

Small Packaged Products Gas Heating/Electric Cooling Accessory LP Conversion Kit

Cancels: IIK 582A-18-5

IIK 582A-18-6
7-00


Installation Instructions Part Number: CPLPCONV005A00—1 1/2 to 5 Tons

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

SAFETY CONSIDERATIONS

Installing and servicing air conditioning equipment can be hazardous due to system fuels. 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.

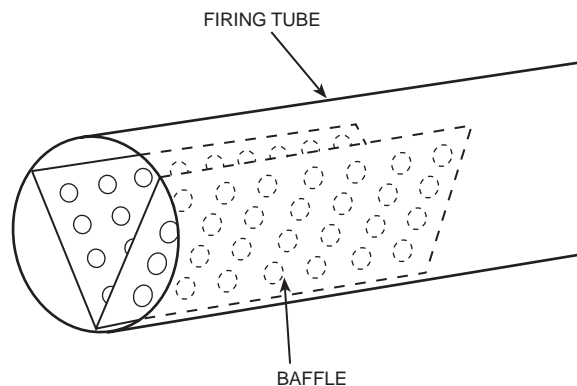
Follow all safety codes. Wear safety glasses and work gloves. Have a fire extinguisher available.

WARNING

Before converting a unit to LP, remove the burner assembly and inspect the heat exchanger tubes. If there are V-shaped NOx baffles installed in the firing tubes (See Fig. 1). **THEY MUST BE REMOVED PRIOR TO CONVERTING THIS UNIT TO LP.** Discard the baffles after removal.

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 or property damage. The qualified agency performing this work assumes responsibility for this conversion.



C99095

Fig. 1—Low NOx Baffle Location

WARNING

This unit is designed to operate at 3.5 in. wg (± 0.3 in. wg) of manifold pressure with liquid propane (LP) gas. Exceeding this pressure will cause explosion or injury.

INTRODUCTION

These instructions cover the installation of a liquid propane conversion kit on 48GS, 582A, and PY1P-B sizes 018-060 and 48GX, 583A and PY2P-B sizes 024-060 gas heating/electric cooling units that are equipped with a White Rogers combination automatic gas valve regulator.

INSTALLATION

WARNING

Before performing service or maintenance operations on unit, turn off gas supply first, then the main power switch to unit. Electrical shock could cause personal injury. 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 yellow/green wire from the burner assembly and the induced-draft motor at the sheet metal partition.
7. Disconnect the gray and brown wires from the gas valve, and remove blue wires from the rollout switch; save switch and the screw.

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

Table 1—Kit Contents

ITEM	QUANTITY
LP Gas Orifice No. 41*	3
LP Gas Orifice No. 42*	3
LP Gas Orifice No. 44*	3
LP Gas Orifice No. 45*	3
LP Gas Orifice No. 46*	3
LP Gas Orifice No. 47*	3
LP Gas Orifice No. 50*	3
LP Gas Orifice No. 51*	3
LP Gas Orifice No. 53*	2
Burner Insert	2
Pressure Switch	1
Nipple, 2-in.	1
Nipple, 2 1/2-in.	1
90-degree Elbow, 1/8-in.	2
Close Pipe	1
Wire Assembly	1
Warning Label	1
Conversion Label	1
Responsibility Label	1

