

# NG TO LP PIPED SYSTEMS KIT AGCKNGLP / AECKNGLP



## APPLICABLE APPLIANCES:

GRILLS - GABR / GSBR / GMBR / EAB / EABR / EMB / EMBR  
SIDE BURNER - AGB / AEB

## IMPORTANT - READ ALL INSTRUCTIONS BEFORE YOU BEGIN

THE INSTRUCTIONS HEREIN SHOULD BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN. THE APPLIANCE MUST BE COMPLETELY COOL AND THE PREVIOUS GAS SOURCE MUST BE SHUT OFF OR REMOVED BEFORE ATTEMPTING INSTALLATION.

Some parts inside your grill or side burner have sharp edges. Care must be taken when handling the various components to avoid personal injury. Wear gloves when handling.

## TOOLS REQUIRED:

Work gloves  
Safety glasses  
Phillips & Flat-blade screwdriver  
Pipe wrench or large slip-joint pliers  
Adjustable Wrenches (2)  
Thread sealant  
1/2" deep socket wrench with short extension  
Assorted combination wrenches (5/16, 1/2, 5/8, 3/4, 7/8 inch)

### **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 the appliance and immediately call your gas supplier or your fire department.

### **DANGER**

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.

### **WARNING**

IF THE INFORMATION IN THIS MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

### **WARNING**

Flammable Gas - disconnect all propane or natural gas supplies to this unit before servicing.

### **WARNING**

Electrical Parts & Components – disconnect all power supplies and batteries before servicing.

READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE USING YOUR GRILL TO REDUCE THE RISK OF FIRE, BURN HAZARD, OR OTHER INJURY. KEEP THIS MANUAL FOR FUTURE REFERENCE.



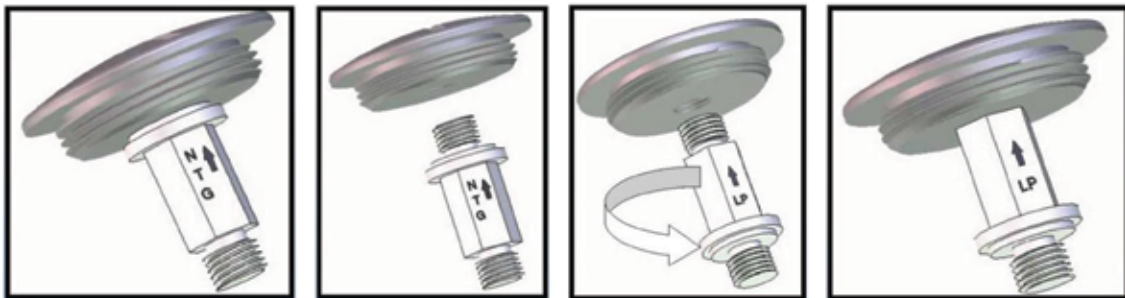
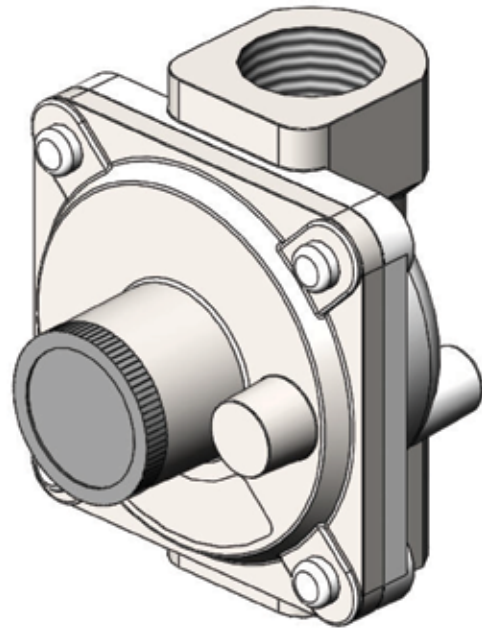
## MODIFYING REGULATOR (FOR UNITS WITH NATURAL GAS)

An LP piped system is one with a large central LP tank that feeds an entire household. These systems are normally equipped with a high pressure regulator by the large LP tank, and low pressure regulators close to the home.

This kit is to be used if your Hestan or Aspire grill or side burner was already supplied with a NG regulator. The kit includes all the necessary orifices to convert your burners to LP fuel, and special instructions to modify the regulator.

1. It is possible to modify the regulator in-place. If your grill is mounted on a freestanding or deluxe cart, you can access the regulator by removing the rear access panel. If your grill or side burner are mounted in an island, you will have to gain access from underneath. Modify as per instruction below.

REMOVE THIS CAP. USE CAUTION, THERE IS A SMALL SPRING INSIDE.



