



# ***INSTALLATION & OPERATION MANUAL MEDIUM DUTY GAS GRIDDLES***

## **MODELS**



**VCRG48-M**

VCRG24-M  
VCRG36-M  
VCRG48-M

WCRG24-M  
WCRG36-M  
WCRG48-M

For additional information on Vulcan or to locate an authorized parts and service provider in your area, visit our website at [www.vulcanequipment.com](http://www.vulcanequipment.com)

## **IMPORTANT FOR YOUR SAFETY**

THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.

POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

### **IMPORTANT**

**IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.**

### **FOR YOUR SAFETY**

**DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**



**WARNING** Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury, or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

**IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.**

# INSTALLATION, OPERATION AND CARE OF MEDIUM DUTY GAS GRIDDLES

## GENERAL

Medium Duty Gas Griddles are produced with quality workmanship and materials. Proper installation, usage and maintenance of your griddle will result in many years of satisfactory performance.

Thoroughly read this entire manual and carefully follow all of the instructions provided.

Model	Number Of Burners	BTU/hr Input Rating
VCRG24-M / WCRG24-M	2	50,000
VCRG36-M / WCRG36-M	3	75,000
VCRG48-M / WCRG48-M	4	100,000

## INSTALLATION

### UNPACKING

This griddle was inspected before leaving the factory. The carrier assumes full responsibility for the safe delivery upon acceptance of the shipment. Check for possible shipping damage immediately after receipt.

If the griddle is found to be damaged, complete the following steps:

1. Carrier must be notified within 5 business days of receipt.
2. Carrier's local terminal must be notified immediately upon discovery (note time, date, and who was spoken to), and follow up and confirm with written or electronic communication.
3. All original packing materials must be kept for inspection purposes.
4. The griddle cannot have been moved, installed, or modified.
5. Notify Vulcan Customer Service immediately at 800-814-2028.

Carefully unpack your griddle and make sure that no parts are discarded with packaging material. A pressure regulator designed to operate with the griddle has been supplied and must be installed before the griddle is placed into service (Refer to GAS PRESSURE REGULATOR INSTALLATION in this manual).

### LOCATION

The installation location must be kept free and clear of combustibles. When installing, never enclose the bottom of the griddle with a raised curb or other constructions that would obstruct flow of air into or out of the griddle. Adequate clearance for air openings into the combustion chamber must be provided. Make sure there is an adequate supply of air in the room to replace air taken out by the ventilation system.

Do not permit air to blow directly at the griddle. Avoid open windows next to the griddle wherever possible. Avoid wall-type fans which create air cross-currents within the room.

This griddle is Design Certified for installation on a non-combustible counter with 4" legs, or combustible floor with 24" high stand.

## INSTALLATION CLEARANCES

### COMBUSTIBLE CONSTRUCTION    NON-COMBUSTIBLE CONSTRUCTION

Back:	6"	0"
Sides:	6"	0"

## INSTALLATION CODES AND STANDARDS

The griddle must be installed in accordance with:

In the United States of America:

1. State and local codes.
2. National Fuel Gas Code, ANSI-Z223.1/NFPA #54 (latest edition). This shall include but not be limited to: NFPA #54 Section 10.3.5.2 for Venting. Copies may be obtained from The American Gas Association Accredited Standards Committee Z223, @ 400 N. Capital St. NW, Washington, DC 20001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park Quincy, MA 02169-7471

NOTE: In the Commonwealth of Massachusetts

All gas appliances vented through a ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.

3. NFPA Standard # 96 *Vapor Removal from Cooking Equipment*, latest edition, available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada:

1. Local codes.
2. CAN/CSA-B149.1 Natural Gas Installation (latest edition)
3. CAN/CSA-B149.2 Propane Installation Code (latest edition), available from the Canadian Gas Association, 178 Rexdale Blvd., Etobicoke, Ontario, Canada M9W 1R3

## GRIDDLES MOUNTED ON STANDS WITH CASTERS

Griddles mounted on stands with casters must use a flexible connector (not supplied) that complies with the Standard for Connectors for Movable Gas Appliances ANSI Z21.69•CSA6.16, and a quick-disconnect device that complies with Gas Fuel, ANSI Z21.3•CSA6.9. In addition, adequate means must be provided to limit movement of the appliance without depending on the connector and the quick-disconnect device (or its associated piping) to limit appliance movement. Attach the restraining device at the rear of the griddle as shown in Fig. 1.

