



**Natural Gas Conversion  
Instructions for Model GAS2420AS  
Natural Gas Conversion Kit Sold Separately**

**Use Even Embers Natural Gas Conversion Kit**

**PROFESSIONAL INSTALLATION MANUAL**

**NOTICE TO  
PROFESSIONAL INSTALLER:**

LEAVE THESE INSTRUCTIONS WITH THE  
GRILL OWNER FOR FUTURE REFERENCE.


**⚠ WARNING**

HAZARDOUS EXPLOSION MAY RESULT IF THESE  
WARNINGS AND INSTRUCTIONS ARE IGNORED. READ  
AND FOLLOW ALL WARNINGS AND INSTRUCTIONS IN  
THIS MANUAL TO AVOID PERSONAL INJURY, INCLUDING  
DEATH OR PROPERTY DAMAGE.

**ASSEMBLY AND OPERATING INSTRUCTIONS**

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

# **IMPORTANT SAFETY WARNINGS**

WE WANT YOU TO USE YOUR CONVERSION KIT FOR YOUR GRILL AS SAFELY AS POSSIBLE. THE PURPOSE OF THIS SAFETY ALERT SYMBOL  IS TO ATTRACT THE ATTENTION TO POSSIBLE HAZARDS AS THE GRILL IS CONVERTED AND USED AS A NATURAL GAS GRILL.

WHEN YOU SEE THE SAFETY ALERT SYMBOL  PAY CLOSE ATTENTION TO THE INFORMATION WHICH FOLLOWS!

 **READ ALL SAFETY WARNINGS AND INSTRUCTIONS CAREFULLY BEFORE CONVERTING AND OPERATING YOUR GRILL.**

## **DANGER**

### **IF YOU SMELL GAS:**

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

## **WARNING**

1. Do not store or use gasoline or other flammable liquids or vapors in the vicinity of this or any other appliance.
2. An LP cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.

**Failure to follow the instructions as written, or installation by other than a trained professional, will void all manufacturer warranties.**

Installer Company or Service Name: \_\_\_\_\_

Technician Name: \_\_\_\_\_ Installation Date: \_\_\_\_\_

## **WARNING**

This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.




**IMPORTANT: FILL OUT PRODUCT RECORD INFORMATION BELOW.**

Model Number: \_\_\_\_\_


Serial Number: \_\_\_\_\_ Date Purchased: \_\_\_\_\_

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-  **DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
-  **WARNING:** Be alert to the possibility of serious bodily injury if the instructions are not followed. Be sure to read and carefully follow all of the messages.
-  **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

## CALIFORNIA PROPOSITION 65 WARNING

 **WARNING:** This product can expose you to chemicals, including carbon monoxide, which are known to the State of California to cause birth defects or other reproductive harm.

*For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)*

 **WARNING: CONTAINS LEAD. MAY BE HARMFUL IF EATEN OR CHEWED. COMPLIES WITH FEDERAL STANDARDS. KEEP OUT OF REACH OF CHILDREN.**

## WARNING

- **FOR OUTDOOR USE ONLY. DO NOT** operate indoors or in an enclosed area such as a garage, shed or breezeway.
- **Use your grill OUTDOORS** in a well ventilated space away from dwellings or other buildings to prevent dangers associated with gas accumulation and toxic vapors. We recommend your grill be situated at least 10 feet (3.1 m) from buildings.
- **Maintain a minimum clearance of 36 inches (91 cm) between all sides of grill and walls or other combustible material. DO NOT** use grill under overhead unprotected combustible construction.
- **DO NOT** use or install this grill in or on a recreational vehicle and/or boat.

## INSTALLATION INFORMATION:

The installation of this appliance must be in accordance with:

All applicable local codes, or in the absence of local codes, either:

- National Fuel Gas Code ANSI Z223.1 NFPA 54
- Natural Gas and Propane Installation Code: CAN/CGA B149.1
- Natural Gas Installation Code: CAN/CGA B149.1 (Canada)


This kit converts your grill for natural gas use at 7 inch water column supply pressure. To check your pressure contact your local natural gas company. If the supply pressure is different than 7 inch, contact a professional service technician for assistance. **Not for use with LP gas.**

## **DANGER**

Connection should be made by a professional service technician. Supply the technician with a copy of these instructions. Incorrect connection can result in a gas leak with possibility of fire.

# **GENERAL WARNINGS**

## **WARNING**

- Never use liquid propane gas in a unit designed for natural gas.
  - Never use charcoal or wood briquette in a gas grill. Flavoring chips must be contained in a metal smoking box to contain ash and prevent fires.
  - Leak test all connections before first use, even if grill was purchased fully assembled.
  - Never check for leaks using a match or open flame.
-  **CAUTION:** Strong odors, colds, sinus congestion, etc. may prevent the detection of natural gas. Use caution and common sense when testing for leaks.
- Always keep your gas grill free and clear of gasoline, lighter fluid, paint thinner, or other flammable vapors and liquids or combustible materials.
  - Always check the grill prior to each use as indicated in the “Pre-Start Check List” section of this manual.
  - Only use the specific orifice designated for your grill model. Always double check the millimeter size on the side of the orifice tip prior to installation. Use of any other orifice could lead to personal injury, property damage and void your grill warranty.
  - DO NOT obstruct the flow of combustion or ventilation air.
  - Keep children and pets away from hot grill. DO NOT allow children to use or play near this grill.
  - DO NOT leave the grill unattended while in use.
  - DO NOT allow the gas hose to come in contact with hot surfaces.
  - DO NOT allow grease from drain hole to fall on hose.
  - Keep any electrical supply cords away from water or heated surfaces.
  - Keep a fire extinguisher on hand acceptable for use with gas products. Refer to your local authority to determine proper size and type.
  - For household use only. DO NOT use this grill for anything other than its intended purpose.
  - DO NOT use while under the influence of drugs or alcohol.
  - Grill is hot when in use. To avoid burns:
    - DO NOT attempt to move the grill.
    - Lock the wheels so the unit does not accidentally move.
    - Wear protective gloves or oven mitts.
    - DO NOT touch any hot grill surfaces.
  - The outdoor cooking gas appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressure in excess of 0.5 psi (3.5kPa)
  - The outdoor cooking gas appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa)