THERE IS A SMALL PLASTIC SPRING GUIDE (USUALLY COLORED BLUE) UNDER THE CAP. UNSCREW THIS PART AND FLIP OVER AND RE-INSTALL IN THE CAP. THEN RE-INSTALL THE CAP INTO THE REGULATOR.

**NOTE:** If you have a Hestan or Aspire Side Burner inter-plumbed with a Grill, you will follow these same instructions.

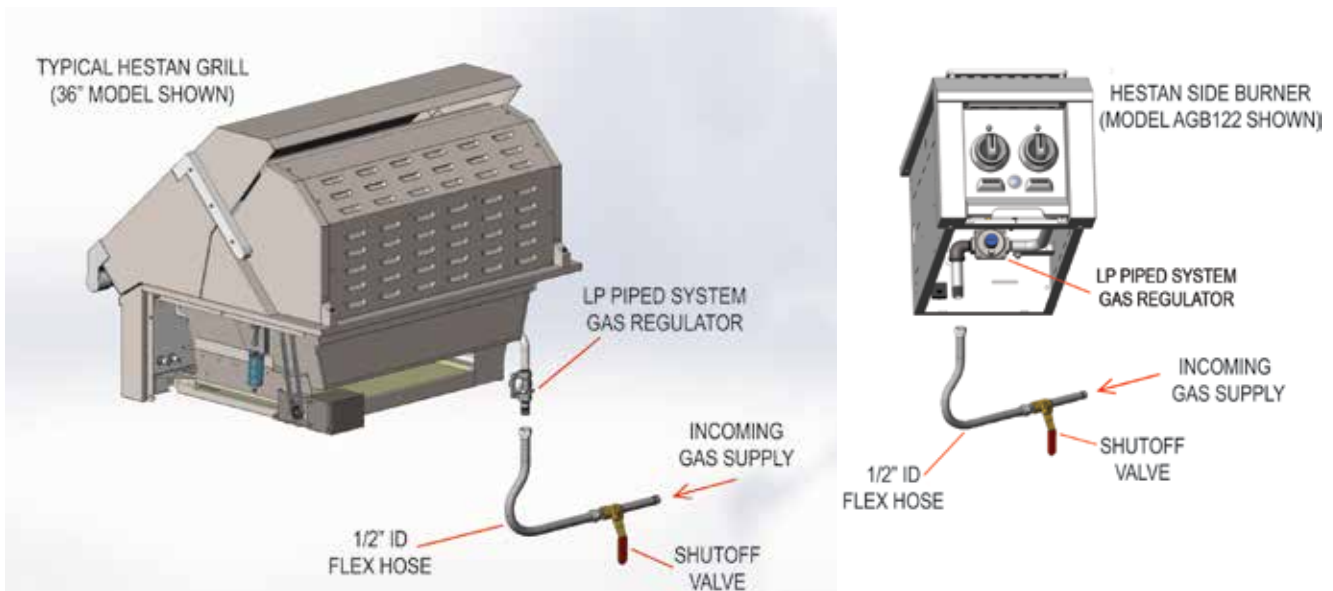
## MODIFYING REGULATOR (continued)



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2. Connect to your LP Piped System using a minimum 1/2" diameter flexible (semi-rigid) stainless steel gas hose. The gas line connectors must comply with the *Standard for Connectors for Outdoor Gas Appliances and Manufactured Homes, ANSI Z21.75 • CAS 6.27*, and suitable for outdoor installation. The connection shall be 6 feet (1.82 m) or less.

**NOTE:** To ensure proper heating performance of this appliance, verify that the supply pressure is adequate (11.0" WC supply pressure is preferred) to maintain 10.0" WC manifold pressure.



### GAS SUPPLY

The local gas authority or supplier should be consulted at the installation planning stage in order to establish the availability of an adequate supply of LP gas. If it is a new installation, have the gas authorities or supplier check the meter size and piping to assure that the unit is supplied with the necessary amount of gas supply and pressure to operate the unit(s).

Gas connections should be made by a qualified plumber, or your professional outdoor appliance service technician.