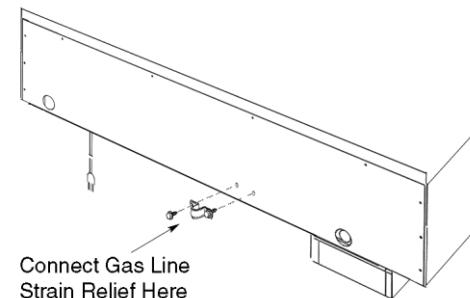


Fig. 1

If disconnection of the restraint is necessary, turn off the gas supply before disconnecting. Reconnect the restraint prior to turning the gas supply on and returning the griddle to its installation position.

Casters are only supplied on a griddle stand. If the griddle is moved for any reason the griddle should be re-leveled (see LEVELING in this manual).

## FLUE CONNECTIONS

Do not obstruct the flow of flue gases from the flue, located at the rear of the griddle. It is recommended that flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel.

From the termination of the flue to the filters of the hood venting system, a minimum clearance of 18" must be maintained.

Information on the construction and installation of ventilating hoods may be obtained from the standard for "Vapor Removal from Cooking Equipment", NFPA No. 96 (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

## GAS CONNECTIONS

**NOTICE** Gas supply connections and any pipe joint compound must be resistant to the action of propane gases.

Use a  $\frac{3}{4}$ " NPT gas supply line for the griddle inlet, located at the rear of the griddle. All of flexible and semi-rigid gas supply lines must comply with the applicable ANSI standard. To ensure maximum operating efficiency, this appliance must be connected with a gas supply line of solid pipe or a commercial type Flexible Connector with the net inside diameter (I.D.) as large as or larger than the gas pipe inlet on this appliance. Codes require that a gas shutoff valve must be installed in the gas line upstream of the griddle.

**WARNING** **Prior to lighting, check all joints in the gas supply line for leaks. Use soap and water solution. Do not use an open flame.**

After checking for leaks all lines receiving gas should be fully purged to remove air.

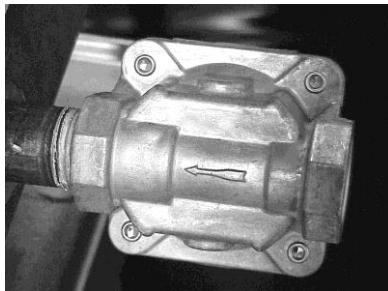
## TESTING THE GAS SUPPLY SYSTEM

When the gas supply pressure exceeds  $\frac{1}{2}$  psig (3.45 kPa), the griddle and its individual shutoff valve must be disconnected from the gas supply piping system.

When the gas supply pressure is  $\frac{1}{2}$  psig (3.45 kPa) or less, the griddle should be isolated from the gas supply system by closing its individual manual shutoff valve.

## GAS PRESSURE REGULATOR INSTALLATION

This griddle is supplied with a convertible gas pressure regulator preset at 4" Water Column (W.C.) for natural gas. No further adjustment should be required. Install the regulator as close to the griddle on the gas supply line as possible. Make sure that the arrow on the underside of the regulator is oriented in the direction of gas flow to the griddle (Fig. 2 on next page) and the regulator is positioned with the vent plug and conversion plug cover upright (Fig. 3 on next page).



