

# INSTALLATION INSTRUCTIONS



## Gas Conversion Kit Pilot Ignition Heaters

View these instructions online at [www.lbwhite.com](http://www.lbwhite.com)

### Kit Contents:

DESCRIPTION	QTY.
Instructions	1
Burner Orifice	1
Pilot Orifice	1
Variable Rate Valve (Guardian 250 Only)	1
Dataplate	1
Honeywell Conversion Kit	1
Pipe Thread Compound	1

### Tools required:

- Standard philips screw driver
- 3/16 in. allen key
- 2 -1/8 in. NPT pressure barb fittings
- 2 - Low pressure gas gauges (0-30 in. w.c.)
- 3/8 & 1/2 open-ended wrench
- Adjustable wrench
- Pipe wrench
- Plier

### Qualifications for installation of the kit:

- You must read and understand these instructions before beginning the conversion.
- You must be properly trained and have sufficient experience to install the gas conversion kit and test the heater for proper operation.
- Ensure the installation's gas type and pressure conforms to the gas type and pressure requirements on the dataplate within the conversion kit.

### CANADIAN REQUIREMENTS:

- The conversion shall be carried out in accordance with the requirements of the provincial authorities having jurisdiction and in accordance with the requirements of the CAN 1-B149.1 and .2 INSTALLATION CODES.

### Discussion:

The following instructions are common for use when converting fuel gas for pilot ignition heaters.

### A. Initial Preparation

1. Close the main gas supply valve to the heater, and disconnect the heater's electrical supply.
2. Remove the gas hose and sediment trap from the inlet of the gas control valve.
3. **Guardian 250 heater:**  
Open the burner end access door or remove the access panel.

### B. Converting the Pilot Assembly

1. For Classic heaters, remove the screw(s) that secure the pilot assembly to the burner. See Fig. 1a, Classic 115 as shown. For Guardian 250, removal of single wing screw which holds the pilot assembly to the burner is required. See Fig. 1b.

FIG. 1a

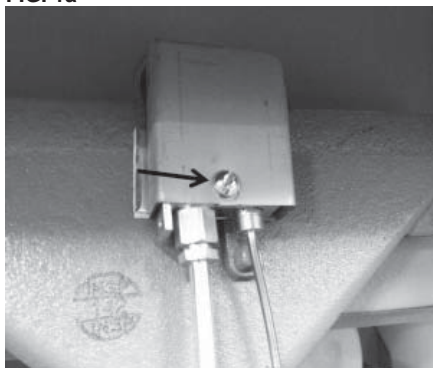
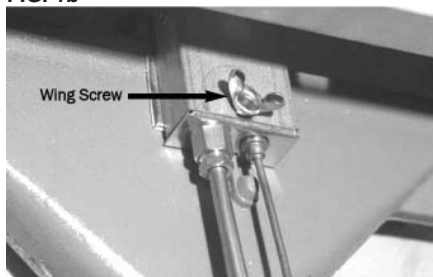
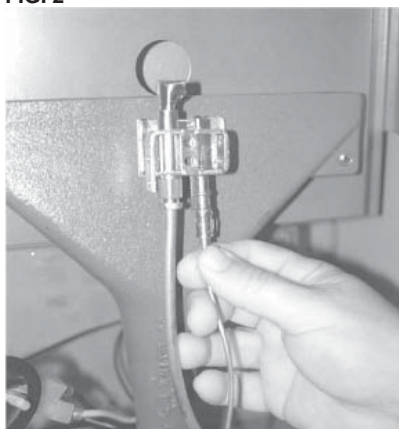


FIG. 1b



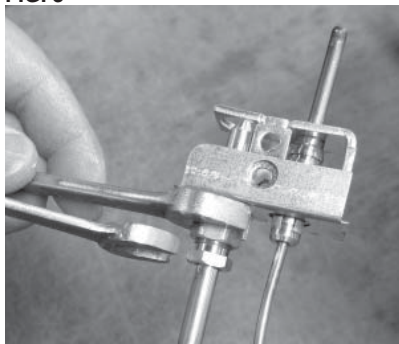
2. Remove the thermocouple by pulling down on the thermocouple to disengage its retaining clip from the pilot bracket. See Fig. 2.

FIG. 2



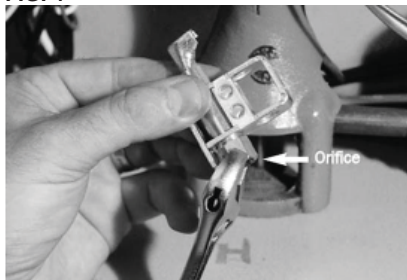
3. Using the appropriate wrench, loosen the pilot line's compression nut at the pilot orifice inlet and remove the pilot orifice from the pilot bracket. You may need to remove the pilot bracket from the burner to accomplish this. See Fig. 3. AB250 pilot assembly as shown.