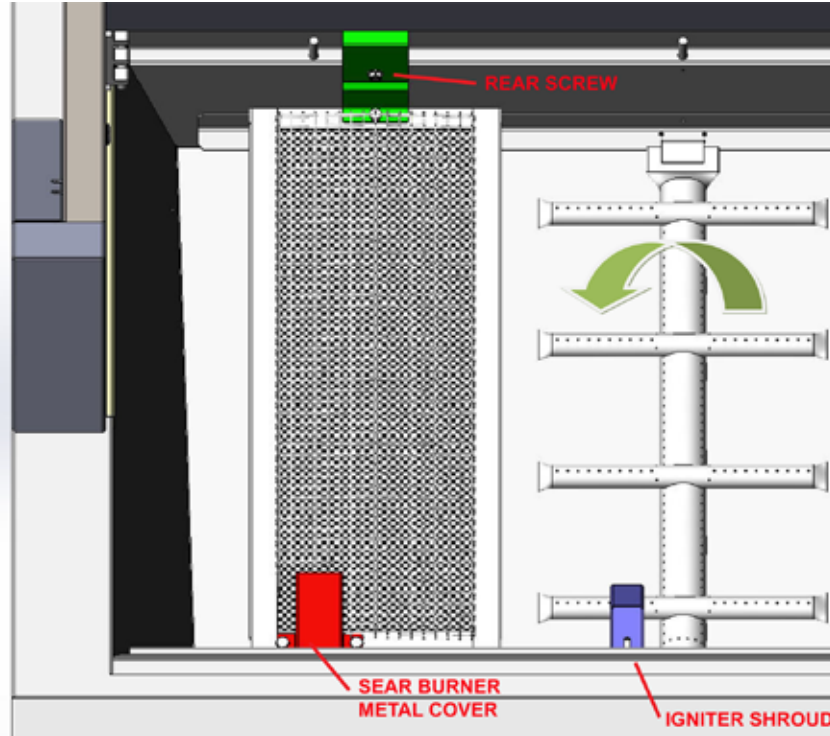
All fixed (non-mobile) appliances must be fitted with an accessible upstream gas shutoff valve as a means of isolating the appliance for emergency shut off and for servicing.

Make certain new piping and connections have been made in a clean manner and have been purged so that piping compound, chips, etc. will not clog regulators, valves, orifices, or burners. Use pipe joint compound / thread sealant approved for LP gas.

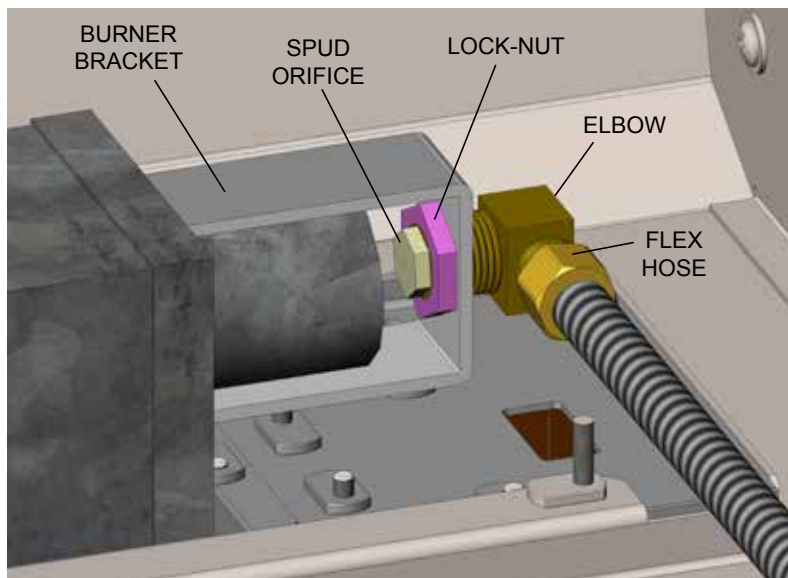


## CHANGING ORIFICES - GRILL

1. Open your grill and remove the grates, radiant trays, and burners from the firebox area. Trellis and U-burners are removed by lifting up the rear of the burner, and carefully twisting to clear the igniter shroud. Infrared Sear burners have a small metal cover over the igniter which must be removed first. There is also a screw at the rear firebox wall which must be removed. The sear burner can then be carefully removed using the same twisting action to avoid breaking the ceramic igniter. Remove the rear cover of the grill. If your grill is mounted on a cart, remove the rear access panel of the cart as well. Also remove the control knobs and drip pan.



2. Beginning with the Infrared Burner in the upper canopy area of the grill, access the spud orifice shown in the image below. Disconnect the flex hose first. Then use a wrench to hold the brass elbow steady, while using another wrench to remove the lock-nut. You may now remove the elbow out of the burner bracket. Try not to disturb the flex hose connection by unduly bending it too much. Be careful not to damage the wires and copper thermocouple tube nearby.