 **USE CAUTION AND COMMON SENSE WHEN OPERATING YOUR GAS GRILL.**

**FAILURE TO ADHERE TO THE SAFETY WARNINGS AND GUIDELINES IN THIS MANUAL  
COULD RESULT IN SEVERE BODILY INJURY OR PROPERTY DAMAGE.**

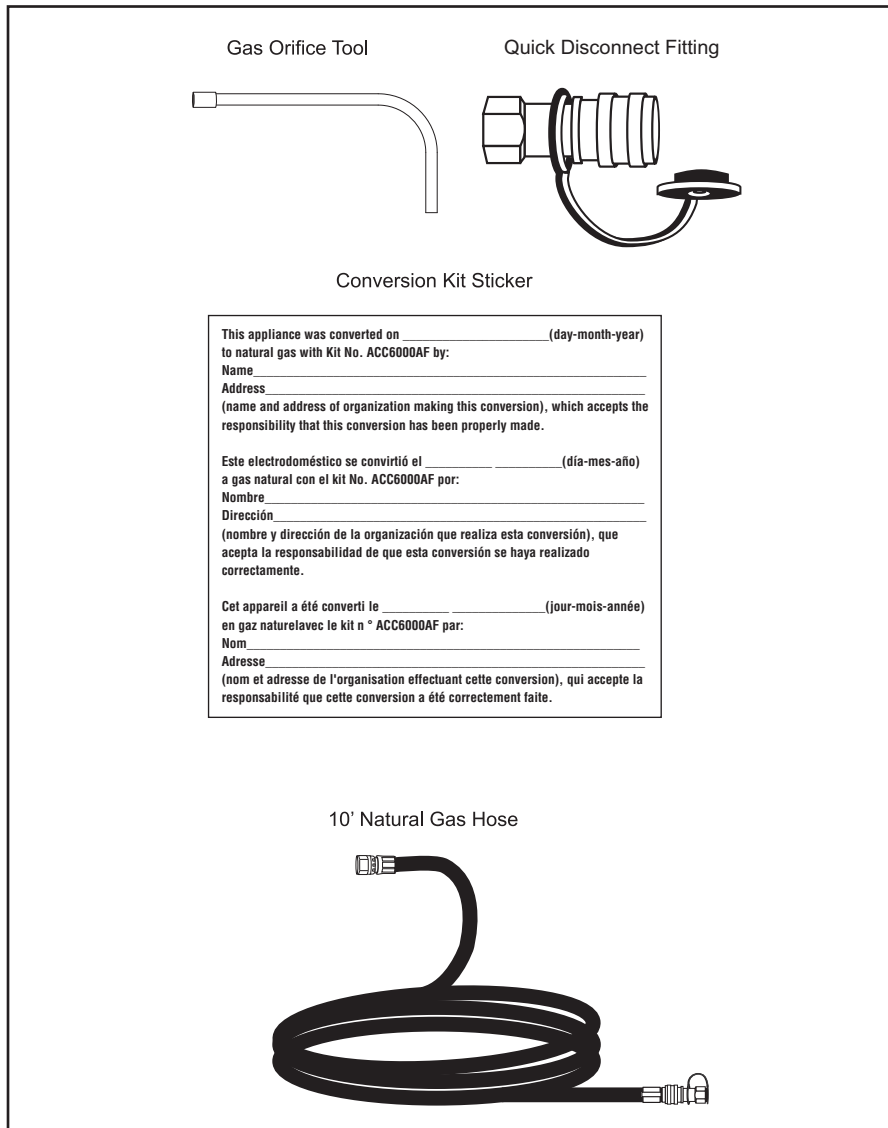
# ASSEMBLY INSTRUCTIONS

YOU MUST BE A PROFESSIONAL SERVICE TECHNICIAN TO CONVERT THIS GRILL.  
 READ ALL SAFETY WARNINGS & ASSEMBLY INSTRUCTIONS CAREFULLY  
 BEFORE ASSEMBLING OR OPERATING THE CONVERTED GRILL.

The following tools are required to assemble the Conversion Kit:

- Phillips and Flathead Screwdrivers
- Adjustable Wrench
- 3/4 Wrench

## PARTS CONTENTS



Inspect contents of the box to ensure all parts are included and undamaged.