**Fig. 2**



**Fig. 3**

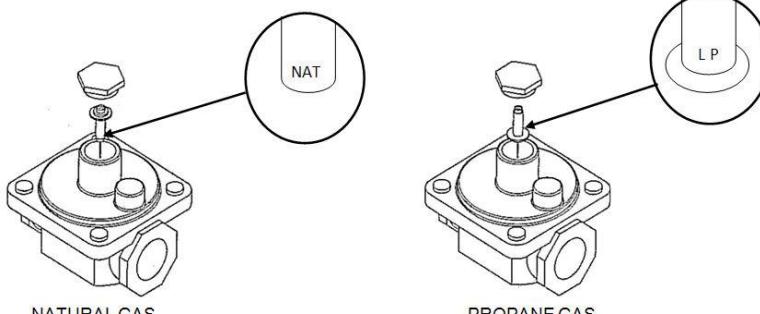
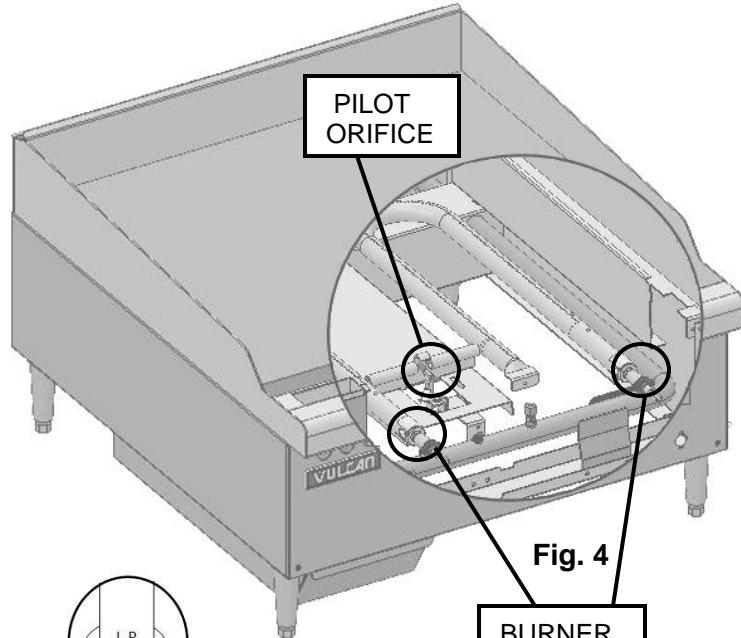
The supply pressure (upstream of the regulator) should be 7-9" W.C. for natural gas and 11-12" W.C. for propane gas. At no time should the griddle be connected to supply pressure greater than  $\frac{1}{2}$  psig (3.45 kPa) or 14" W.C.

## PROPANE GAS CONVERSION

This griddle is shipped from the factory equipped with fixed burner and pilot orifices for natural gas operation. The burner and pilot orifices required to convert the griddle to propane gas are shipped with the griddle in the shipping packaging. It is recommended that a trained gas service technician with the necessary tools, instruments and skills perform the conversion.

To convert to propane, following steps must be completed:

1. Remove all natural gas burner orifices and install the provided propane burner orifices. See Fig. 4
2. Remove all pilot orifices and install the provided propane pilot orifices. See Fig 4.
3. Set the regulator to 10" W.C. by inverting the regulator spring plug. See Fig 5.



**Fig. 5**

**WARNING** Prior to lighting, check all joints in the gas supply line for leaks. Use soap and water solution. Do not use an open flame.

# OPERATION

**WARNING** The griddle and its parts are hot. Use care when operating, cleaning or servicing the griddle.

## BEFORE FIRST USE

Remove all packing material and protective plastic from surfaces of the unit. Before leaving the factory the griddle is coated with vegetable oil as a rust inhibitor. Remove this film when the griddle plate is being cleaned prior to its first cooking use. Heat the griddle to 200-300°F to loosen and melt the coating, then clean the surface with a non-corrosive, grease dissolving commercial cleaner, following the manufacturer's directions. Rinse thoroughly and wipe dry with a soft clean cloth. Clean all accessories.

## SEASONING THE GRIDDLE

Season the griddle to avoid possible surface corrosion before first use, and after every cleaning. Heat griddle to a low temperature (300-350°F) and apply a small amount of cooking oil – about one ounce per square foot of surface. Use a soft lint-free cloth to spread the oil over the entire griddle surface to create a thin film. Wipe off any excess oil with a cloth. Repeat the procedure until the griddle has a slick, mirror-like finish. This will also help reduce the sticking of cooked food product.

## CONTROLS

There is one pilot for every two burners except on the 36" models. The 36" models have an odd number of main burners; therefore one of the pilots in these models will control only one main burner. The pilot burners are off centered about 1" to the left of pilot sight holes and inset approximately 7" from the front panel. See cutaway view on page 8.

The unit is equipped with standing, unmonitored pilots. Gas will flow from the pilots as soon as the main gas supply to the unit is turned on. The pilots are lit with the use of an outside ignition source (such as a lit taper, etc). See pilot lighting procedure on page 8.

