INSTALLATION INSTRUCTIONS

DNLPKIT7002A00 – Accessory Liquid Propane Conversion Kit

Used On: PGS/E180-240

These instructions must be read and understood completely before attempting installation.

Table 1 – LP Kit contents and usage

Kit Number	Unit	Type of System	Standard Unit Heat Input Btuh 60 Hz	Kit Contents
DNLPKIT7002A00	PGS180	6 Cell	300,000	7 Orfices (#36), Instructions, Conversion and Warning Label
	PGS240, PGS/E180-240	7 Cell	360,000	

General

These instructions cover the installation of liquid propane (LP) conversion kits used to convert units from standard natural gas input to LP gas input. See Table 1 below for accessory kit contents and usage.

Important

IMPORTANT: Read these installation instructions thoroughly BEFORE starting installation. These units are equipped with an IGC (Integrated Gas Unit Controller) board and a direct spark ignition system.

Safety considerations

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 unit. Also observe any other safety precautions that may apply.

⚠ WARNING

FIRE, EXPLOSION, ELECTRICAL HAZARD

Failure to follow this warning could result in personal injury, death or property damage.

Gas supply MUST be shut off before disconnecting electrical power and proceeding with conversion.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing or servicing system, always turn off main power to system. There may be more than one disconnect switch. Tag disconnect switch with suitable warning label.

⚠ WARNING

FIRE, EXPLOSION, ELECTRICAL HAZARD

Failure to follow this warning could result in personal injury, death or property damage.

This unit is designed to operate at 3.3 +/- 0.3 in. wg (0.82 +/- 0.075 kPa) manifold pressure with LP gas. Exceeding this pressure will cause explosion or injury.

⚠ WARNING

FIRE, EXPLOSION, ELECTRICAL HAZARD

Failure to follow this warning could result in personal injury, death or property damage.

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

BEFORE STARTING INSTALLATION, DISCONNECT ALL POWER TO THE UNIT.

INSTALLATION:

Remove Current Burner Assembly

1. Shut off manual gas valve.
2. Shut off power to unit and install lockout tag.
3. Remove control box access panel, control box cover, burner section access panel, and unit center post. See Fig. 1.
4. Disconnect orange ignitor and yellow sensor wires from the IGC board.
5. Disconnect wires from gas valve. Mark for reconnection.
6. Remove rollout switch leads at rollout switch. Mark for reconnection.
7. Remove the wire ties securing the rollout switch leads to the manifold.
8. Disconnect the incoming gas piping from the gas valve manifold and remove hold-down clamp.
9. Remove the partition filler panel by removing 2 screws from panel. See Fig. 2. Save screws for reinstallation of filler panel.

10. Remove the 2 screws securing the burner assembly to the partition. See Fig. 2. Save screws for reinstallation of burner assembly.

Figure 1 – Access Panel Locations

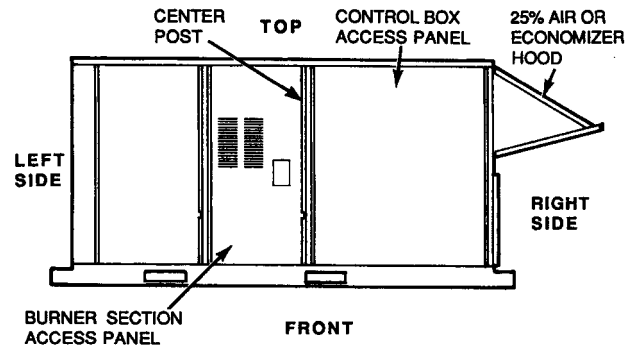
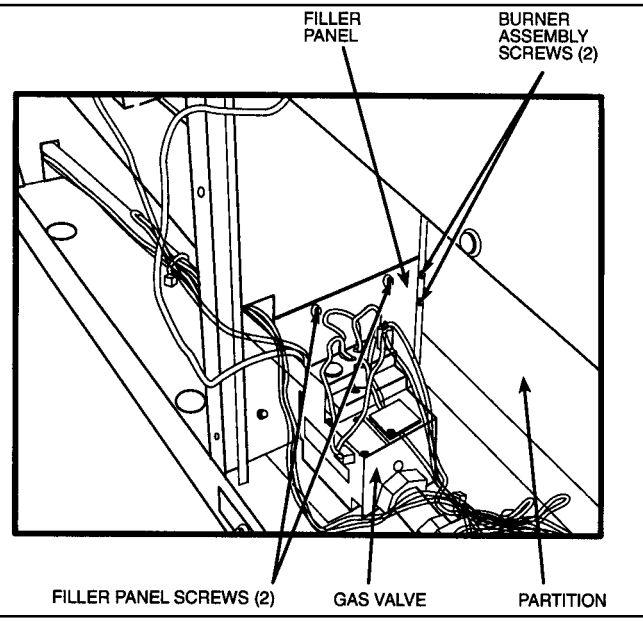


Figure 2 – Removal of Filler Panel



11. Remove the 2 screws securing the burner assembly to the basepan. Save screws for reinstallation of burner assembly. See Fig. 3.
12. Remove 3 screws securing the burner assembly to the flame shaper. See Fig. 4. Save screws for re-installation of burner assembly.
13. Lift and remove burner assembly from unit.

