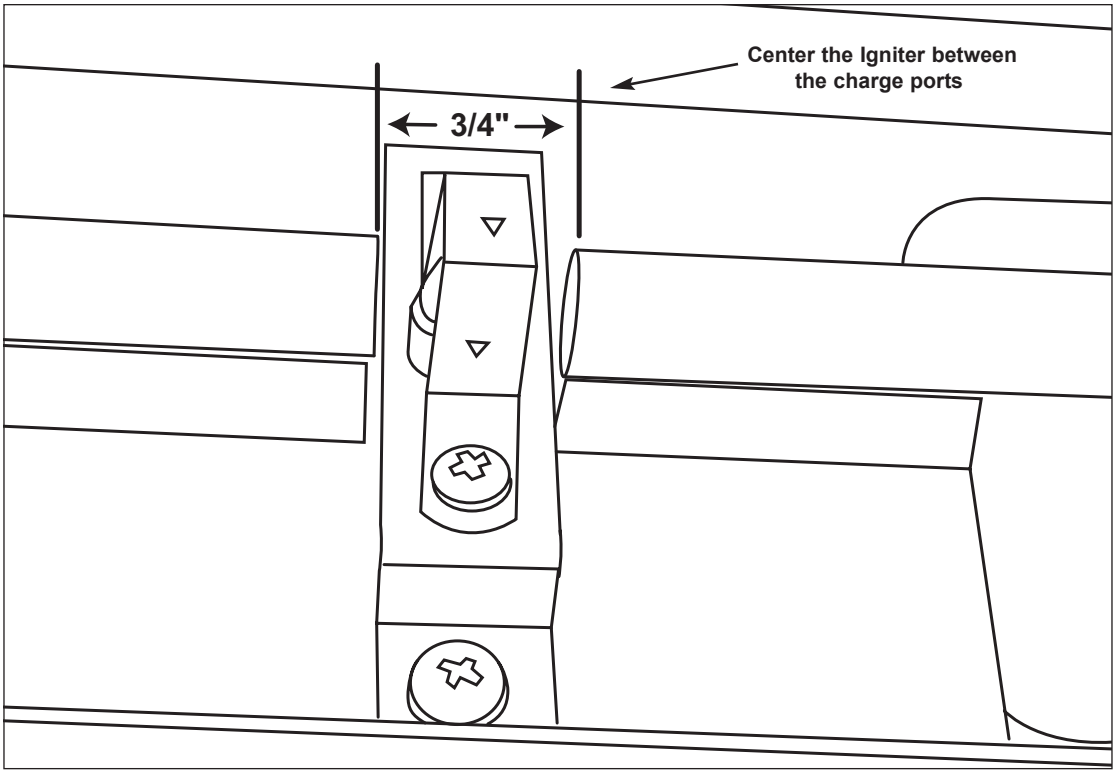


Fig. 6-2 **Igniter Module and Gas Charge Tube Assembly**