Each 12" section of the griddle is independently controlled by an infinite heat control valve. Once the pilots are lit, turning the control knob to the ON position will light each burner. The burners will be in the full ON position when turned all the way to the left. The burners will be in the full OFF position when turned all the way to the right. See Fig. 6. The height of the burner flame and plate temperature can be adjusted by turning control knobs while viewing burners through the burner sight holes.

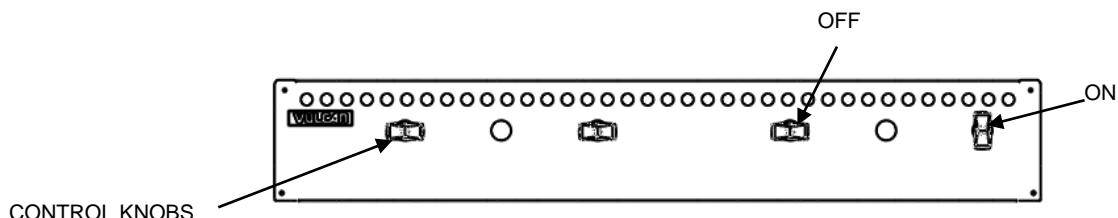
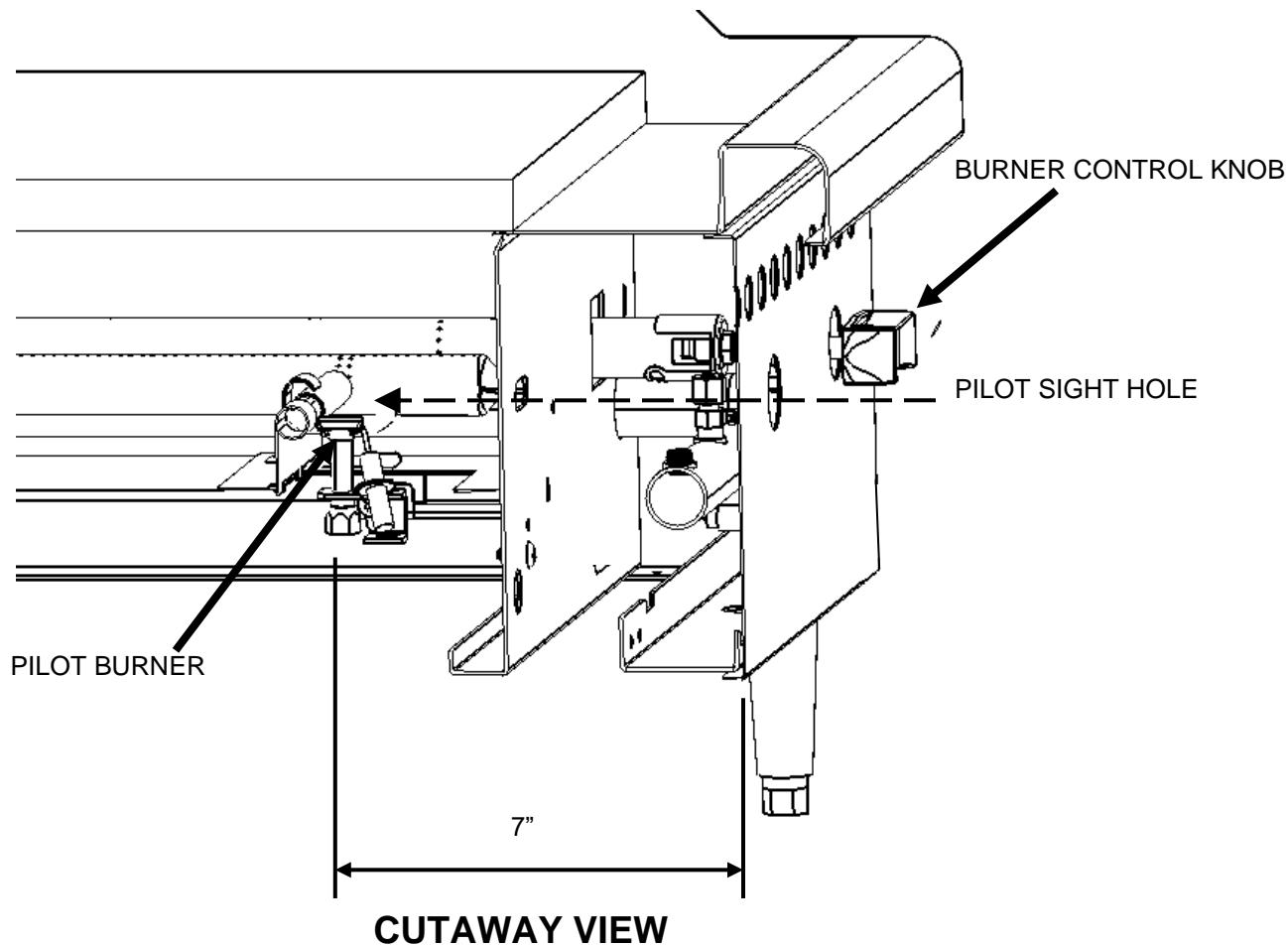


