

Small Packaged Products Gas Heating/Electric Cooling Units LP to Natural Gas Conversion Kit

Cancels: New

IIK 582A-18-10
3-01

Installation Instructions Part Number: CPNGCONV001A00 — 1-1/2 to 5 Tons

NOTE: Read the entire instruction manual before starting the installation.

This symbol → indicates a change since the last issue.

SAFETY CONSIDERATIONS

Installing and servicing air conditioning equipment can be hazardous due to system pressures, electrical components, and fuel gases. Only trained and qualified personnel should install, service, or repair air conditioning equipment.

Untrained personnel can perform basic maintenance functions such as cleaning coils, or cleaning and replacing filters. All other operations should be performed by trained service personnel. When working on air conditioning equipment, observe precautions in the literature, on tags, and on labels attached to the unit.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies a hazard which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **would** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

Follow all safety codes. Wear safety glasses and work gloves. Have a fire extinguisher available.

⚠ WARNING

This conversion kit is to be installed by qualified service personnel in accordance with these instructions and all codes and requirements of the authority having jurisdiction, and in Canada, in accordance with the requirements of the CAN/CGA (Canadian Gas Association) B149.2 Installation Code. Failure to follow these instructions could result in serious injury, property damage or death. The qualified agency performing this work assumes responsibility for this conversion.

⚠ WARNING

This unit is designed to operate at 3.5 in. wg (±0.3 in. wg) of manifold pressure with natural gas. Exceeding this pressure may result in explosion, injury or death.

INTRODUCTION

These instructions cover the installation of a natural gas conversion kit on models 48GS, 582A, PY1P-B sizes 018-060 and 48GX, 583A, PY2P-B, 48GP, and 583B sizes 024-060 gas

heating/electric cooling units that are equipped with a White Rogers combination automatic gas valve regulator. Refer to Table 1 for kit contents.

DESCRIPTION AND USAGE

This kit is applicable to units with heating inputs from 40,000 Btu/hr to 130,000 Btu/hr. All such units were factory equipped to operate on natural gas, but may have been field converted to operate on liquid propane (LP). This kit restores the unit to original factory conditions.

INSTALLATION

⚠ WARNING

Before performing service or maintenance operations on unit, turn off gas supply first, then the main power switch to unit. Electrical shock or explosion could cause serious injury or death. TAG DISCONNECT SWITCH WITH SUITABLE WARNING LABEL.

1. Turn off gas supply first, then power to unit.
2. Remove the front access panel from unit.
3. Disconnect the gas pipe from the gas valve.
4. Disconnect orange sparker cable at the ignition control.
5. Disconnect yellow flame sensor wire from the ignition control.
6. Remove the screw securing the brown wire from the burner assembly and the green wire from the induced-draft motor at the sheet metal partition. Save screw.
7. Disconnect the gray and brown wires from the gas valve, and remove blue wires from the rollout switch.

Table 1-Kit Contents

ITEM	QUANTITY
Gas Orifice No. 31*	3
Gas Orifice No. 33*	3
Gas Orifice No. 38*	3
Gas Orifice No. 44*	2
1/8-in. Pipe Plug	1
Warning Label	1
Conversion Label	1
Responsibility Label	1

* Refer to Table 2 to determine the correct orifice to use.

8. Some LP units may have a low pressure switch attached to the gas valve. (See Fig. 1.) If there is a low pressure switch present on this unit, disconnect both gray wires from the switch. Discard the 6 in. gray jumper wire.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

Book 1 4
Tab 1a 1a

PC 101

Catalog No. 534-80024

Printed in U.S.A.

Form 48-18SI

Pg 1

3-01

Replaces: New

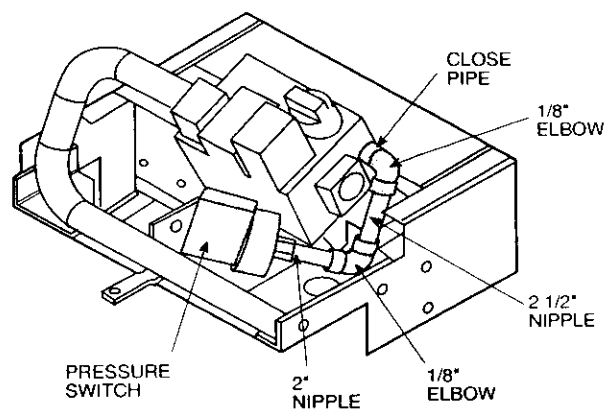
→ **Table 2—Gas Orifice Sizes**

UNIT SIZES	NUMBER OF ORIFICES	NATURAL GAS ORIFICE PART NO. AND SIZE
40,000	2	LH32RF086 NO. 44
60,000	2	LH32RF102 NO. 38
90,000	3	LH32RF102 NO. 38
115,000	3	LH32RF113 NO. 33
130,000	3	LH32RF120 NO. 31

- Remove the screw attaching the gas manifold to the basepan, and slide the entire burner rack assembly out of the unit. Save screw.