FIG. 3



4. Remove pilot orifice and replace it with the pilot orifice from kit. See Fig. 4.

FIG. 4

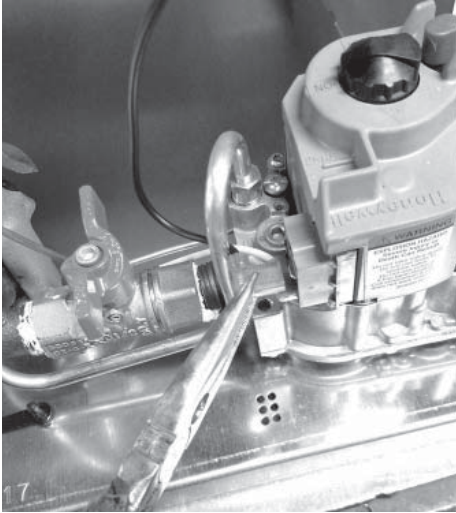


**PILOT ORIFICE**

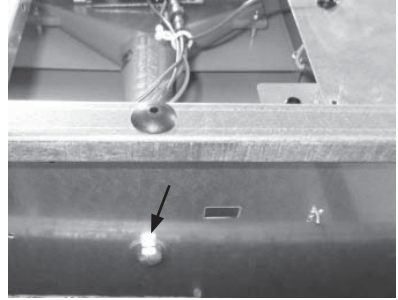
HEATER MODEL	LP GAS	NATURAL GAS
Guardian 250	9714	9727
Classic 377 / 60	4712	6721

**C. Converting the Gas Control Valve**

1. Disconnect the gas control valve's wiring.  
See Fig. 5. Guardian 250 shown.

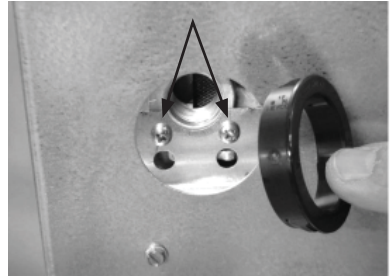
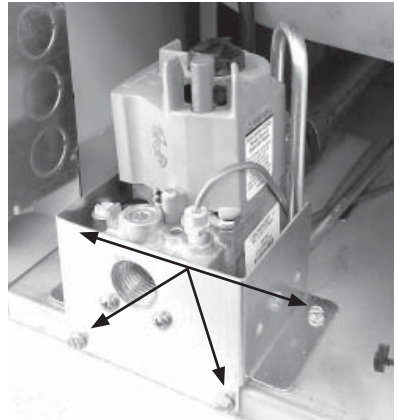
**FIG. 5**

2. Remove the burner retaining bolt and washer from beneath the heater's base for all models except the Classic 60. See Fig. 6.

**FIG. 6**

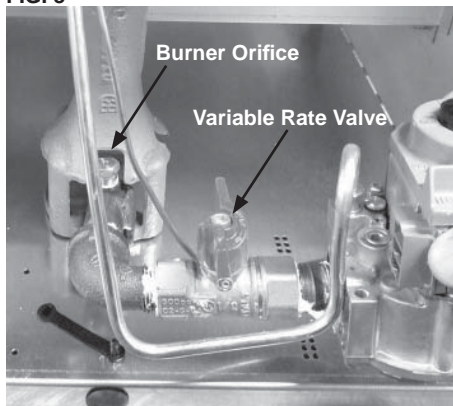
3. If needed, remove the plastic bushing at the case's gas inlet. Remove the screws from the gas valve bracket. See Fig. 7a.

- For Classic models remove the gas valve cover and the four gas valve bracket mounting screws. See figure 7b, Classic 60 as shown.

**FIG. 7a****FIG. 7b**

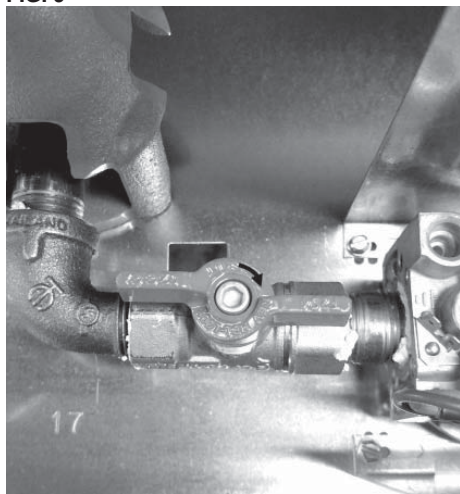
4. Lift and pivot the valve and manifold assembly as needed to remove it from the heater.
5. Replace the existing burner orifice and if applicable the variable rate valve with similar components from the kit. See Fig. 8, Guardian 250 shown.

FIG. 8



- For Guardian 250 Natural Gas ONLY, Observe the arrow located on the variable rate valve handle when assembling it to the manifold piping. See Fig. 9. Ensure the variable rate valve is installed with arrow on valve positioned as shown in Fig. 9.