Figure 3 – Removal of Burner Assembly from Basepan

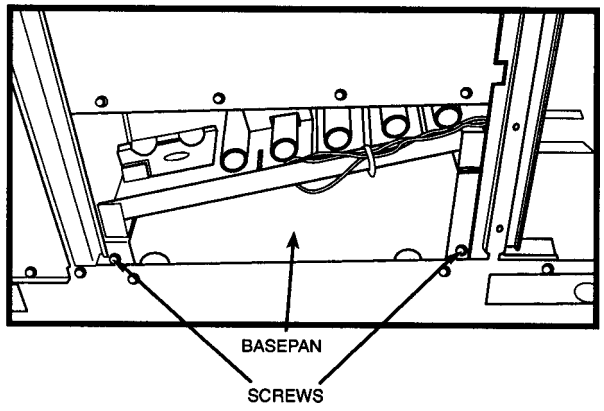
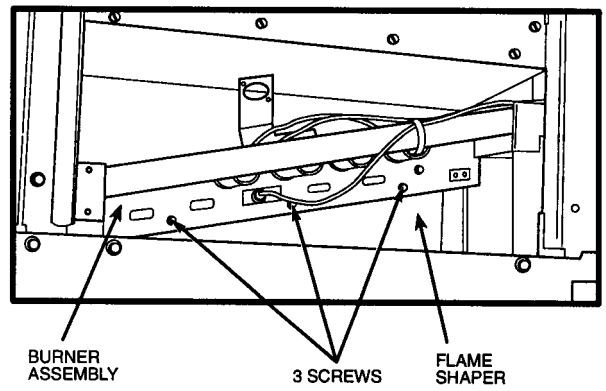


Figure 4 – Removal of Burner Assy. from Flame Shaper



Rollout Switch Relocation – Remove the 2 screws securing the rollout switch to the no. 4 burner and save. Reattach the rollout switch to burner no. 3 using same screws. See Fig. 5.

IMPORTANT: Be sure rollout switch is on burner no. 3 to ensure proper operation of the safety device.

Orifice Replacement

1. Remove the 2 screws securing the burner brackets to the manifold. See Fig. 6.
2. Remove the orifices from the manifold.
3. Insert the new orifices from the accessory kit. The orifices should be screwed in until 2 threads remain visible. Save the old orifices for possible reinstallation if natural gas becomes available.
4. Reattach the burner manifold assembly to the burner brackets. Make sure that all orifices have been installed.

Figure 5 – New Rollout Switch Location

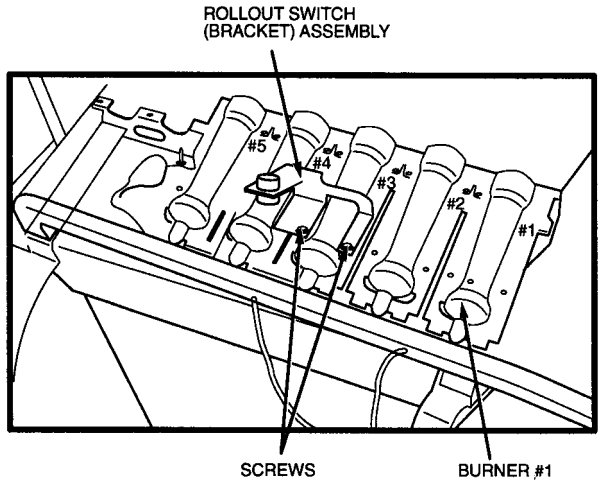
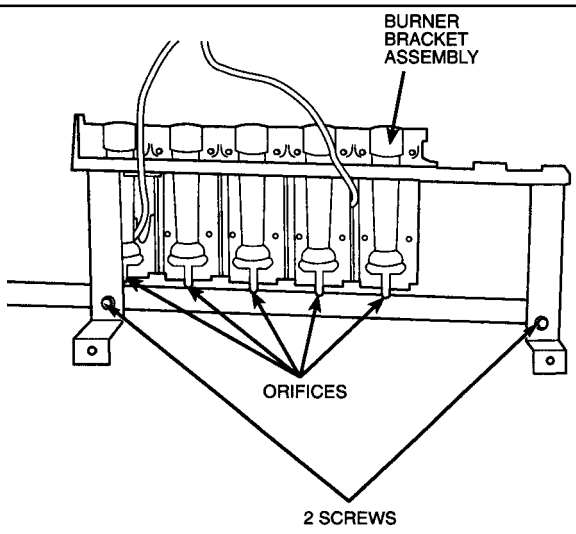


Figure 6 – Burner Section



Reinstall Burner Assembly

1. Perform the Remove Current Burner Assembly section steps (4 to 13) in reverse order. Be sure to reconnect wires to the same points from which they were disconnected. Use the wiring label on the access panel as a guide.
2. Replace any wire ties that were removed in previous steps.