Orifice size	Main Burner		Side Burner	
	LP	NG	LP	NG
Orifice size	Φ0.99	Φ1.38	Φ1.02	Φ1.48
Input rating	4 X 10,500 BTU		12,000 BTU	

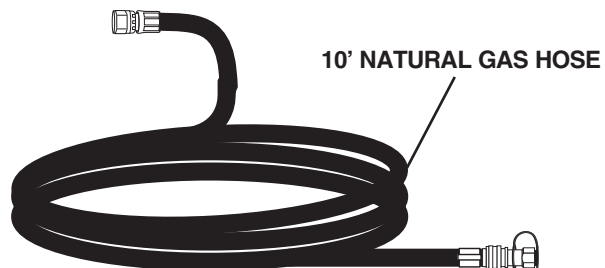
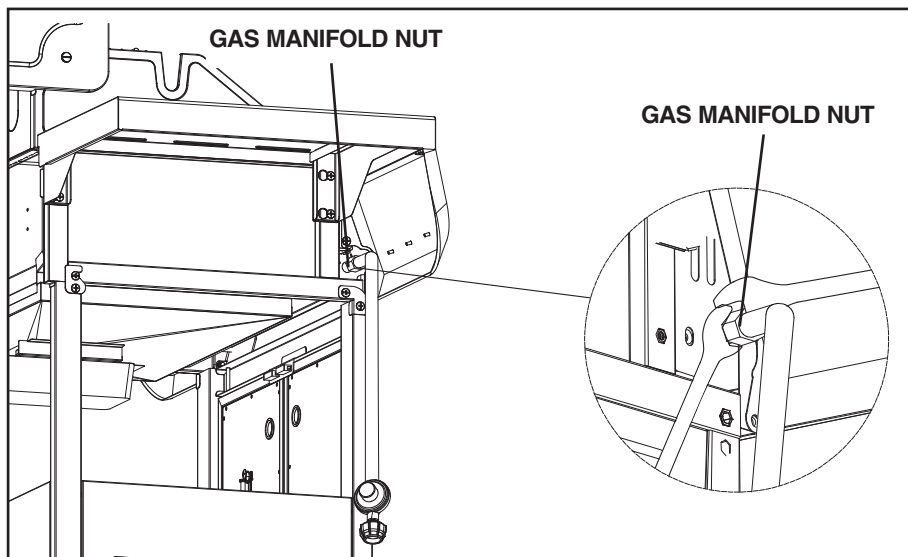
# CONVERSION INSTRUCTIONS GAS2420AS

**⚠ CAUTION:** Some parts may contain sharp edges. Wear protective gloves if necessary.

Note: Make sure all control knobs are in the OFF position, LP tank valve is closed and tank is disconnected from regulator and removed from grill.