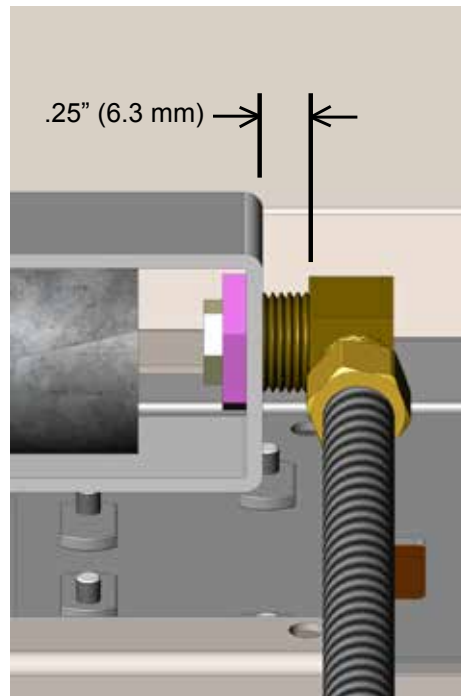


## CHANGING ORIFICES - GRILL (continued)

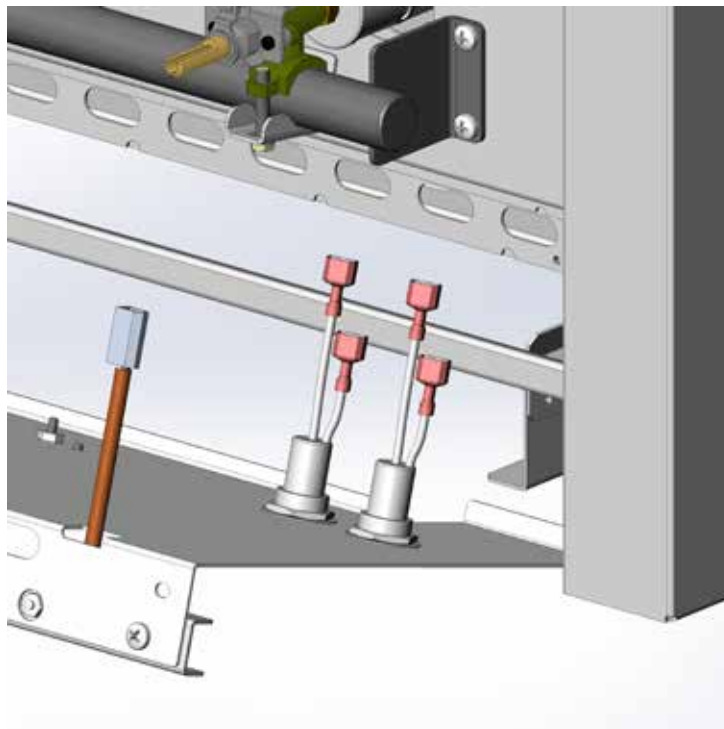


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- When replacing the elbow and orifice assembly back into the burner bracket, it is important to maintain the original spacing shown below for proper burner performance.



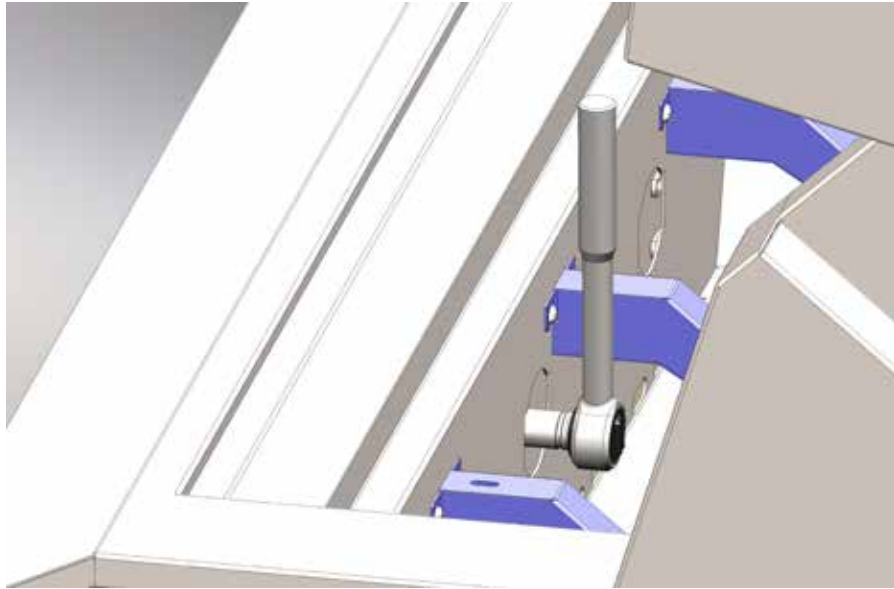
- Remove the screws securing the control panel to the front of the grill. Carefully tilt down the control panel being careful not to damage the wires to the switches and LED light bar. Pull off the connectors to the 2 switches and the LED light bar at this time. Remove the control panel from the grill and set aside.