Fig. 6

## VCRG-M / WCRG-M PILOT LIGHTING PROCEDURE

1. Turn the main gas shut-off valve and all burner control knobs to the OFF position. Wait 5 minutes to allow any gas that may have accumulated in the burner compartment to escape.
2. Turn the main gas shut-off valve ON.
3. While viewing through the pilot sight hole, you will have to reach under the front of the unit and through the pilot cutout to ignite the pilots with an outside ignition source(such as a lit taper, etc.). It may be necessary to adjust the pilot valve to increase gas to the pilot. See Fig. 7 on page 11.
4. Repeat steps until all pilots are lit
5. To light main burners, turn individual burner valves to the ON position.
5. If after completing steps 1-5 main burners do not light, turn off the main gas shut-off valve and contact an authorized service contractor.



## USING THE GRIDDLE

To preheat, turn the burners on about 20-25 minutes before cooking.

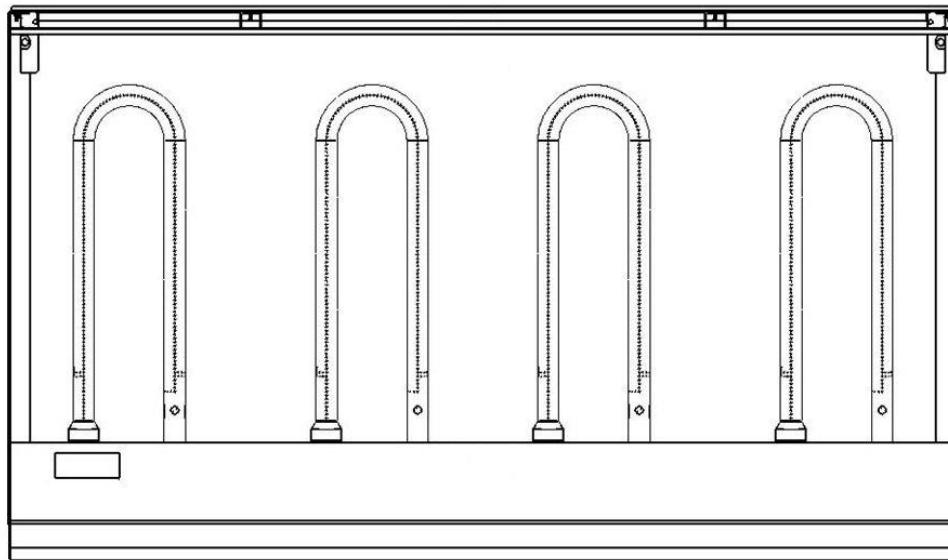
A uniform and systematic approach to loading the griddle will produce the most consistent product results.

The griddle plate is steel, but the surface is relatively soft and can be scored or dented by careless use of a spatula or scraper. Be careful not to dent, scratch, or gouge the plate surface. Do not try to knock off loose food that may be on the spatula by tapping the corner or the edge of the spatula on the griddle surface.

## ZONE COOKING

This griddle features a tubular U-shaped burner in each 12" section, each controlled by independent valves. Each 12" section is a separate cooking zone, and allows cooking a wide variety of products over a single griddle plate. The chart below is a suggested usage of zone cooking.

When zone cooking, it is suggested that you start with your lowest temperature setting at either side of the griddle, increasing the zone temperature as you move up the zone line. These zone cooking guidelines will vary depending on product temperatures, size and shape. This guide should be adjusted to suit your product and operational cooking preference.