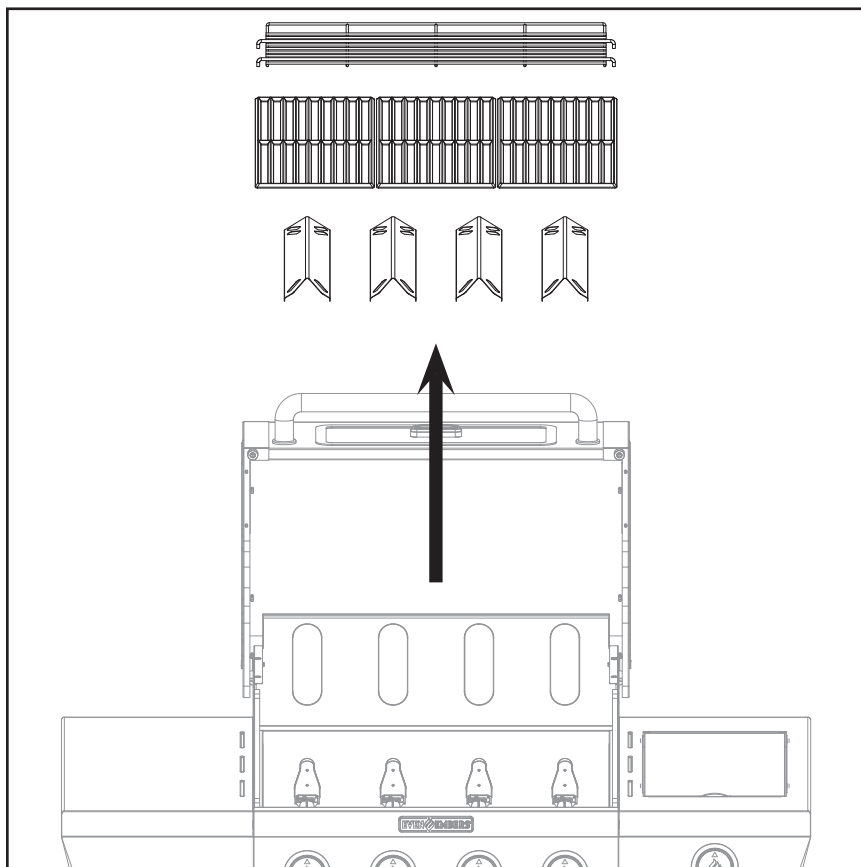
## Step 1

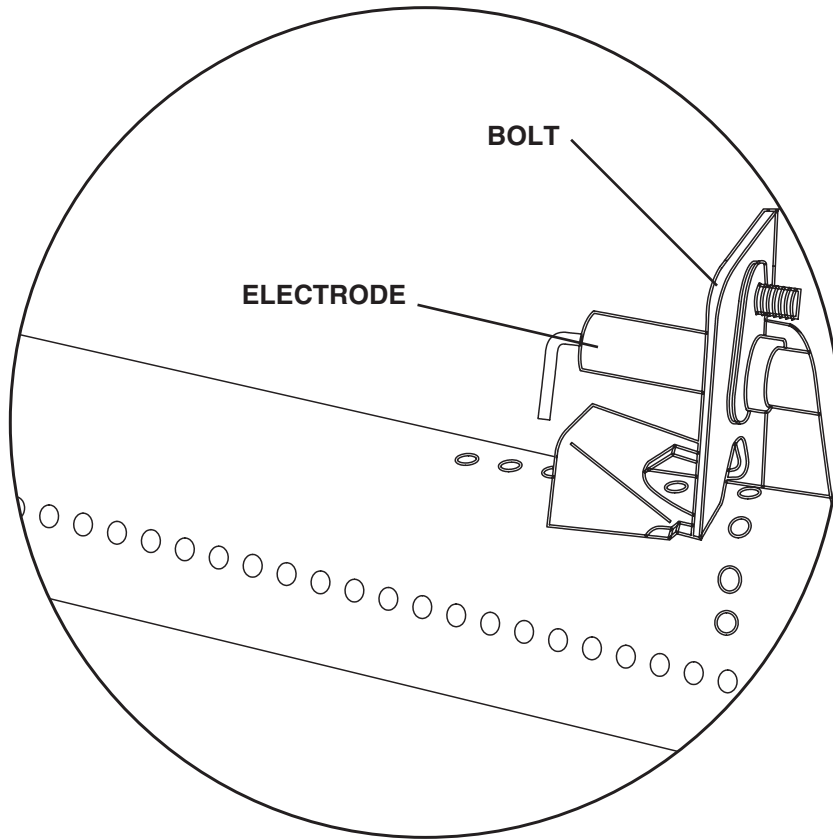
Using an adjustable wrench to hold the gas manifold connection secure, use a 3/4" wrench to loosen the hose connection nut. Replace existing LP hose/regulator assembly with natural gas 10' hose assembly. Tighten the connection carefully using two wrenches.



## Step 2

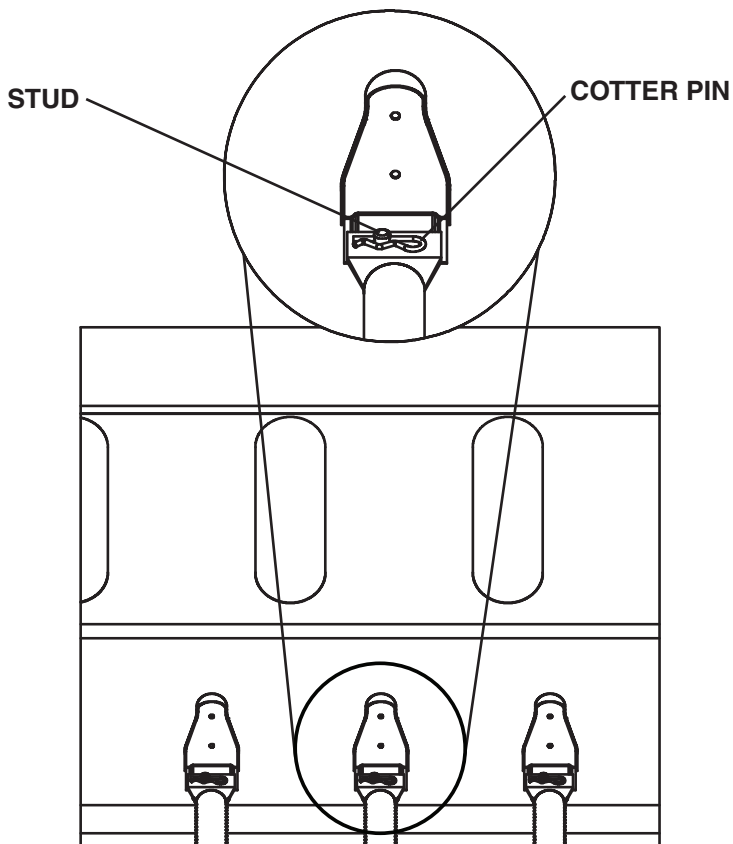
Open hood and remove warming rack, cooking grates and heat tents. Set aside for later use.





### Step 3

Remove electrodes from each burner by unscrewing the bolt. Set aside for later use.



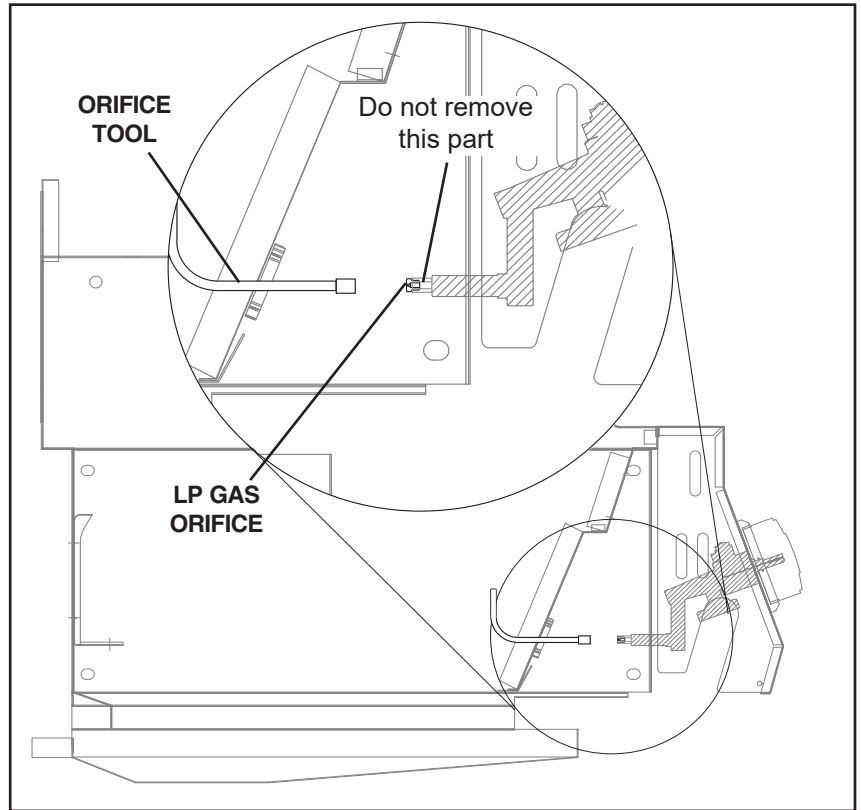
### Step 4

Remove cotter pins and studs from each burner "foot". Carefully lift each burner up and away from valve openings. Set aside for later use.