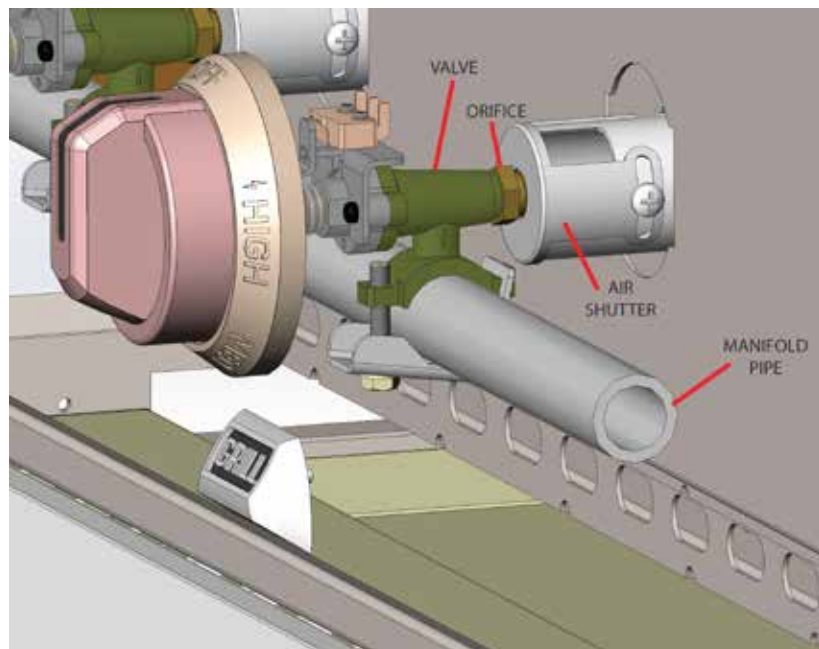
## CHANGING ORIFICES - GRILL (continued)

5. Before removing the main burner orifices, take a visual note as to how far the orifice is installed onto the valve body. The orifices are removed with a 1/2" deep socket wrench. Use even pressure to break loose the old orifice and remove from the valve.



6. If your grill is equipped with both open-flame (Trellis or U-Burners) and Infrared Sear Burners, verify you have the correct orifice for each kind of burner. The orifice size is stamped on the body of the orifice. Consult the chart at the end of this manual for what size is used on each burner type. This is also a good time to clean and inspect the burners for clogged ports, debris, spider webs, etc.

Install the orifices slowly to avoid cross-threading and damaging the threads. The orifice will become noticeably harder to turn as you proceed. Make frequent visual checks of the orifice as it goes onto the valve. As shown below, the orifice is nearly bottomed-out on the valve body. You want to tighten all the orifices equally so they are all seated the same distance. Use a burner to check the orifice is properly seated. As shown, the burner should fully seat with the orifice protruding into the air shutter as far as possible. The burner should rest flat on the burner hanger at the back of the firebox.