LP — Liquid Propane

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

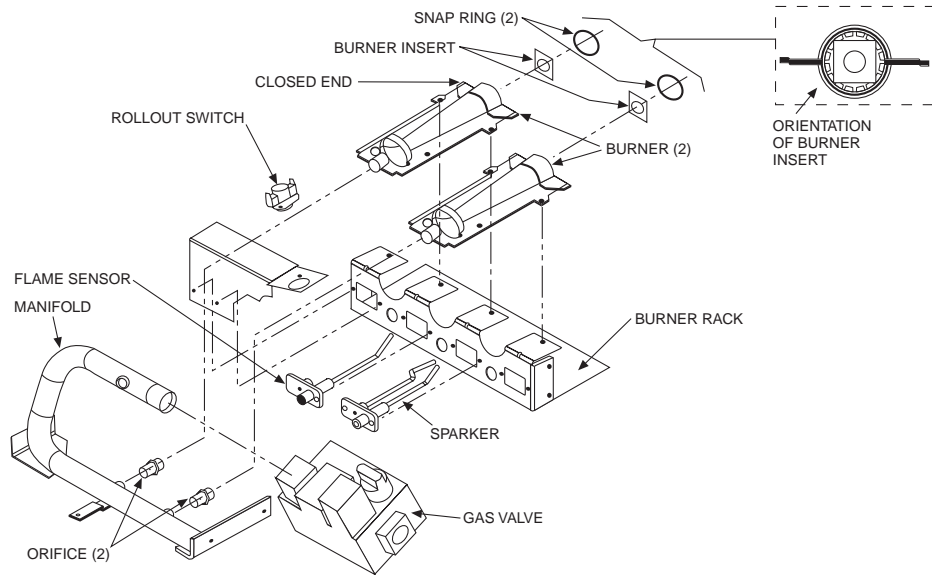
8. Remove the screw attaching the burner rack assembly to the basepan, and slide out assembly from unit. Save screw.
9. Inspect inside of heat exchanger tubes. If V-shaped NOx baffles are present in the heat exchanger tubes, these must be removed prior to converting unit for LP gas.
To remove, release the tab or ring holding the baffle in place inside the heat exchanger. Remove baffle and discard.
- 10. Using a 5/16 in. nut driver, remove the four screws securing the manifold/gas valve assembly to the burner assembly. **Save these screws.**
- 11. Remove the natural gas orifices from the manifold using a 9/16 in. wrench and install the correct LP gas orifices in the manifold (See Table 2 to select correct orifice size based on input and altitude, See Fig. 2 and 3 for orifice installation).

For 40,000 Btuh input units: Remove the two burners from the rack, save the screws. Remove the snap ring from the end of each burner. Install burner insert in the end of each burner with the flat sides of the square vertical and horizontal. Replace the snap ring to retain burner insert (See Fig. 2 for correct orientation). Replace the burners in the rack using the saved screws, making sure burners with closed crossovers are at each end.

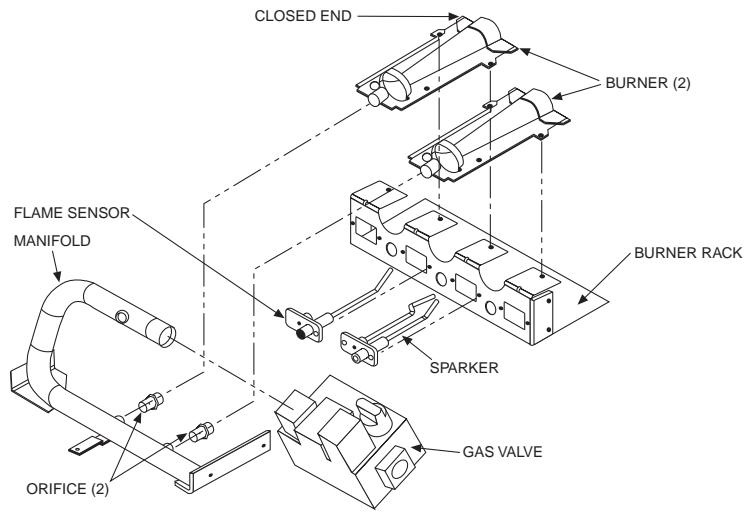
12. Replace the manifold/gas valve assembly into the burner assembly using the four screws saved from Step 10.
 13. Remove the plug on the inlet end of the gas valve using a 3/16 in. hex wrench.
 14. Install the 1/8 in. close pipe where the plug was removed in Step 13 (See Fig. 6). Use sealant (field-supplied), making sure not to get any excess in the pipe or valve. Next, install a 1/8 in. elbow, a 1/8 in. x 2 1/2 in. nipple, 1/8 in. elbow, 1/8 in. x 2 in. nipple, and pressure switch as shown in Fig. 6.
 15. Attach warning label to visible side of gas valve.
 16. Attach conversion label above unit rating plate on exterior of unit (See Fig. 4).
 17. Attach completed conversion responsibility label inside service access panel (See Fig. 5).
 18. Install the 6 in. gray wire (in kit) on terminal 1 (M1) on the main gas valve and to the pressure switch (See Fig. 7).
 19. Reconnect the blue wires to the rollout switch and reinstall rollout switch.
 20. Reconnect the gray wire removed from the gas valve in Step 7 to the other terminal on the pressure switch. Reconnect the brown wire, removed in Step 7, to terminal 2 (C1) on the main gas valve (See Fig. 7).
 21. Reconnect orange sparkler cable and the yellow flame sensor wires at the ignition control.
 22. 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 8.
 23. Replace screw and two yellow/green wires, removed in Step 6.
- IMPORTANT:** After installing this kit, leak check all gas fittings, pipes and pressure switch for leaks prior to firing the burners.
24. Replace service panel. Reconnect power supply, then gas supply to unit.

