

Before performing any service always follow applicable safety precautions.

## 120v Smoker Gas Conversion Instructions

**Affected Products:** 120v Smokers with Wayne P250 or P265 Electronic Pilot Natural or LP Burners  
**Affected Serial Range:** N/A  
**Related Issue #:** N/A  
**Revision 1:** Added conversion instructions



**WARNING:**

**Fire or Explosion Hazard**

- Failure to follow safety warnings exactly could result in serious injury or property damage.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.



**WARNING:**

**If You Smell Gas.....**

1. Open Windows.
2. Do not touch electrical switches.
3. Extinguish any open flames.
4. Immediately call your gas supplier.



**WARNING:**

All gas piping must conform with local building codes, or in the absence of local codes, with the most recent edition of the National Fuel Gas Code ANSI Z223.1. DO NOT attempt to modify, or tap into gas lines yourself. Fire or explosion may result causing property damage, personal injury or loss of life. Failure to follow the safety warnings exactly could result in serious injury, death, or property damage.

The individual performing this work assumes all responsibility for this conversion. These instructions are intended to assist qualified individuals experienced in the proper installation and service of these components. Some local codes require licensed installation/service personnel for this type equipment and service. Improper installation of the components or failure to follow safety warnings could result in serious injury, death, or property damage.

**TO CONNECT THE GAS BURNER TO A TYPE OF GAS OTHER THAN WHAT IS SPECIFIED ON THE SOUTHERN PRIDE DATA PLATE COULD RESULT IN A HAZARDOUS CONDITION AND WILL VOID THE WARRANTY. IF A GAS CONNECTION IS TO BE MADE TO A TYPE OF GAS OTHER THAN WHAT IS SPECIFIED ON THE DATA PLATE, THE FOLLOWING INSTRUCTIONS MUST BE FOLLOWED.**

## Introduction

A gas conversion kit must be used when converting a burner from natural gas to liquid propane, or vice versa. A gas conversion kit consists of a main orifice, pilot orifice, pressure regulator spring, pressure regulator cap, pressure regulator adjusting screw and stickers. All components of the kit must be used and the service technician must be sure to change the gas type on the smoker's data plate.

## Conversion Instructions

1. Disconnect power to the smoker. If the smoker is already connected to the gas supply, turn OFF the main gas shut off valve before beginning the gas conversion.
2. Convert the gas valve using the kit supplied. Follow the gas valve manufacturer's instructions supplied with the kit. Figures 1, 2, and 3 show the PRV cap screw, adjusting screw, and spring. The color code for the Honeywell valve kit is as follows.

	Natural Gas	L.P. (propane) Gas
PRV Cap Screw	Silver	Black
PRV Adjusting Screw	Black	Black
PRV Spring	Stainless Steel	Red

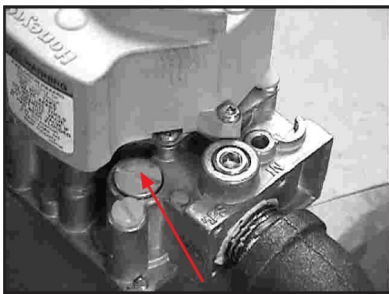


Figure 1: PRV Cap Screw

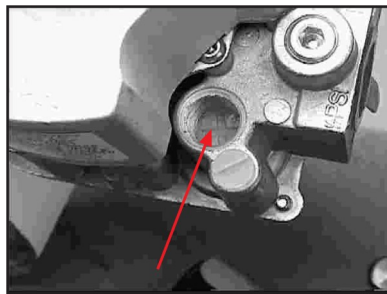


Figure 2: PRV Adjusting Screw

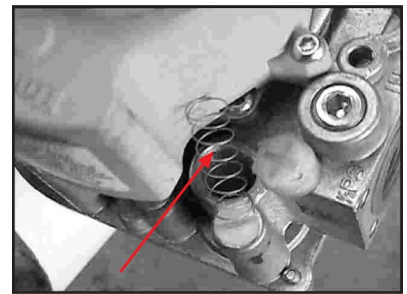


Figure 3: PRV Spring

3. To change the main orifice: Remove the valve and orifice flange from the back of the burner by loosening the pilot line and removing the two nuts that hold the orifice flange in position (figure 4), then grasp the valve and pull it away from the burner (figure 5). Use a wrench to loosen the orifice and then remove it, replacing it with the correct orifice supplied with the conversion kit.