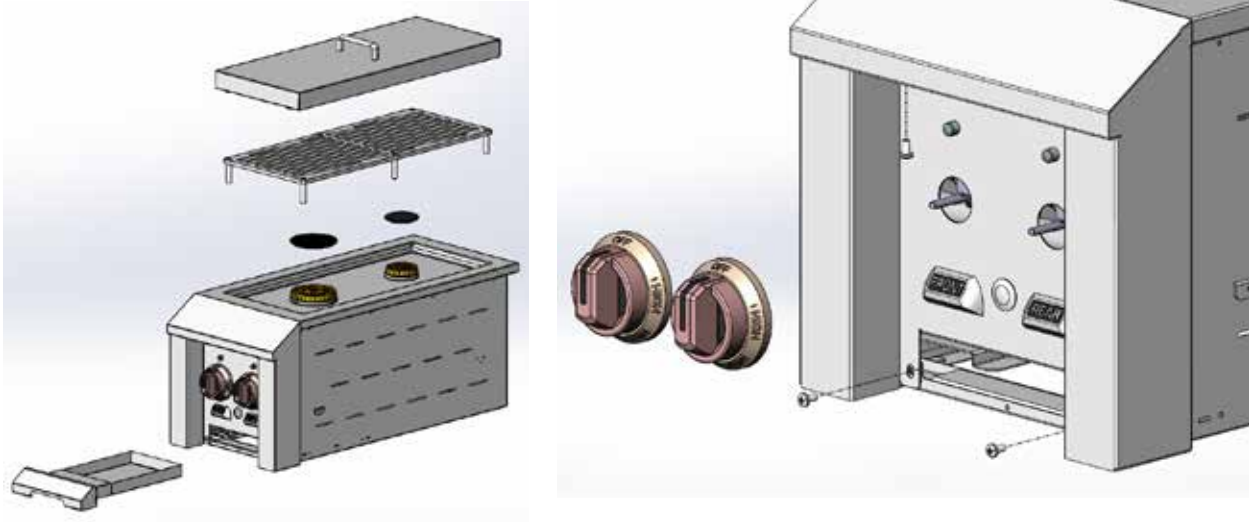


## CHANGING ORIFICES - SIDE BURNER

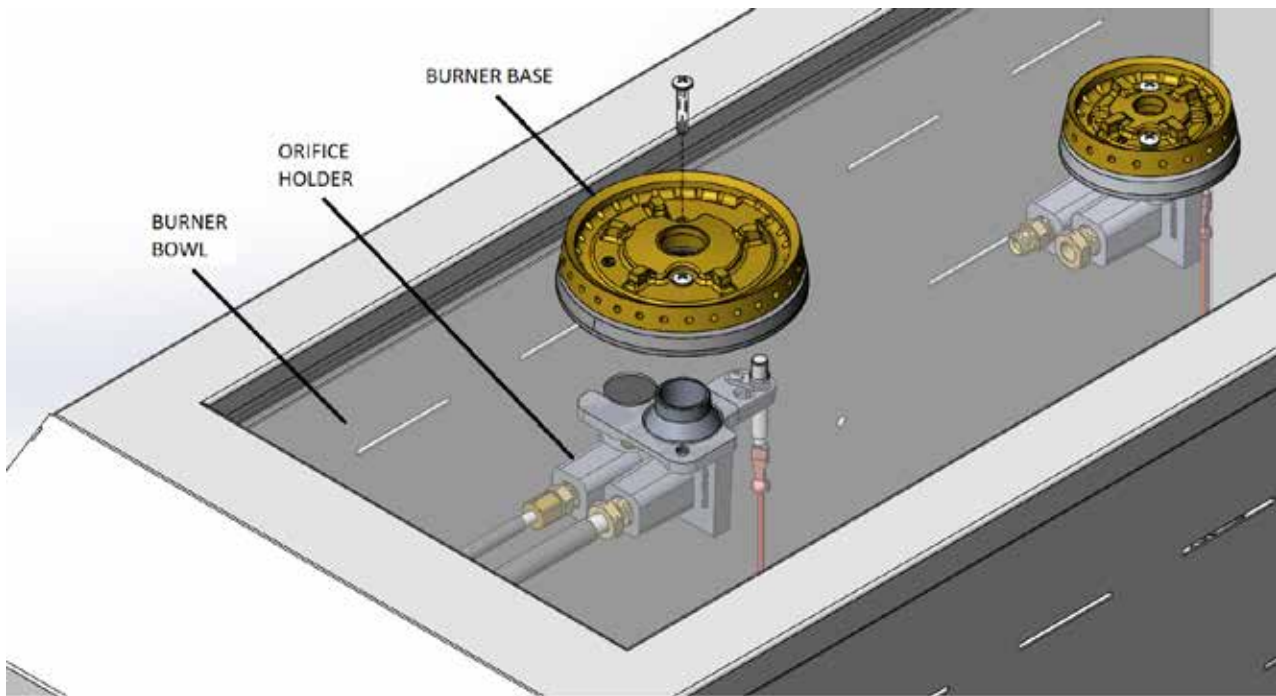


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1. Remove the grate cover, grate, burner cap(s), and drip tray from the side burner. Remove the control knob(s) and the 4 Phillips head screws securing the control panel to the side burner. Carefully tilt down the control panel and pull off the connectors to the light switch. Remove the control panel and set aside.



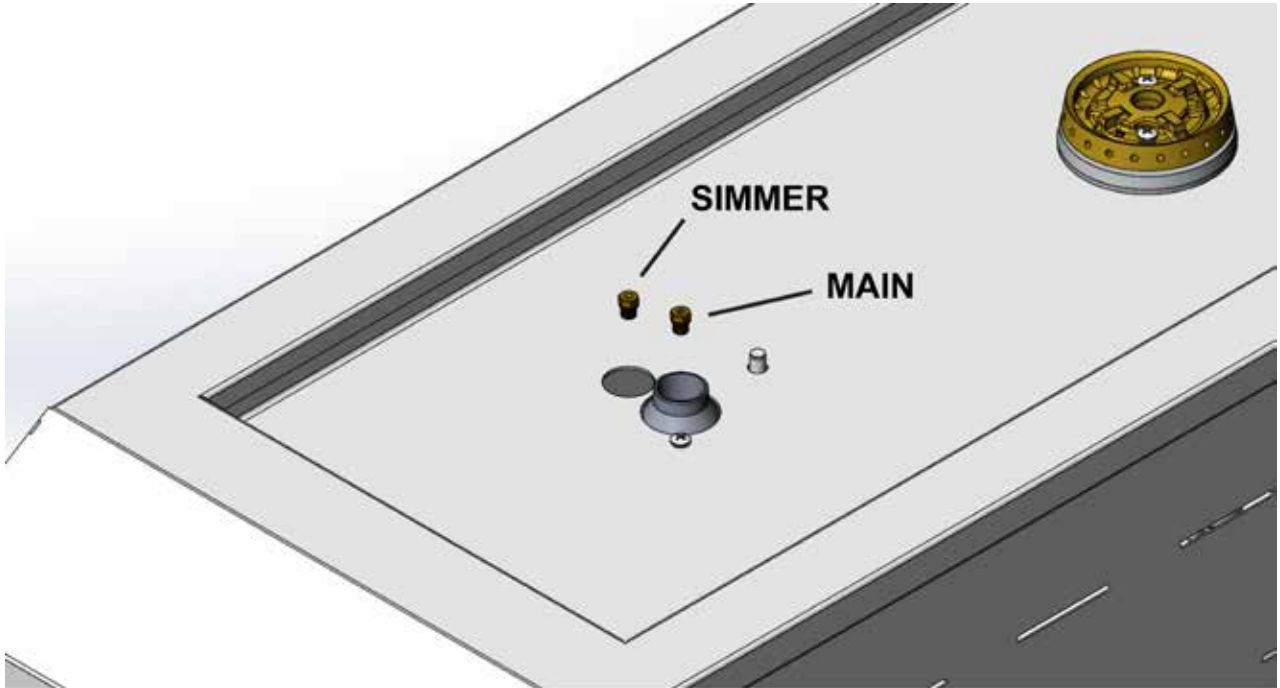
2. Reach inside the burner to hold up the orifice holder against the burner bowl (to prevent it from falling) and remove the 2 Phillips head screws securing the burner base. Continue to hold the orifice holder against the burner bowl and reinstall the 2 Phillips head screws back onto the orifice holder so it doesn't fall.