Apply Warning Labels

1. Apply the LP conversion label on the unit panel, next to the current nameplate.
2. Apply the warning label on the outside of the control box access panel.

Check Unit Operation and Make Necessary Adjustments

1. Remove manifold pressure tap plug from manifold and connect pressure gage or manometer.
2. Replace control box cover. Cover must be in place before applying any power to unit.
3. Turn on electrical supply.
4. Turn on unit main gas valve.
5. Set room thermostat or room sensor to call for heat.
6. When main burners ignite, adjust regulator for 3.3 +/– 0.3 in. wg (0.82 +/– 0.075 kPa) manifold pressure with LP gas. Check manifold and orifices for leaks.

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

7. Check firing rate and readjust pressure if necessary. See nameplate.
8. Shut off manual gas valve and shut off power to unit.
9. Remove pressure gage or manometer and replace manifold pressure tap plug.
10. Turn on main gas valve and power to unit. With burners ignited, check pressure tap for gas leaks. Repair if necessary.
11. Replace all access panels and center post.
12. Set thermostat to desired temperature.
13. Remove warning tags from disconnect switch and gas supply shutoff valve.

Service

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before installing or servicing system, always turn off main power to system. There may be more than one disconnect switch. Tag disconnect switch with suitable warning label.

Cleaning – Inspect unit interior at beginning of each heating and cooling season and as operating conditions require. Remove unit top panel and/or side panels for access to unit interior.

MAIN BURNER – At the beginning of each heating season, inspect for deterioration or blockage due to corrosion or other causes. Observe the main burner flame.

FLUE GAS PASSAGEWAYS –The flue collector box and heat exchanger cells may be inspected by removing burner section access panel, flue box cover, and main burner assembly (Fig. 7). If cleaning is required, remove heat exchanger baffles and clean tubes with a wire brush.

Use caution with ceramic heat exchanger baffles. When installing retaining clip, be sure the center leg of the clip extends inward toward baffle. See Fig. 8.

COMBUSTION–AIR BLOWER – Clean periodically to assure proper airflow and heating efficiency. Inspect blower wheel every fall and periodically during heating season. For the first heating season, inspect blower wheel bi–monthly to determine proper cleaning frequency.

To inspect blower wheel, remove heat exchanger access panel. Shine a flashlight into opening to inspect wheel. If cleaning is required, remove motor and wheel assembly by removing screws holding motor mounting plate to top of combustion fan housing (Fig. 7). The motor and wheel assembly will slide up and out of the fan housing. Remove the blower wheel from the motor shaft and clean with a detergent or solvent. Replace motor and wheel assembly.

Figure 7 – Typical Gas Heating Sections

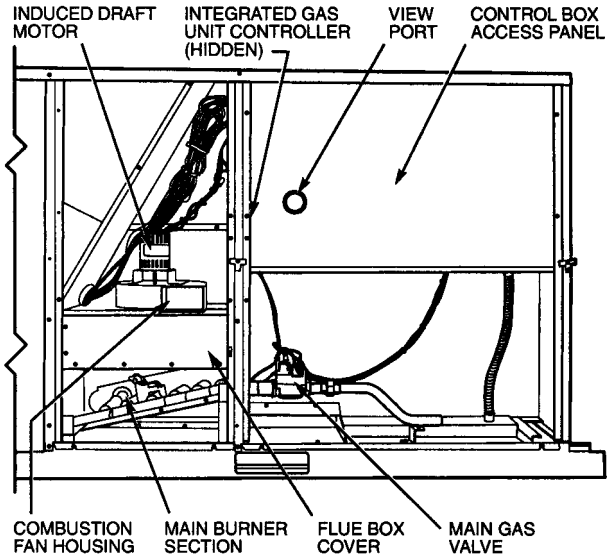
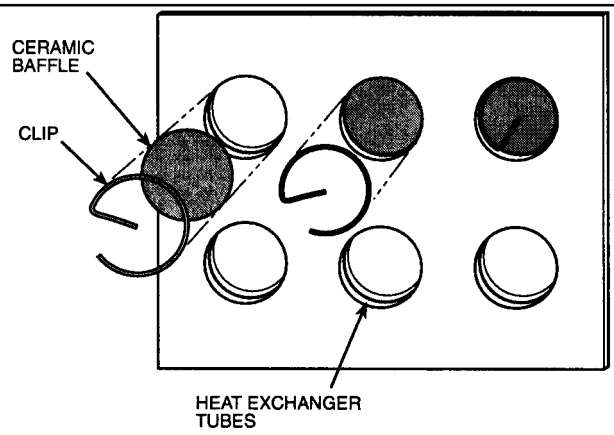


Figure 8 – Removing Heat Exchanger Ceramic Baffles and Clips



NOTE: One baffle and clip will be in each upper tube of the heat exchanger.