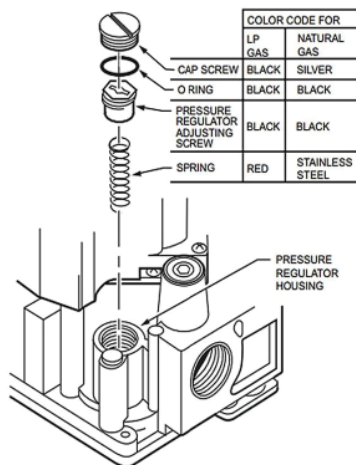
FIG. 9



6. Apply a small amount of pipe thread compound on threads, tightening securely.

7. Remove the regulator cap and pressure regulating adjusting screw. Remove the existing spring from the gas control valve. Install the spring and adjusting screw from the kit. See Fig. 10.

FIG. 10

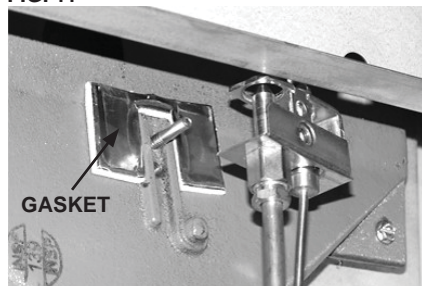


8. Turn the adjusting screw clockwise 10 complete turns.

**NOTE:** This does not accurately set the pressure. It only allows the heater to light. See Section D – Setting Gas Pressures.

9. Install the converted assembly back into the heater.
10. Ensure the pilot gasket is positioned as shown in Fig. 11 for Classic 115 & Guardian 250 heaters. Classic 60 heaters do not have the gasket.

FIG. 11

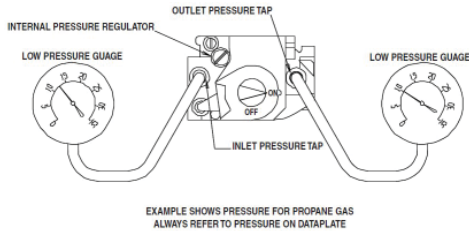


11. Install screw(s) or wing screw removed earlier. Reconnect the gas control valve's wiring.

## D. Setting Gas Pressures

- Using the 3/16 allen key, remove the pressure tap plugs at inlet and outlet of gas control valve. See Fig. 12.

FIG. 12



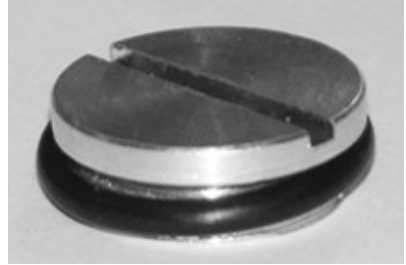
- Securely thread the 1/8 in NPT barbed fittings into the inlet and outlet pressure ports of the gas control valve.
- Securely connect pressure gauges capable of measuring up to 30 in. W.C. gauges at both locations. See Fig. 12.
- Reconnect the sediment trap and gas hose to the heater. Use pipe thread compound.
- Open the gas supply valve to the heater.
- Leak test the installation using approved leak detectors. Eliminate any gas leaks at threaded connections before proceeding.
- Reconnect the heater's electrical supply and start the heater.
- Refer to the dataplate supplied with the conversion kit. Ensure pressures are set according to required specifications given on the dataplate.

- Observe the pressure read at the inlet and outlet of the gas control valve.
- The pressure read at the inlet of the gas control is Inlet Pressure. The pressure read at the outlet of the control valve is Burner Manifold Pressure.
- Verify proper inlet pressure. If the inlet pressure to the gas control valve **DOES NOT** agree with the dataplate, then the regulator controlling gas pressure to the heater requires adjustment. Proceed after proper inlet pressure has been established.
- Verify proper burner manifold pressure. Turn the regulator adjusting screw CW (increase) or CCW (decrease) to adjust pressure as needed.

## E. Completion

- Install the O-ring into the groove on the regulator cap screw as shown on Fig. 13. Tighten cap screw on to the gas control valve.

FIG. 13



- Close the heater's main gas supply valve.
- Remove gauges and barb fittings. Install pressure tap plugs, tightening securely.
- Apply the labels included in the kit to the heater. Clean the areas to allow adhesion.

- Apply dataplate from the kit over the existing dataplate.
- Apply language specific ATTENTION label to the gas control valve in the dotted area as shown in Fig. 14.

FIG. 14



- Open the heater's main gas supply valve. Close and latch the burner access door.
- Set thermostat to desired temperature.

## Notes



## Service

Contact your local L.B. White dealer for replacement parts and service. You may also call the L.B. White Co., Inc. at 1-800-345-7200, for assistance, or email us at [customerservice@lbwhite.com](mailto:customerservice@lbwhite.com).

Be sure that you have your heater model number and configuration number when calling.



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