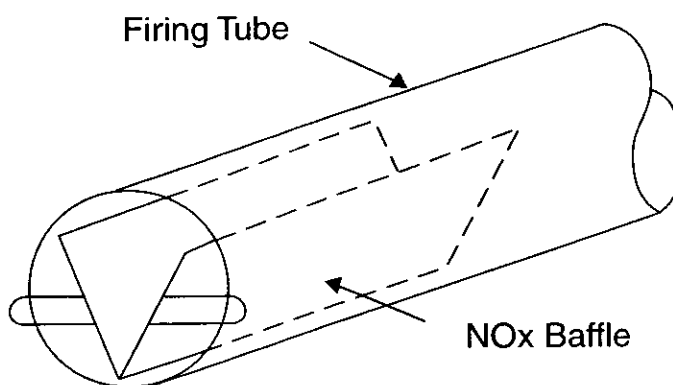
CALIFORNIA INSTALLATIONS ONLY: When this unit is operated with natural gas fuel in certain State of California Air Quality Management Districts, the fire tubes must be equipped with V-shaped NOx baffles to reduce NOx emissions below mandated limits. This unit was originally factory equipped to operate with natural gas fuel and NOx baffles, but the baffles were removed during field conversion to LP gas. These baffles **MUST** be reinstalled as shown in Fig. 2. If the original baffles are no longer available, order Replacement Part #50DK508489 from the factory. Failure to install proper baffles in this unit will violate applicable laws regulating NOx emissions in those districts.

- Using a 5/16 in. nut driver, remove the 4 screws securing the manifold/gas valve assembly to the burner assembly. Save these screws.
- If there is a low pressure switch mounted to the gas valve (See Fig. 1.) it should be removed. Disconnect the switch and all of the 1/8-in. pipe fittings leading back to the gas valve. Plug the open hole in the gas valve with the 1/8-in. pipe plug contained in this kit. Use a suitable pipe sealant to prevent leakage of combustible gas.
- Remove the LP orifices from the manifold using a 9/16 in. wrench and install the correct natural gas orifices in the manifold. (See Table 2 to determine correct natural gas orifice size based on input. See Fig. 3 for orifice installation.)
- HIGH ALTITUDE INSTALLATIONS ONLY:** Orifice sizes in this kit are applicable to standard altitude only (0–2000ft). Orifice sizes for high altitude must be field supplied and are available through your local distributor.
- Reinstall the manifold/gas valve assembly into the burner assembly using the four screws saved from Step 11.
- Reconnect the blue wires to the rollout switch.
- Reconnect the gray wire removed in Step 7 to terminal 1 (M1) on the gas valve. Reconnect the brown wire removed in step 7 to terminal 2 (C2) on the gas valve.
- Reconnect orange sparker cable and the yellow flame sensor wires at the ignition control.
- Slide burner rack assembly into basepan. Align burner rack with screws on sheet metal partition and slide assembly back tight to the partition. Replace the screw attaching the burner rack to the basepan, removed in Step 9.
- Reconnect the brown wire from the burner assembly and the green wire from the induced-draft motor to the sheet metal partition with screw saved from Step 6.
- Remove the 1/8-in. pipe plug on the gas manifold (see Fig. 3.) and connect a pressure manometer.
- Reconnect electrical power, and then gas supply to the unit.
- Fire unit and verify proper ignition. Verify that the pressure manometer reads 3.5-in. wg (+/- 0.3-in.) If the pressure is outside of this range, adjust the gas valve setting by removing the slotted brass fitting and turning the nylon adjustment screw. Replace the brass fitting.
- Turn off unit, remove pressure manometer and replace the 1/8-in. pipe fitting on the gas manifold. Use a suitable pipe sealant to prevent leakage of combustible gas.
- Attach warning label (P/N 48GS500598) to visible side of gas valve. If there is already a warning label for LP on the valve, either peel it off or cover it with the new label.
- Find the LP conversion label near the unit rating plate on the exterior of the unit. Apply the natural gas conversion label (P/N 48GS500597) on top of the LP label, completely covering the old label.
- Write information on the natural gas conversion responsibility label (P/N 48GS500599). Find the old LP conversion responsibility label inside the service access panel. Attach the new label next to (not covering) the old LP label.
- Restart unit and leak check all gas connections including the main service connection, gas valve, gas spuds, and manifold pipe plug.
- After all leaks are eliminated, replace service panel