ZONE 1 (300°F)	ZONE 2 (350°F)	ZONE 3 (350°F)	ZONE 4 (400°F)
PRODUCT	PRODUCT	PRODUCT	PRODUCT
Sausage Eggs (Hard Fried) Eggs (Scrambled) Burger (Well Done) Steak (Well Done) Chicken Breast Frozen Foods Pork Chops	Pancakes French Toast Bacon Eggs (Sunny Side Up) Boiled Ham Steak (Medium Well) Fresh Burger (Medium Well) Small Frozen Burger (Medium Well)	Omelet Hash Browns Canadian Bacon	Steak (Rare) Stir Fry Vegetables Salmon Fish Cakes Lobster Scampi

**NOTICE** It is recommended to avoid using ice to rapidly cool the griddle surface temperature. Doing so could result in thermal shock and damage to the cooking surface.

## CLEANING THE GRIDDLE

Empty the grease drawer as needed throughout the day and regularly clean at least once daily.

Clean the griddle regularly. A clean griddle always looks better, lasts longer and performs better. To produce evenly cooked, perfectly browned griddle products keep the griddle plate clean and free of carbonized grease. Carbonized grease on the surface hinders the transfer of heat from the griddle surface to the food, resulting in spotty browning and loss of cooking efficiency. Carbonized grease tends to cling to griddle foods, giving them a highly unsatisfactory and unappetizing appearance.

To keep the griddle clean and operating at peak efficiency, follow these procedures:

### AFTER EACH USE

Clean the griddle with a wire brush or flexible spatula.

### ONCE PER DAY

Thoroughly clean the griddle back splash, sides and front. Remove, empty and wash the grease drawer in the same manner as an ordinary cooking utensil.

### ONCE PER WEEK

Clean the griddle surface thoroughly. Use a griddle stone, screen, or Scotch Bright pad on the surface as necessary. Rub with the grain of the metal while the griddle is still warm (not hot). A detergent may be used on the plate surface to help clean it, but be sure the detergent is thoroughly removed by flushing with clear water.

After removal of detergent the surface of the plate the griddle should be seasoned according to the instructions in this manual.

Clean stainless steel surfaces with a damp cloth and polish with a soft dry cloth. To remove discoloration, use a griddle cleaner.

If the griddle usage is very high, consider conducting this weekly cleaning procedure more than once per week.

## LEVELING

The griddle must be level (side-to-side and front-to-back) during operation to ensure proper performance. Improper leveling can result in uneven temperature distribution, cold spots, and possibly damaged components.

1. Place a level on the griddle.

2. Adjust legs by turning the bullet feet at the bottom of each leg. Using pliers or a crescent wrench, turn the feet counter-clockwise to increase height, and clockwise to decrease height until leveling is achieved. Do not extend the legs more than 1- $\frac{3}{4}$ ".

## PILOT ADJUSTMENT

Using a flathead screwdriver, turn the slotted hex-head pilot adjustment screw clockwise to decrease the flame, and counterclockwise to increase the flame. See Fig. 7.