### Step 5

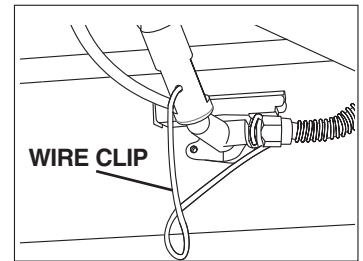
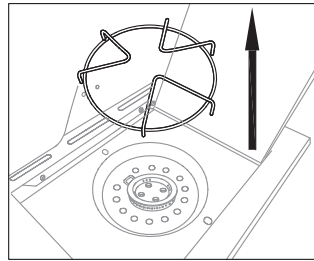
Use the orifice tool to remove the LP gas valve orifice from each main burner valve through the hole in the firebox front panel.

Note: All orifices of the grill are double orifices (LP gas and natural gas). You only remove the LP gas orifice tip.



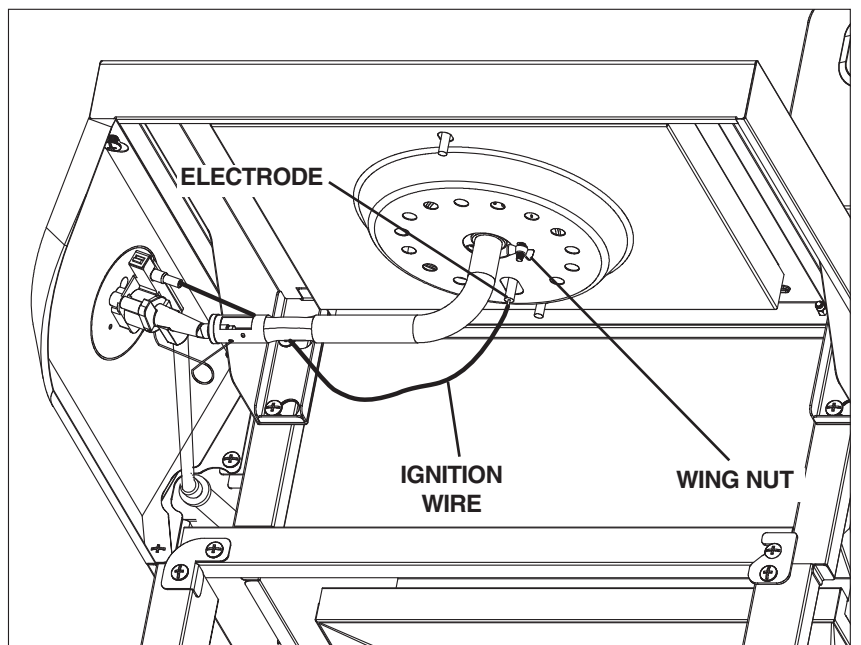
### Step 6

Remove the side burner grate and wire clip from the side burner tube.

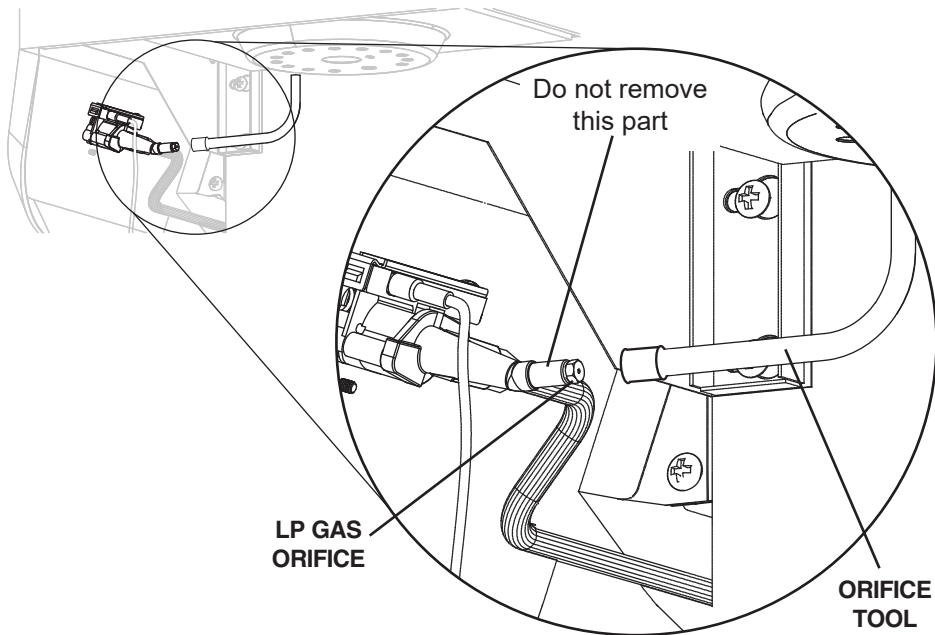


### Step 7

Remove wing nut from side burner. Remove ignition wire from electrode. Carefully lift up and away side burner from valve nozzle. Set aside for later use.