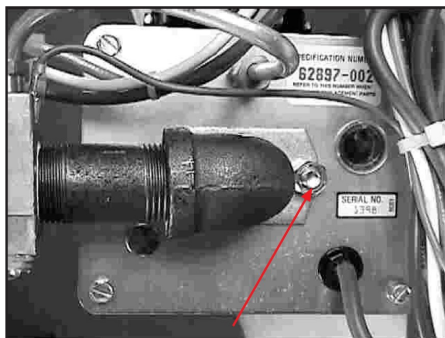


Figure 4: Pilot Line & Orifice Flange Nuts

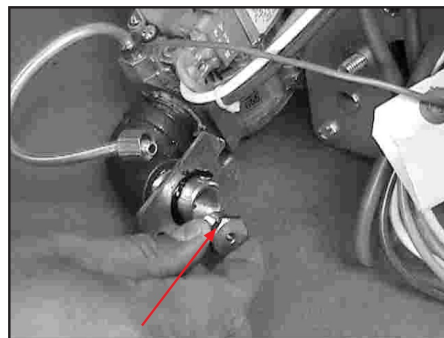


Figure 5: Main Orifice

**WARNING:** The proper input rating necessary for installation may only be accomplished with factory supplied orifices. Do not attempt to drill out orifices in the field. Improperly drilled out orifices may cause fire, explosion, carbon monoxide poisoning, personal injury or death.



**WARNING:** Do not use Teflon tape or pipe joint compound on the orifice threads. The hole in the orifice may become blocked & cause fire, property damage, personal injury, or death.

## Conversion Instructions (continued)

- To change the pilot orifice: Remove the four screws from the mounting plate (figure 6). Grasp the mounting plate and pull it away from the back of the burner (figure 7), this will expose the venturi and the electrode (figure 8). Next loosen the pilot tube and unplug the high voltage lead from the electrode (figure 9), then remove the two screws that fasten the electrode to the venturi (figure 8), and pull the electrode away from the venturi (figure 10). Turn the electrode so that the gas tube port is down and tap the side of the port with a screw driver, the pilot orifice (figure 10) should fall out. If it does not, use a miniature screw driver and gently pry the pilot orifice loose from the gas tube port.