## CHANGING ORIFICES - SIDE BURNER *(continued)*

3. Use a nut driver or deep socket wrench ( $9/32''$  or 7 mm) to remove the two orifices from the orifice holder. Install the new orifices and remount the burner base in the same manner it was removed. Repeat this process for the secondary burner if applicable.



## TESTING & ADJUSTMENT

### LEAK TESTING

#### GENERAL

A complete gas tightness check must be performed of all gas-carrying components due to possible movement during installation, or excessive pressure unknowingly being applied to parts of the unit.

#### BEFORE TESTING

- Do not smoke while leak testing.
- Never leak test with an open flame.
- Make a soap solution of one part liquid detergent and one part water for leak testing purposes.
- Apply the solution to the gas fittings by using a spray bottle or a brush.
- For LP units, always check with a full LP cylinder.



## TESTING & ADJUSTMENT *(continued)*



### TO TEST

- Make sure all control valves are in the “OFF” position.
- Apply the soap solution described above to all fittings.
- Turn the gas supply on.
- Check all connections from the supply line, or LP cylinder up to and including the manifold pipe assembly.
- Soap bubbles will appear where a leak is present. If a leak is present, immediately turn off gas supply, tighten any leaking fittings, turn the gas supply back on, and recheck.
- If you cannot stop a gas leak, turn off the gas supply and call the dealer where you purchased your grill.
- Do not use the grill or side burner until all connections have been checked and do not leak.

**IMPORTANT NOTE - ALWAYS CHECK FOR LEAKS AFTER EVERY LP CYLINDER CHANGE.**

### BURNER / VALVE ADJUSTMENTS

Consult the GAS CONNECTIONS section of your Hestan or Aspire outdoor appliance for full instructions on burner adjustments, flame appearance, air shutter adjustment, and valve adjustments. This step is very important to ensure successful burner performance after conversion to the new fuel type, or changing orifices for high altitude locations.

### Hestan Grill Orifice Chart

Equipment	Burner Type	Gas Type	Rate Per Burner (Btu/hr)	ORIFICE SIZE			Air Shutter Opening (inch)
				Sea Level - 1999 ft (609m)	2000 ft (609m) - 5999 ft (1829m)	6000 ft (1829m) - 10000 ft (3048m)	
30" Hestan Grill	Trellis Burner	NG	25,000	<b>42</b>	<b>43</b>	<b>45</b>	5/16
		LP	25,000	53	54	55	3/8
	Sear Burner	NG	25,000	<b>42</b>	<b>43</b>	<b>45</b>	N/A
		LP	22,000	54	55	56	N/A
	Rotiss	NG	12,000	<b>51</b>	<b>52</b>	<b>53</b>	N/A
		LP	11,000	60	62	64	N/A
36" Hestan Grill	Trellis Burner	NG	25,000	<b>42</b>	<b>43</b>	<b>45</b>	5/16
		LP	25,000	53	54	55	3/8
	Sear Burner	NG	25,000	<b>42</b>	<b>43</b>	<b>45</b>	N/A
		LP	22,000	54	55	56	N/A
	Rotiss	NG	14,000	<b>50</b>	<b>51</b>	<b>52</b>	N/A
		LP	13,000	57	59	62	N/A
42" Hestan Grill	Trellis Burner	NG	25,000	<b>42</b>	<b>43</b>	<b>45</b>	5/16
		LP	25,000	53	54	55	3/8
	Sear Burner	NG	25,000	<b>42</b>	<b>43</b>	<b>45</b>	N/A
		LP	22,000	54	55	56	N/A
	Rotiss	NG	18,000	<b>45</b>	<b>47</b>	<b>49</b>	N/A
		LP	18,000	56	57	59	N/A