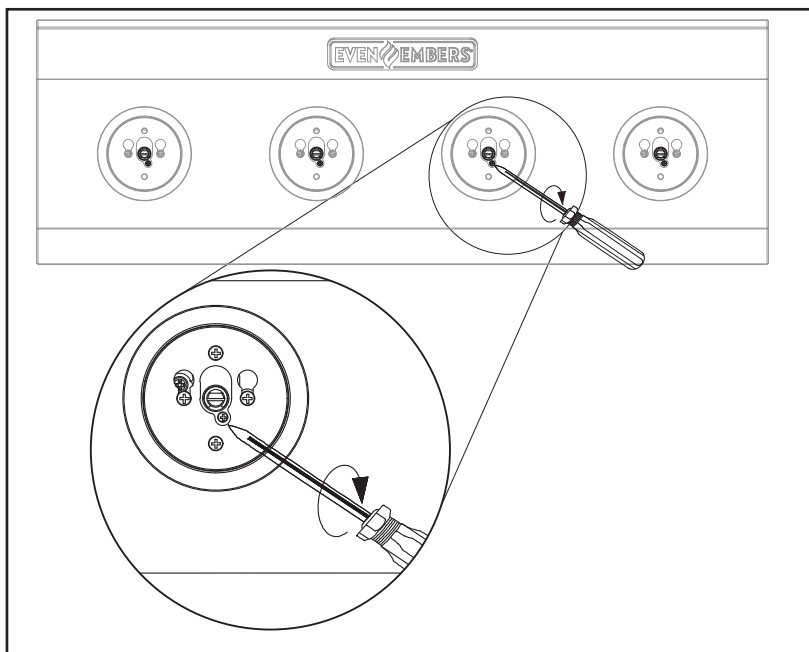






### Step 8

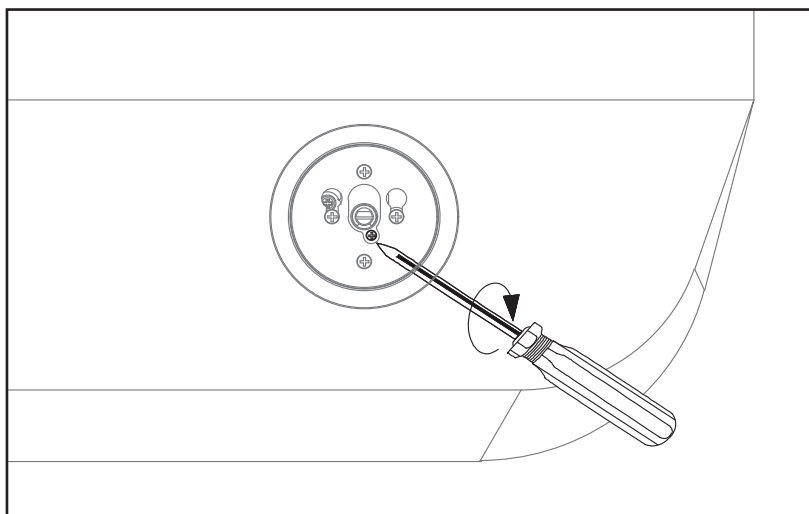
Use the gas orifice tool to remove the LP orifice from side burner valve.



### Step 9

Make sure all control knobs are OFF, then remove all the control knobs. Tighten screw on each control valve.

Note: This screw regulates the low flame setting for natural gas. After replacing knobs you will notice the knobs will stop at the "MED" setting on the dial. This is the correct low setting for natural gas. Do not try to turn the knob to "LO" setting.



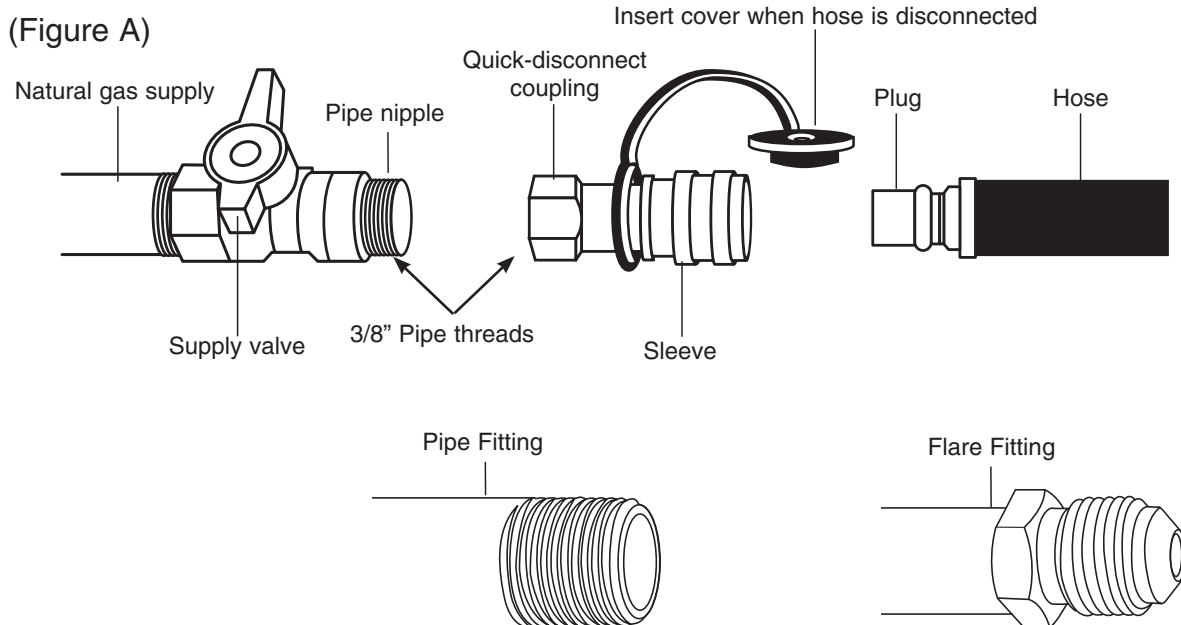
### Step 10

Carefully replace all burners, making sure burner openings slide over valve nozzles. Attach each main burner using studs and cotter pins that were set aside in previous step. Attach side burner using wing nut and reattach wire clip to side burner that were set aside in previous step. Reattach any electrodes that were detached in previous steps. Reattach all control knobs.