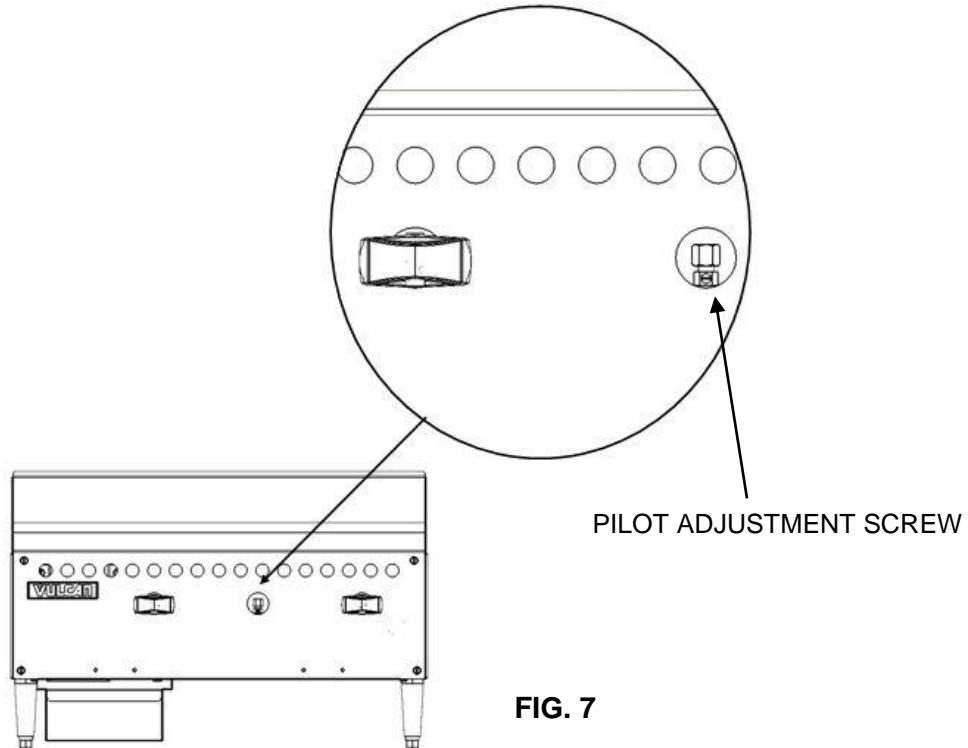


FIG. 7

## SHUTDOWN OF GRIDDLE WITH STANDING PILOT SYSTEM

1. Turn burner control knobs to the OFF position to cut off burners.
2. The pilots will remain lit as long as the main gas supply is on.

## **EXTENDED SHUTDOWN**

1. Shut off the main gas supply valve.
2. Apply a heavy coat of vegetable oil over the griddle plate to inhibit rust.

## **MAINTENANCE**

**⚠ WARNING** The griddle and its parts are hot. Use care when operating, cleaning or servicing the griddle.

### **LUBRICATION**

All valves must be checked and lubricated periodically. Check with your service agency for details.

### **VENT**

Daily, when the griddle is cool, check the flue and clear any obstructions.

### **SERVICE AND PARTS INFORMATION**

Contact the Service Contractor in your area to obtain service and parts information. For a complete listing of Service and Parts depots refer to or [www.vulcanequipment.com](http://www.vulcanequipment.com).

When calling for service, the following information should be available from the appliance identification plate: Model Number, Serial Number and Gas Type.

# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES
Burner does not come on when the control knob is turned on	<ol style="list-style-type: none"> <li>1. Problem with gas valve. (Call for service)</li> <li>2. Pilot burner not lit. (Call for service)</li> <li>3. Low gas pressure. (Call for service)</li> </ol>
Pilot burner will not light	<ol style="list-style-type: none"> <li>1. Manual gas valve not turned on.</li> <li>2. Obstructed pilot orifice. (Call for service)</li> <li>3. Pilot gas turned off at pilot. Adjust pilot to allow gas flow.</li> <li>4. Low gas pressure. (Call for service)</li> </ol>
Pilot burner will not stay lit	<ol style="list-style-type: none"> <li>1. Obstructed or wrong size pilot orifice. (Call for service)</li> <li>2. Gas supply not purged of air. Open pilot valve until air is purged.</li> <li>3. Air blowing pilot out. (Call for service)</li> <li>4. Low gas pressure. (Call for service)</li> </ol>
Fat appears to smoke excessively	<ol style="list-style-type: none"> <li>1. Temperature set too high.</li> <li>2. Moisture in food may be turning into steam</li> </ol>
Food sticks to griddle or burned around edges or contains dark specs	<ol style="list-style-type: none"> <li>1. Temperature set too high.</li> <li>2. Griddle surface requires cleaning and/or seasoning.</li> <li>3. Surface under food not covered with enough cooking oil.</li> </ol>
Food under-cooked inside	<ol style="list-style-type: none"> <li>1. Temperature set too low.</li> <li>2. Food not cooked for long enough time.</li> </ol>
Food tastes greasy or has objectionable off-flavor	<ol style="list-style-type: none"> <li>1. Food itself may have off-flavor.</li> <li>2. Food stored improperly before cooking.</li> <li>3. Too much griddle fat used.</li> <li>4. Temperature set too low.</li> </ol>
Noticeable build-up of gum on griddle	<ol style="list-style-type: none"> <li>1. Temperature set too high.</li> <li>2. Griddle surface needs cleaning and/or seasoning.</li> <li>3. Too much griddle fat used.</li> </ol>

## **NOTES**