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**Aspire Grill Orifice Chart**

Equipment	Burner Type	Gas Type	Rate Per Burner (Btu/hr)	ORIFICE SIZE			Air Shutter Opening (Inch)
				Sea Level - 1999 ft (609m)	2000 ft (609m) - 5999 ft (1829m)	6000 ft (1829m) - 10000 ft (3048m)	
30" Aspire Grill	U-Burner	NG	23,000	43	44	47	1/4
		LP	23,000	54	55	56	3/8
	Sear Burner	NG	23,000	43	44	47	N/A
		LP	23,000	54	55	56	N/A
	Rotiss	NG	12,000	51	52	53	N/A
		LP	11,000	60	62	64	N/A
36" Aspire Grill	U-Burner	NG	23,000	43	44	47	1/4
		LP	23,000	54	55	56	3/8
	Sear Burner	NG	23,000	43	44	47	N/A
		LP	23,000	54	55	56	N/A
	Rotiss	NG	14,000	50	51	52	N/A
		LP	13,000	57	59	62	N/A
42" Aspire Grill	U-Burner	NG	23,000	43	44	47	1/4
		LP	23,000	54	55	56	3/8
	Sear Burner	NG	23,000	43	44	47	N/A
		LP	23,000	54	55	56	N/A
	Rotiss	NG	18,000	45	47	49	N/A
		LP	18,000	56	57	59	N/A

**Side Burner Orifice Chart**

Equipment	Burner Type	Gas Type	Rate Per Burner (Btu/hr)	ORIFICE SIZE		
				Sea Level - 1999 ft (609m)	2000 ft (609m) - 5999 ft (1829m)	6000 ft (1829m) - 10000 ft (3048m)
Single Outdoor Side Burner	Front (main)	NG	20,000	45	47	49
	Front (simmer)	NG		65	66	68
	Front (main)	LP	18,000	56	57	59
	Front (simmer)	LP		75	76	77
Double Outdoor Side Burner	Front (main)	NG	20,000	45	47	49
	Front (simmer)	NG		65	66	68
	Front (main)	LP	18,000	56	57	59
	Front (simmer)	LP		75	76	77
	Rear (main)	NG	10,000	54	55	56
	Rear (simmer)	NG		67	68	70
	Rear (main)	LP	10,000	65	66	68
	Rear (simmer)	LP		76	77	77

**LABEL**

After conversion, the labels below must be attached to the grill and/or side burner next to the existing rating labels located in the drip pans. The qualified service technician will fill in the Gas Type, Manifold Pressure, and BTU Rates for each burner type (per the chart above and on previous page). The technician should sign and date the labels.

GAS CONVERSION	
GAS TYPE / TYPE DE GAZ	BTU/HR / ROTISS / ROTISSOIRE
MAN. PRESS. / PRESS. ADM INCH W.C. / PO. W.C.	BTU/HR / GRILL / LE GRIL
	BTU/HR / SEAR / INFRAROUGE
THIS EQUIPMENT WAS CONVERTED TO THE FUEL INDICATED BY A QUALIFIED SERVICE TECHNICIAN ON THE DATE INDICATED BELOW. CET APPAREIL A ETE CONVERTI AU COMBUSTIBLE INDIQUE PAR UN TECHNICIEN QUALIFIE A LA DATE INDIQUEE CI-DESSOUS.	
TECH. : _____	
DATE : _____	
P/N 013624 REV A	

GAS CONVERSION	
GAS TYPE / TYPE DE GAZ	BTU/HR / FRONT BURNER / BTU/HR BRULEUR AVANT
MAN. PRESS. / PRESS. ADM INCH W.C. / PO. W.C.	BTU/HR / REAR BURNER / BTU/HR BRULEUR ARRIERE
THIS EQUIPMENT WAS CONVERTED TO THE FUEL INDICATED BY A QUALIFIED SERVICE TECHNICIAN ON THE DATE INDICATED BELOW. CET APPAREIL A ETE CONVERTI AU COMBUSTIBLE INDIQUE PAR UN TECHNICIEN QUALIFIE A LA DATE INDIQUEE CI-DESSOUS.	
TECH. : _____	
DATE : _____	
P/N 013658 REV A	

**RETAIN THIS MANUAL FOR FUTURE REFERENCE**



**Hestan Commercial Corporation**

3375 E. La Palma Ave  
Anaheim, CA 92806  
(888) 905-7463