



# Installation Instructions

Part No. CRLPKIT1004A00 (LP Gas Conversion Kit)

## LP GAS CONVERSION KIT USAGE AND CONTENTS

ACCESSORY PART NO.	USAGE	CONTENTS
CRLPKIT1004A00	48PG03-14	11 Burner Orifices, Drill Size No. 50, 0.070 in. 11 Burner Orifices, Drill Size No. 51, 0.067 in. 11 Burner Orifices, Drill Size No. 52, 0.065 in. 8 Burner Orifices, Drill Size No. 53, 0.060 in. 1 LP Conversion Plate 1 LP Conversion Responsibility Label 1 Warning Label

### SAFETY CONSIDERATIONS

Read these instructions entirely before installing the accessory LP (Liquid Propane) Gas Conversion Kit into the base rooftop unit.

Installation, start-up, and servicing of this equipment can be hazardous due to system pressures, electrical components, and equipment location (roofs). Only trained, qualified installers and service technicians should install, start up, and service this equipment.

When working on this equipment, observe precautions in the literature and on tags, stickers, and labels attached to the equipment. Also observe any other safety precautions that may apply.

#### ▲ WARNING

Before beginning any modification, close main gas supply shutoff valve. Be certain that the main line electrical disconnect switch is in the OFF position and lockout tag is installed. Electric shock or fire could result. Tag disconnect switch and gas valve with suitable warning labels.

#### ▲ WARNING

This unit is designed to operate at 3.5 in. wg ( $\pm 0.3$  in. wg) manifold pressure in high fire with LP gas. Exceeding this pressure will cause explosion or injury.

### GENERAL

The LP Conversion Kit allows the unit to utilize a liquid propane fuel supply in areas where natural gas is not available. The kit may be used at elevations as high as 7000 ft.

For higher elevations, an accessory high altitude kit is required.

**IMPORTANT:** The Accessory LP Conversion is not for use with Low NOx units. If Low NOx units are converted to LP gas, the Low NOx baffle must be removed. The units will no longer be classified as Low NOx units. Use the LP Conversion Kit with standard units only.

The Gas Input (Btuh) values will be affected by the change in orifice sizes. See Table 1.

### INSTALLATION

#### Step 1 — Remove Gas Manifold Pipe

1. Close the manual shutoff valve on the gas supply piping.
2. Open gas section access door. See Fig. 1.
3. Set the switch on the main gas valve to the OFF position. See Fig. 2.
4. Shut off power to unit and install lockout tag.
5. Disconnect gas piping at unit gas valve.  
NOTE: Use a backup wrench to avoid twisting the gas manifold pipe.
6. Remove wires connected to gas valve. Mark each wire to ensure proper reassembly.
7. Remove wires connected to the flame rollout switch. Mark wires.
8. Remove wires connected to igniter and flame sensor. Mark wires.
9. Remove the four screws that attach the gas manifold pipe to the burner bracket and rotate the pipe away from the unit. The pipe should NOT be removed from the wire bundle connecting to the IGC board. See Fig. 3.

#### Step 2 — Replace Orifice Fittings

1. Remove standard orifice fittings from the manifold pipe. Save orifices for possible conversion back to natural gas at a later date.
2. Select the correct LP orifice fittings from the LP Conversion Kit. For standard elevations refer to Table 1. For elevations above 2000 ft refer to Table 2. Extra orifices are included in the accessory for elevations up to 7000 ft. For elevations above 7000 ft, refer to Table 2 and purchase the correct orifices required.
3. Install new orifice fittings.  
NOTE: Pipe sealant is not required. Never use Teflon tape on fitting threads since loose pieces may plug gas orifices.

#### Step 3 — Reinstall Manifold Pipe

1. Attach manifold pipe to the burner bracket using four screws. See Fig. 3. Make sure that all orifice fittings are properly seated in the burner inlets.
2. Reconnect wires to the igniter, flame sensor, flame rollout switch, and gas valve.
3. Reconnect gas piping to the gas valve.

**Table 1 — Burner Orifice Sizes**

UNIT SIZE 48PG	GAS HEAT TYPE (UNIT CODE)	ORIFICE DRILL SIZE*	MANIFOLD PRESSURE (in. wg)	ADJUSTED LP HEATING INPUT (Btuh)
03	High (F)	No. 52, 0.065 in.	3.5	55,000
	Low (D)	No. 52, 0.065 in.	3.5	55,000
04, 05	Medium (E)	No. 52, 0.065 in.	3.5	74,000
	High (F)	No. 52, 0.065 in.	3.5	111,000
06, 07	Low (D)	No. 52, 0.065 in.	3.5	74,000
	Medium (E)	No. 52, 0.065 in.	3.5	111,000
08, 09	High (F)	No. 52, 0.065 in.	3.5	148,000
	Low (D)	No. 50, 0.070 in.	3.5	130,000
12, 14	Medium (E)	No. 50, 0.070 in.	3.5	174,000
	High (F)	No. 50, 0.070 in.	3.5	217,000

\*Orifice sizes are for 0 to 2000 ft only. For elevations higher than 2000 ft, see Table 2.

