



“LPKIT__” - PROPANE CONVERSION KIT

Kits are available for field converting from natural to propane gas. These conversion kits must be installed by a qualified service agency.

“WARNING”

“This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer’s instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, an explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer’s instructions supplied with the kit.”

NOTE: Skypak model SGAC201212 is not approved for use with propane gas and must not be converted. The gas valve will not regulate down to 20,000 Btu/hr on propane gas. The valve would continuously open and close resulting in unsatisfactory operation.

All Skypak models listed below may be field converted to use propane gas:

SGAC401212	R or SGAC40(18 or 24)12
SGAC603012	R or SGAC60(18 or 24)12
SGAC803012	R or SGAC802412

The propane conversion kit consists of the following parts and instructions:

Main Burner Orifices – Skymark Part #: Orifice – 1.35

Size 1.35 mm, drill size “C”.

The number of orifices required is 1 for each 20,000 Btu/hr of input capacity.

Gas Valve Spring (Propane) – Skymark Part #: SPR-393691

Honeywell # 393691 (Includes Honeywell instruction form # 69-0244-4)

Pilot Burner Orifice (Propane) – Skymark Part # PBO-010P

Honeywell # 390686-1

Label – “Converted to Propane”

Propane Conversion Kit Installation Instructions – These instructions included in the kit.

Installation and Operation Instructions for Skypak Units – Form INOP-PAK-10/02

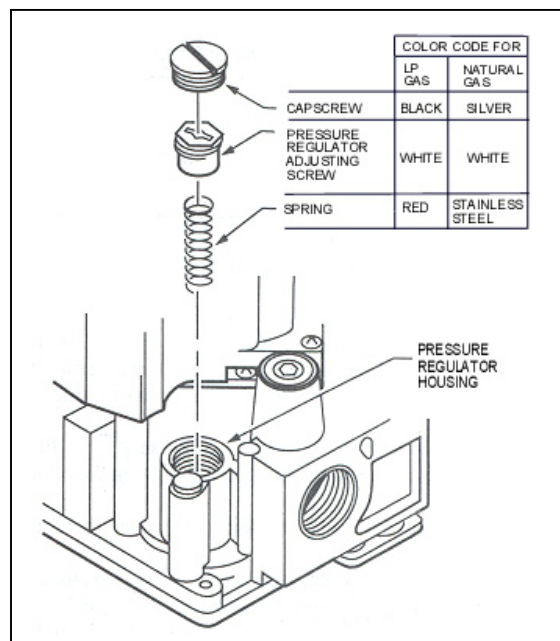
These instructions are packaged with the unit in the blower compartment.

PROCEDURE FOR INSTALLING THE PROPANE CONVERSION KIT

CAUTION: The gas supply shall be shut off prior to disconnecting the electrical power, before proceeding with the conversion.

Changing the Main Burner Orifices

Begin the conversion by removing the natural gas orifices from the main burners and replace them with the propane orifices size 1.35 mm supplied in the kit. Refer to section 27C in the unit Installation and Operation Instructions manual for detailed instructions on replacing main burner orifices. For high altitudes between 2000 and 4500 feet above sea level the main burner orifices must be 1.30 mm to derate the furnace by 10%. The manifold pressure must be 9.5 inches W.C. Inlet pressure must be between 11 and 13 inches W.C. To convert the gas valve to propane, replace the natural gas spring in the pressure regulator with the propane spring included in the kit. Refer to the drawing of the gas valve and follow the step by step instructions.



Remove regulator cap screw and pressure regulator adjusting screw. Remove the existing regulator spring. Insert the replacement spring from the propane conversion kit. Install the new plastic pressure regulator adjustment screw. Make sure the screw top is flush with the regulator top. Turn the pressure regulator adjustment screw clockwise six complete turns. This gives a preliminary pressure setting of approximately 9.5 inches W.C. Check the regulator setting with a manometer and adjust the regulator screw to set the manifold pressure at 9.5 inches WC. Refer to section 25B in the unit Installation and Operation Instructions manual for the step by step procedure.

CAUTION: Many installers set propane (LP) manifold pressure at 11.0 inches W.C. DO NOT DO THIS! It could cause heat exchanger failure or nuisance callbacks. After the regulator adjustment has been verified as correct, install the black cap screw provided in the kit.