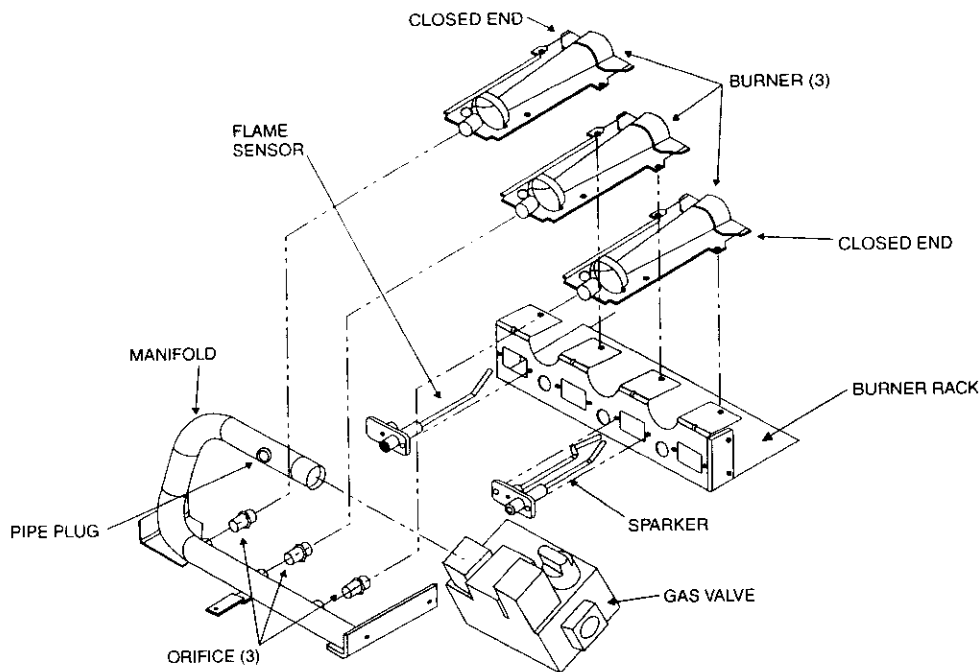
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Fig. 1—LP Pressure Switch (On Some Models)

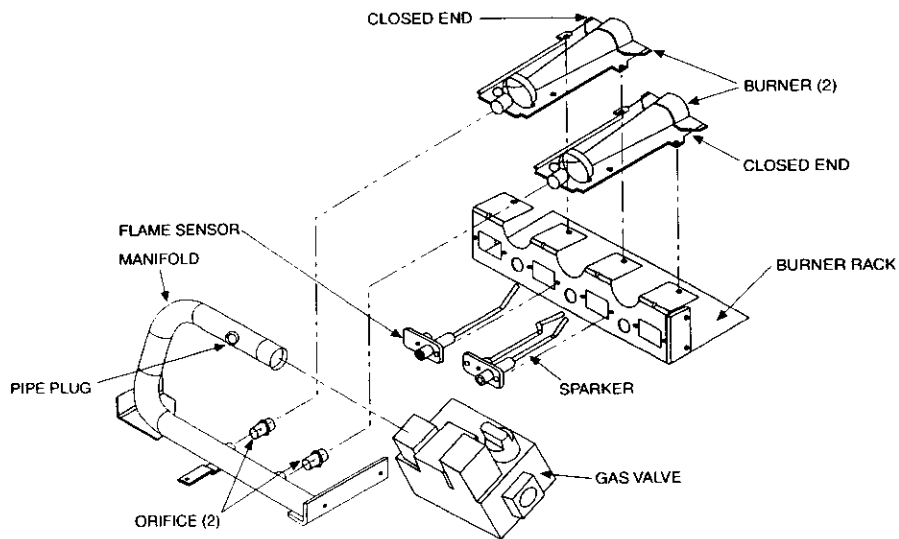


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Fig. 2—Low NOx Baffle Installation (California Installations Only)



90,000 BTUH TO 130,000 BTUH UNITS



40,000 BTUH to 60,000 BTUH UNITS

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Fig. 3—Orifice Installation