**Table 2 — Altitude Compensation\***  
48PG03-07

ELEVATION (ft)	NATURAL GAS ORIFICE†	LP ORIFICE†
0-1,999	45	52
2,000	47	52
3,000	47	53
4,000	47	53
5,000	48	53
6,000	48	53
7,000	48	53
8,000	49	54
9,000	49	54
10,000	50	54
11,000	51	54
12,000	51	55
13,000	52	55
14,000	52	56

**48PG08-14**

ELEVATION (ft)	NATURAL GAS ORIFICE†	LP ORIFICE†
0-1,999	43	50
2,000	44	51
3,000	44	51
4,000	44	51
5,000	45	51
6,000	45	52
7,000	47	52
8,000	47	52
9,000	47	53
10,000	48	53
11,000	49	53
12,000	50	54
13,000	50	54
14,000	51	55

**LEGEND**

LP — Liquid Propane

\*As the height above sea level increases, there is less oxygen per cubic foot of air. Therefore, heat input rate should be reduced at higher altitudes. Includes a 4% input reduction per each 1000 ft.

†Orifices available through your Carrier dealer.

**Step 4 — Apply Conversion Labels**

1. Attach the LP Conversion Plate next to the unit rating plate.
2. Complete the Conversion Responsibility label by writing the kit number, dealer name, and date in ink. Attach to the burner bracket near the main gas valve. See Fig. 3.
3. Attach Warning Label on the outside of the gas section access door.

**Step 5 — Check Unit Operation and Make Necessary Adjustments**

NOTE: Gas pressure must not be less than 5 in. wg or greater than 13 in. wg at the unit connection.

1. Remove pressure tap plug from manifold pipe and connect a pressure gage or manometer.
2. Turn on electrical supply.
3. Open the manual shutoff valve on the gas supply piping. Check pipe connection to main gas valve for leaks.
4. Set the switch on the main gas valve to the ON position.
5. Call for high stage heat (W2 energized). The unit may require several ignition attempts due to trapped air in the manifold pipe.
6. When main burners ignite check orifice fittings for leaks. Repair if necessary.

**⚠ WARNING**

Never use a match or other open flame to check for leaks. Use a soap and water solution. Fire or serious injury could result.

**⚠ CAUTION**

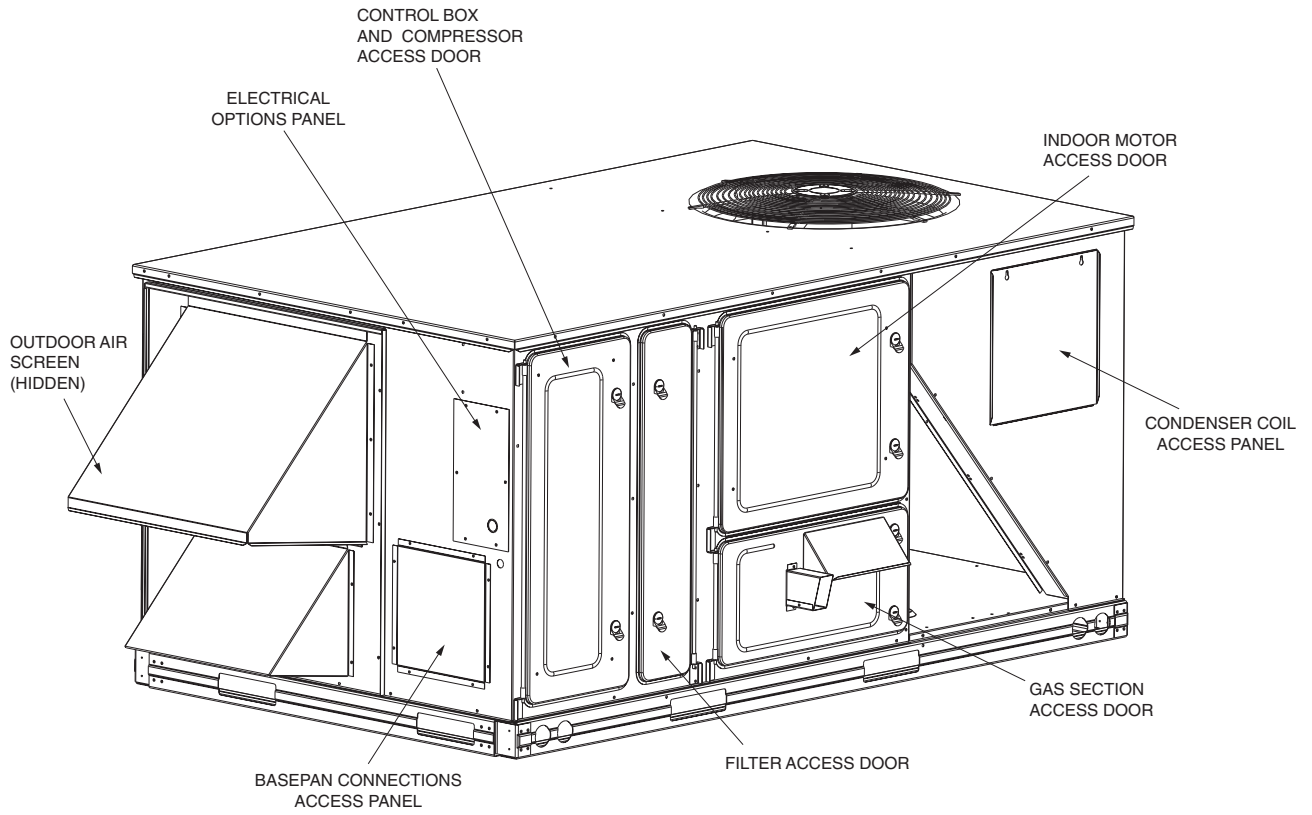
If unit is equipped with a 2-stage gas valve, ensure valve has energized second stage (high fire) before adjusting manifold pressure. Improper manifold pressures may cause explosion or injury.