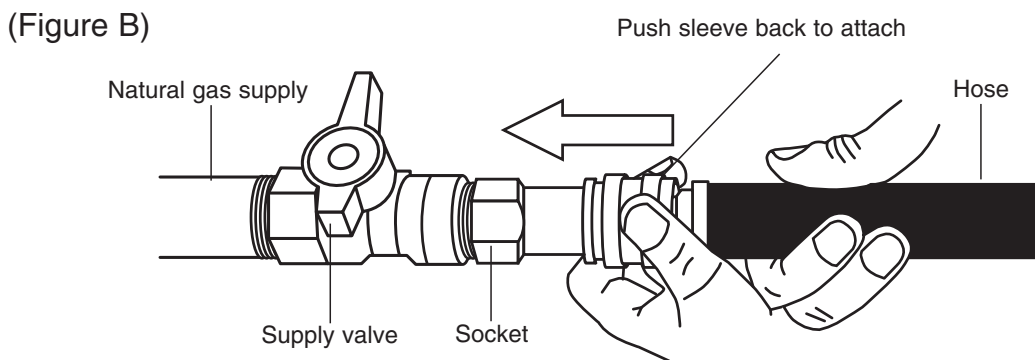
Replace heat tents, cooking grates and warming rack and side burner grate.

## CONNECTING YOUR GRILL TO THE NATURAL GAS SOURCE

1. Coat pipe nipple with gas resistant teflon tape or pipe dope. Tighten quick-disconnect coupling onto pipe nipple that leads to natural gas supply (Figure A).
2. After grill is completely assembled, make sure natural gas supply valve is "OFF" and then connect natural gas hose to socket. Push sleeve back on socket (Figure B) and insert plug until sleeve snaps forward, locking plug into socket. Be sure to leak test these connections prior to use.



When attaching the quick disconnect to your natural gas supply line, use a pipe fitting, DO NOT use a flare fitting.



## DISCONNECTING YOUR GRILL FROM THE NATURAL GAS SOURCE

1. Turn natural gas supply valve "OFF"
2. To disconnect, push sleeve back and pull plug out of sleeve.

## **⚠ WARNING**

- Never use your grill without leak testing all gas connections and hoses. See the section on “Leak Testing” in this manual for proper procedures.
- Visually inspect the hose assembly prior to each use for evidence of damage, excess wear or deterioration. If found, replace the assembly before using your grill. Only the manufacturer’s supplied replacement should be used.
- During assembly or conversion to natural gas, keep the supply hoses free of kinks and/or damage.

## **⚠ WARNING**

### **AVOID HARD METAL PIPING**

- **DO NOT** use hard metal piping of any kind to connect this converted natural gas grill. Use only natural gas hose specified by the manufacturer. Using hard metal piping or convoluted metal tubing is an unsafe practice. Movement of the grill can cause breakage of metal pipe.

## **⚠ DANGER**

### **LEAK TESTING:**

To prevent fire or explosion hazard:

- **DO NOT** smoke or permit ignition sources in the area while conducting a leak test.
- Perform test **OUTDOORS** only in a well ventilated area.
- Never perform a leak test with a match or open flame.
- Never perform a leak test while the grill is in use or while grill is still hot.

## **⚠ WARNING**

### **WHEN TO PERFORM A LEAK TEST:**

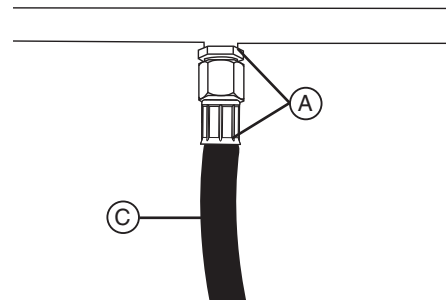
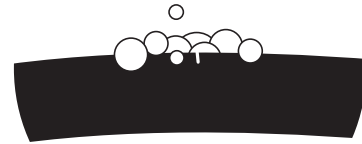
- After assembling or converting your natural gas grill and before lighting for the first time, even if purchased fully assembled.
- Any time the gas components are replaced.
- Any time your grill has been moved.
- At least once per year or if your grill has not been used for more than 60 days.

## CHECKING FOR LEAKS:

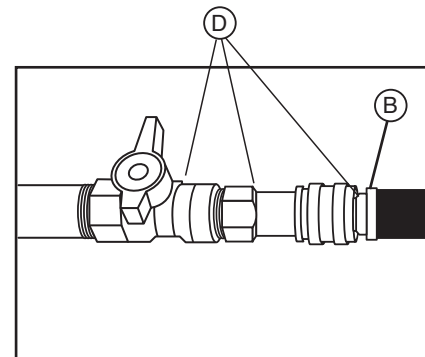
1. Create a mixture of 50% water and 50% liquid dishwashing soap.
2. Open the lid.
3. Ensure all control knobs are set to the “OFF” position.
4. Ensure gas hose is tightly connected to gas source.
5. Turn on the fuel supply at the source.
6. Apply the soap water mixture to the following:

- (A) Hose connection to gas manifold.
- (B) Brass connections and quick disconnect assembly.
- (C) The full length of gas supply hose.
- (D) Quick disconnect coupler.