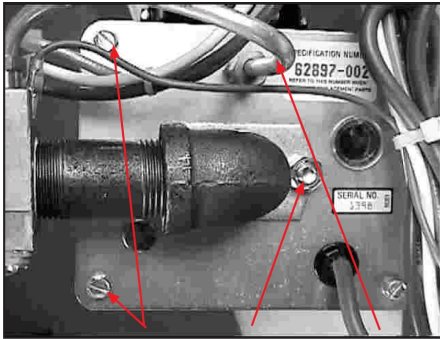


Figure 6: Mounting Bolts, Flange Nuts, Pilot Line

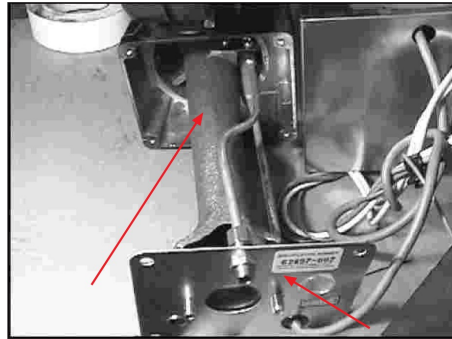


Figure 7: Venturi and Mounting Plate

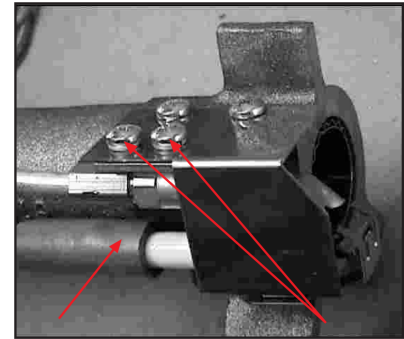


Figure 8: High Voltage Lead, Mounting Screws

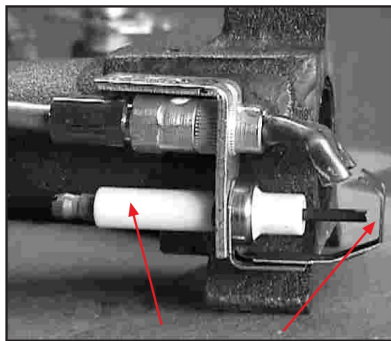


Figure 9: Electrode - 1/8" Gap

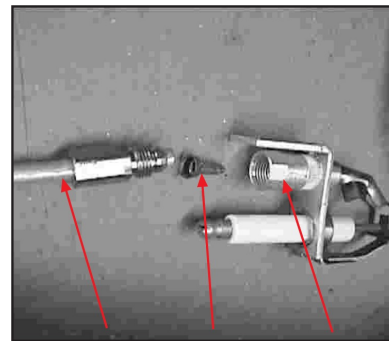


Figure 10: Pilot Tube, Pilot Orifice, Gas Tube Port

- Install the correct pilot orifice supplied with the conversion kit. The pilot orifice goes into the electrode tapered end first (figure 10).
- Reassemble the burner. Fasten the electrode back onto the venturi and reconnect the pilot tube and voltage lead. Slide the venturi back into the burner housing (figure 7). Fasten the venturi in place with the four mounting screws (figure 6). Slide the orifice flange back onto the two stubs, making sure that the pilot line slides into the brass fitting, then fasten the flange in place with the two orifice flange nuts (figure 6), and last, screw the brass compression nut on the pilot line back onto the brass fitting that protrudes through the mounting plate (figure 6).

## Conversion Instructions (continued)

7. Change the gas information on the burner. Apply the Gas Pressure Information Label and the Type of Gas Label supplied with the kit. If the conversion was to LP gas, apply the LP gas sticker, supplied with the valve kit, to the gas valve. If the conversion is to natural gas, remove the LP gas sticker from the valve.
8. Double check all gas fittings for tightness along with the four mounting plate screws and the two orifice flange nuts.
9. Turn on the gas supply to the burner and check for leaks.



**WARNING:** Never test for gas leaks with an open flame. Fire or explosion may result causing property damage, personal injury or loss of life. Use a commercially available soap solution made specifically for the detection of leaks to check all connections.

10. Using a manometer, check the supply line pressure to the burner. There are two ports to check the pressure, first at the inline gas shutoff (figure 11) and second, on the inlet side of the gas valve (figure 12). The pressure must be within the limits stated on the gas pressure label on the burner. If it is not, the pressure must be corrected before continuing.



Figure 11: Gas Shutoff

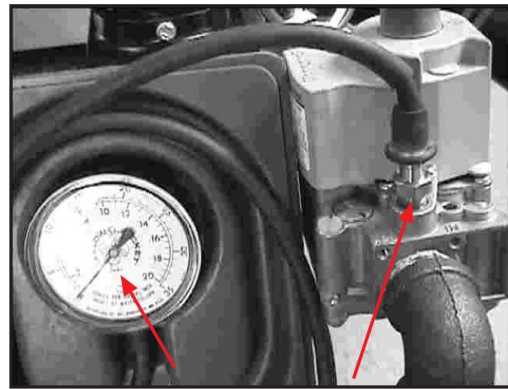


Figure 12: Manometer, Pressure Tap Fitting

11. Connect the manometer to the outlet manifold pressure tap (figure 13) and check the manifold pressure. The burner will have to be started to see a reading. The manifold pressure must be within the limits stated on the gas pressure label. If it is not, remove the PRV cap screw (figure 14) and adjust the pressure with the PRV adjusting screw (figure 15). Turning the screw clockwise increases pressure, turning it counter-clockwise decreases pressure.