7. Verify that manifold pressure is between 3.2 and 3.5 in. wg while in high fire (W2 energized). Readjust pressure if necessary.

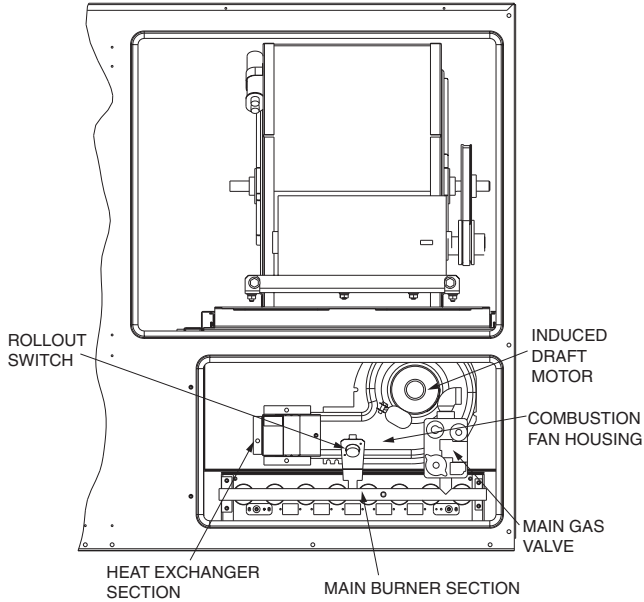
**⚠ WARNING**

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

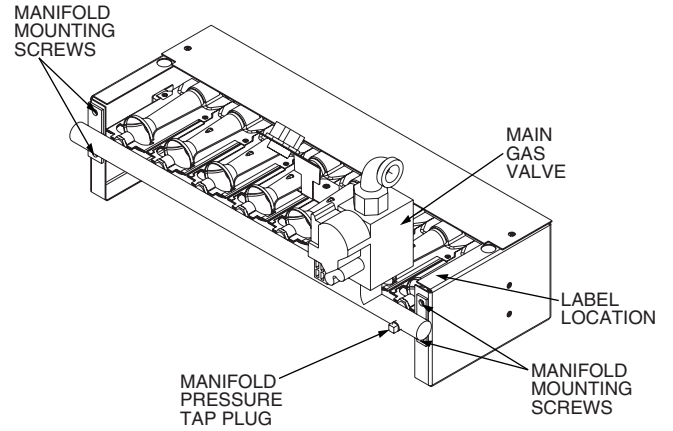
8. Shut down unit by turning down thermostat, shutting off manual gas valve, and shutting down power to unit.
9. Remove pressure gage or manometer and replace manifold pressure tap plug.
10. Start up unit. With burners ignited, check pressure tap plug for gas leaks. Repair if necessary.
11. Close and secure gas section access door.
12. Set thermostat to desired temperature.
13. Remove warning tags from disconnect switch and gas supply shutoff valve.



**Fig. 1 — Panel and Filter Locations (48PG03-07 Unit Shown)**



**Fig. 2 — Typical Gas Heating Section**



**Fig. 3 — Main Burner Section (48PG03-07 Shown)**