Replacing the Pilot Burner Orifice

Disconnect the ¼ inch gas line connection at the pilot burner assembly. Tap gently on the pilot burner if necessary to get the pilot orifice to fall out. Install the propane pilot orifice BBR10 supplied in the conversion kit. Reconnect the ¼ inch gas line to the pilot burner assembly. Apply the yellow label supplied in the kit to the gas valve to indicate the valve has been converted to propane.

Start Up and Testing

The conversion to propane is not complete until the following tests and adjustments have been completed:

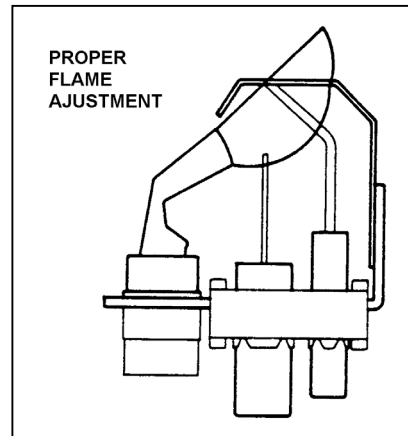
1. It is important to purge all air from the gas piping right up to the unit before turning on the furnace and checking operation. This can be done by removing the 1/8 gas test plug on the inlet side of the gas valve. Turn on the gas without the electric power being turned on. Continue purging until there is a smell of gas at the gas valve. Then turn off the gas and connect a manometer or pressure gauge at the valve inlet test port, ready to test the inlet pressure.
2. Set the room thermostat at least 5°F above the room temperature and select the heat cycle. Turn on electric power and gas supply to the unit. The furnace should then start and go through the normal operating

sequence of the ignition system as detailed in Section 20 of the unit Installation and Operation Instructions manual.

3. With the furnace operating, check for leaks where the main burner orifices are threaded into the manifold and where the $\frac{1}{4}$ inch gas line connects to the pilot burner. Use a soapy water solution to test for leaks. Never use an open flame to test for leaks. A fire or explosion could occur.
4. Measure the inlet gas pressure with the furnace on and all other gas burning equipment on the same supply also in operation. The inlet gas pressure must be between 11 and 13 inches W.C. If it is not within these limits, contact the propane gas supplier to have the pressure corrected. Refer to Section 23A of the unit Installation and Operation Instructions manual for detailed instructions on how to test inlet gas pressure.
5. Turn off the electric and gas supply to the furnace. Transfer the manometer or pressure gauge connection to the outlet or manifold side of the gas valve. Re-install the plug in the test port on the inlet side of the gas valve. Turn on the electric and gas supply to the furnace and measure the manifold pressure. The normal manifold pressure is 9.5 inches W.C. The allowable range is 9.2 to 9.8 inches W.C. If necessary, adjust the regulator adjustment spring to obtain 9.5 inches W.C. manifold pressure.

CAUTION: Many installers set propane manifold pressure at 11.0 inches W.C. DO NOT DO THIS! It could cause heat exchanger failure or nuisance callbacks. Refer to Section 27 in the unit Installation and Operation Instructions manual for more detailed instructions on adjusting manifold pressure.

6. The pilot flame should cover $\frac{1}{2}$ inch of the tip of the flame sensor, as shown in the illustration. If necessary, adjust the size of the pilot flame by means of the pilot adjusting screw in the gas valve. Refer to Section 23B of the unit Installation and Operation Instructions manual for more detailed instructions on adjusting the pilot flame.



7. The main burner flames should be clear blue in appearance, with no yellow occurring.
8. The required input rating of the converted furnace is the same as the input rating stated on the data plate. Changing to propane gas with main burner orifices of 1.35 mm and a manifold pressure of 9.5 inches W.C. will give the same input rating as stated on the data plate for natural gas. If the furnace is also being converted for high altitude (2000 to 4500) feet as well as converting to propane, main burner orifices 1.30 must be used at 9.5 inches W.C. manifold pressure. This will result in a 10% reduction of the input rating shown on the data plate. A separate label should be placed next to the data plate indicating the unit has been converted to propane, or for propane and high altitude. These labels are included in the conversion kits.