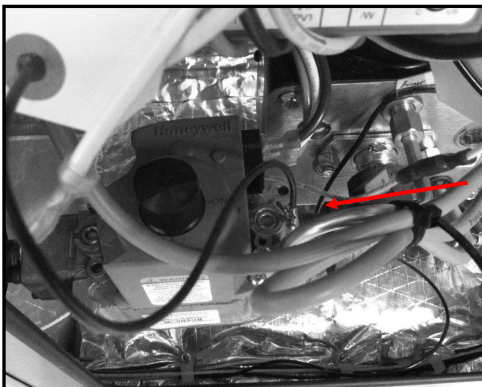


Figure 13: Manifold Pressure Tap

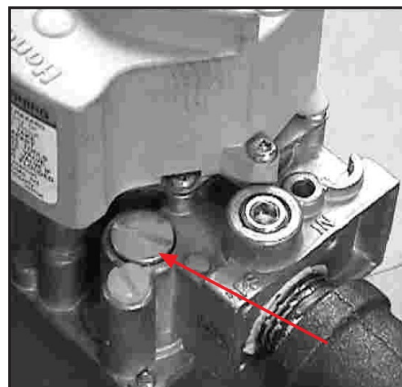


Figure 14: PRV Cap Screw

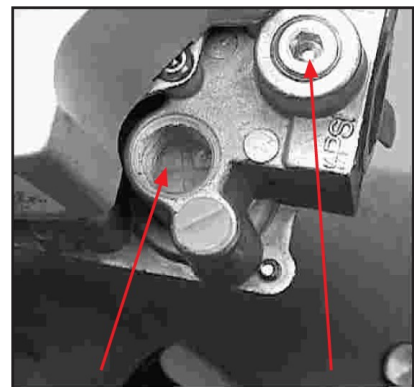


Figure 15: PRV Adjusting Screw,  
Pressure Tap

**Conversion Instructions (continued)**

12. Apply the new Gas Type Label on the smoker data plate (figure 16).

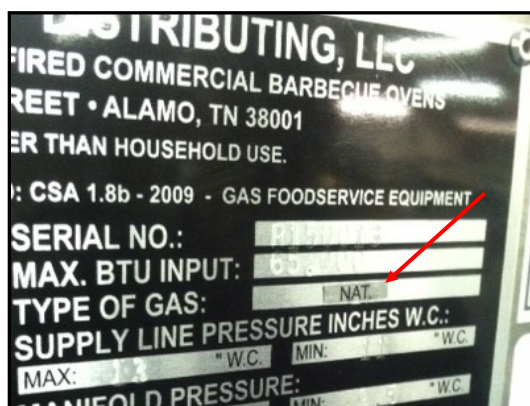


Figure 16: Applied on Plate

**Additional Comments:**

The main orifice should not be enlarged using a drill or other device. The correct main orifice should be used for the gas type and Btu’s specified on the smoker data plate.

Always verify that the gas line supply pressure and manifold pressure are correct for the type of gas utilized.

	Gas Supply Line Pressure		Manifold Pressure	
	Minimum	Maximum	Minimum	Maximum
<b>Natural</b>	4.5” w.c.	10.0” w.c.	3.0” w.c.	3.5” w.c.
<b>LP</b>	11.0” w.c.	13.0” w.c.	9.5” w.c.	10.0” w.c.

**Secondary Distribution:**

Service technicians within the Distributor’s organization.

Service companies.

**For Additional Information:**

Southern Pride Technical Support: (800) 437-2679