Table 2—LP Gas Orifice Sizes

UNIT SIZE	LP NOMINAL HEATING INPUT (BTUH)	NUMBER OF ORIFICES	GAS SUPPLY PRESSURE (IN. WG) (LP)		MANIFOLD PRESSURE (IN. WG) (LP)	LP GAS ORIFICE PART NO. AND SIZE ALTITUDE (FT)		
			MIN	MAX		0 TO 2000	2000 TO 4500	4500 TO 6000
018040 024040 030040	40,000	2	4.0	13.0	3.5	LH32RF070 No. 50	LH32RF060 No. 53	Not to be used above 4500 ft
024060 030060 036060 042060	57,000	2	4.0	13.0	3.5	LH32RF080 No. 46	LH32RF070 No. 50	LH32RF067 No. 51
036090 042090 048090 060090	85,500	3	4.0	13.0	3.5	LH32RF080 No. 46	LH32RF070 No. 50	LH32RF067 No. 51
048115 060115	115,000	3	4.0	13.0	3.5	LH32RF094 No. 42	LH32RF082 No. 45	LH32RF079 No. 47
048130 060130	125,000	3	4.0	13.0	3.5	LH32RF096 No. 41	LH32RF086 No. 44	LH32RF082 No. 45



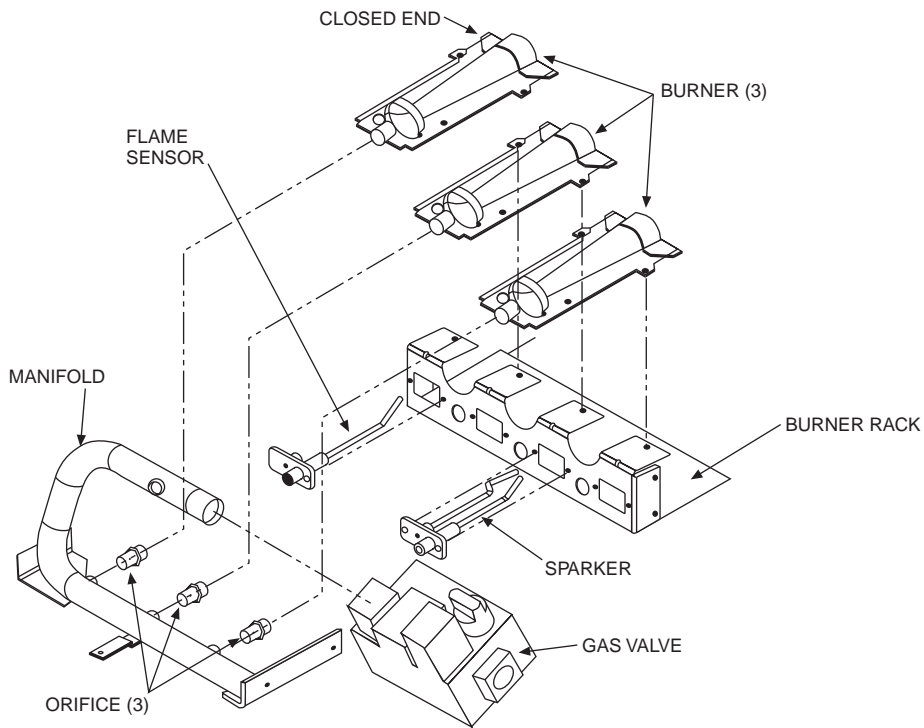
40,000 BTUH UNITS



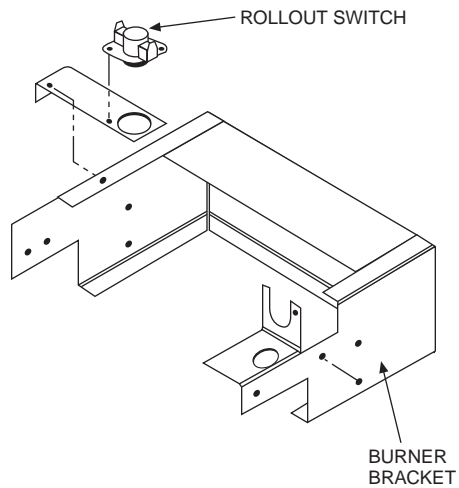
57,000 BTUH UNITS

Fig. 2—Orifice Installation

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85,000 BTUH TO 125,000 BTUH UNITS