Watch For Bubbles



7. Check each place listed (A–D) for growing bubbles which indicates a leak.
8. Turn off gas supply at source.
9. Turn on control knobs to release gas pressure in hose.
10. Turn control knobs to “OFF” position.
11. Tighten any leaking connections.
12. Repeat soapy water test until no leaks are detected.
13. Turn off gas supply at source until you are ready to use your grill.
14. Wash off soapy residue with cold water and towel dry.
15. Wait 5 minutes to allow all gas to evacuate the area before lighting grill.



**⚠ CAUTION: DO NOT** use the grill if leaks cannot be stopped.

Note: The leak test must be performed in an area that has adequate lighting in order to see if bubbles are developing.

## **⚠ WARNING**

Property damage, bodily harm, severe burns, and death could result from failure to follow these safety steps. These steps should be performed after the grill has been assembled and prior to each use. **DO NOT** operate this grill until you have read and understand **ALL** of the warnings and instructions in this manual.

### **PRE-START CHECK LIST:**

- Ensure that the grill is properly assembled.
- Inspect the gas supply hose for burns, chaffing, kinks, and proper routing before each use. If it is evident there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to the grill being used.
- Leak check all gas connections and hose. See section on “Leak Testing”
- Ensure that all electrical supply cords are properly grounded. Keep any electrical supply cord and the fuel supply hose away from any heated surfaces. Hose should be at least 3 inches from hot surfaces.
- Position your grill on level ground in a well ventilated location, a safe distance from combustible materials, buildings and overhangs.
- Properly place the empty grease tray under the grease drain hole in the bottom of the grill to catch grease during use.
- **DO NOT** obstruct the flow of combustion and ventilation air.

## **⚠ WARNING**

**Read, understand and follow all warnings and instructions contained in this manual. DO NOT skip any of the warnings and instructions contained in the preceding sections of this manual.**

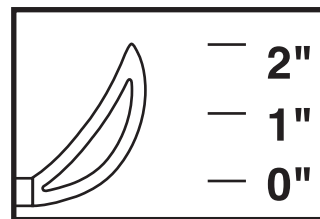
## **⚠ WARNING**

### **LIGHTING INSTRUCTIONS:**

Follow the instructions in your grill owners manual or on the control panel of the grill.

1. **OPEN THE GRILL LID** before attempting to light a burner so that fumes do not accumulate inside the grill. An explosion could occur if grill lid is down.
2. Check that all burner control knobs are turned to the “OFF” position.
3. **DO NOT** stand with head, body, or arms over the grill when lighting.

Note: Observe flame height of main burner when lit:  
Flame should be a Blue/Yellow color between  
1”–2” when burner is on “HIGH”.

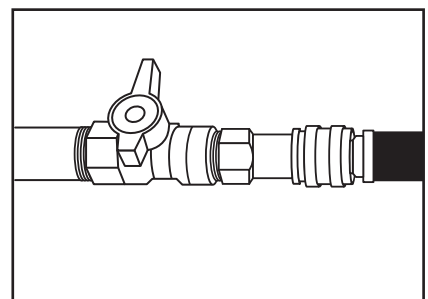


### **TURNING OFF THE GRILL:**

1. Turn off the gas at the source.
2. Turn all burner control knobs to the “OFF” position.

### **⚠ CAUTION:**

- The natural gas source should always be in the off, or closed position when the grill is not in use.
- Refer to your grill owner’s manual for grill operating instructions.
- Apply conversion kit sticker to an area near the rating label to show the grill has been converted for use with natural gas.



# WARRANTY

Fair Game Group warrants to the original purchaser that the Natural Gas Conversion Kit is free from defects due to workmanship or materials for 1 Year when installed by a professional service technician.

Fair Game's obligations under this warranty are limited to the following guidelines:

- This warranty does not cover conversion kits that have been altered/modified or damaged due to: normal wear, rust, abuse, improper maintenance and/or improper use.
- This warranty does not cover surface scratches, rust or heat damage to the finish, which is considered normal wear.
- Fair Game may elect to repair or replace damaged units covered by the terms of this warranty.
- This warranty extends to the original purchaser only and is not transferable or assignable to subsequent purchasers.

Fair Game requires reasonable proof of purchase. Therefore, we strongly recommend that you retain your sales receipt or invoice. To obtain replacement parts for your Natural Gas Conversion Kit under the terms of this warranty, please call Customer Service Department at 1-866-212-3150 **A receipt will be required. Fair Game will not be responsible for any conversion kits forwarded to us without prior authorization.**

EXCEPT AS ABOVE STATED, FAIR GAME MAKES NO OTHER EXPRESS WARRANTY.

THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THOSE LISTED ABOVE FROM THE DATE OF PURCHASE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

ANY LIABILITY FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE FAILURE OF THE NATURAL GAS CONVERSION KIT TO COMPLY WITH THIS WARRANTY OR ANY IMPLIED WARRANTY IS EXCLUDED. CUSTOMER ACKNOWLEDGES THAT THE PURCHASE PRICE CHARGED IS BASED UPON THE LIMITATIONS CONTAINED IN THE WARRANTY SET OUT ABOVE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.