57,000 BTUH TO 125,000 BTUH UNITS

Fig. 3—Orifice Installation

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CONVERSION KIT RATING PLATE							
THIS APPLIANCE HAS BEEN CONVERTED TO USE LP GAS FOR FUEL							
:REFER TO INSTRUCTIONS FOR CONVERSION PROCEDURES.							
:USE PARTS SUPPLIED, AND INSTALLED BY QUALIFIED PERSONNEL.							
:SEE EXISTING RATING PLATE FOR APPLIANCE MODEL NO.							
:GAS SUPPLY PRESSURE 13.0 IN. WC. [3.2 kPa] MAX.							
4.0 IN. WC. [0.99 kPa] MIN.							
:MANIFOLD GAS PRESSURE 3.5 IN. WC. [0.87 kPa]							
ALTITUDE 0-2000 FEET							
BTU'S	GAS ORIFICE		INPUT MAX.		OUTPUT CAP.		THERMAL EFFICIENCY %
	NO.	SIZE IN.	BTU/HR.	kW	BTU/HR.	kW	
40,000	50	.0700	40,000	11.7	33,200	9.6	83
60,000	46	.0810	57,000	16.7	47,310	13.9	83
90,000	46	.0810	85,000	25.0	70,965	20.8	83
115,000	42	.0935	115,000	33.7	95,450	28.0	83
130,000	41	.0960	125,000	37.2	105,410	30.9	83
ALTITUDE 2000-4500 FEET							
BTU'S	GAS ORIFICE		INPUT MAX.		OUTPUT CAP.		THERMAL EFFICIENCY %
	NO.	SIZE IN.	BTU/HR.	kW	BTU/HR.	kW	
40,000	53	.0595	33,290	9.7	27,630	8.1	83
60,000	50	.0700	47,430	13.9	39,370	11.5	83
90,000	50	.0700	71,150	20.8	59,050	17.3	83
115,000	45	.0820	95,700	28.0	79,430	23.3	83
130,000	44	.0860	105,690	31.0	87,720	25.7	83
ALTITUDE 4500-6000 FEET							
BTU'S	GAS ORIFICE		INPUT MAX.		OUTPUT CAP.		THERMAL EFFICIENCY %
	NO.	SIZE IN.	BTU/HR.	kW	BTU/HR.	kW	
40,000	NOT TO BE USED ABOVE 4500 FT						
60,000	51	.0670	44,620	13.1	37,030	10.8	83
90,000	51	.0670	66,930	19.6	55,550	16.3	83
115,000	47	.0785	90,020	26.4	74,720	21.9	83
130,000	45	.0820	99,140	29.1	82,510	24.1	83

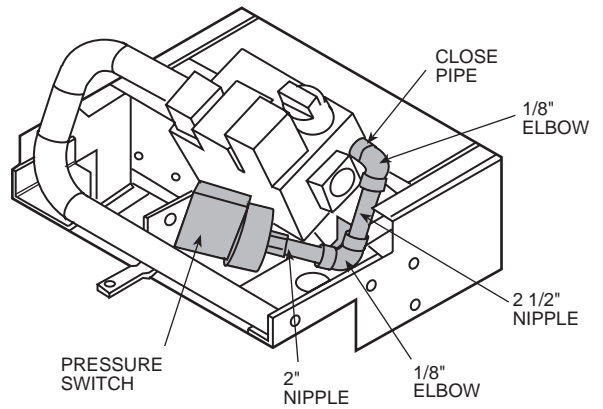
Fig. 4—Conversion Label

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THIS APPLIANCE HAS BEEN CONVERTED TO LP GAS. KIT NO. _____
 BY _____ DATE: _____
 WHO ACCEPTS THE RESPONSIBILITY FOR THE CORRECTNESS OF THIS CONVERSION.
 48SS500283

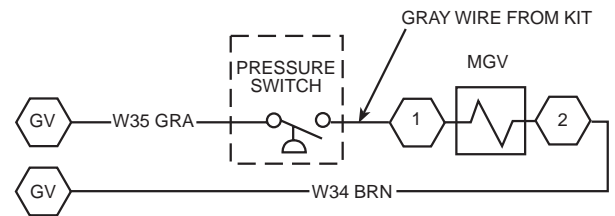
Fig. 5—Conversion Responsibility Label

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Fig. 6—Installing Elbows, Nipples, and Pressure Switch



LEGEND

- GV - Gas Valve
- MGV - Main Gas Valve

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Fig. 7—Pressure Switch Wiring

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