

INSTALLATION INSTRUCTIONS

**CONVERSION KIT ANGKT555-1
FOR CONVERTING G(U,C,H)J; G(U,C)K;
RG(U,C,H)80; RG(U,C)90; PGE & RPG GAS FURNACES
FROM PROPANE TO NATURAL GAS
-FOR USE AT THE SAME ALTITUDE ONLY**

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 THE 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.

AVERTISSEMENT

Cette trousse de conversion ne doit être installée que par le représentant d'un organisme qualifié et conformément aux instructions du fabricant et à tous les codes et exigences pertinents de l'autorité compétente. Les instructions du présent guide doivent être suivies afin de réduire au minimum le risque d'incendie ou d'explosion, de dommage matériel, de blessure ou de mort. L'organisme qualifié est responsable de l'installation adéquate de cette trousse. L'installation n'est pas adéquate ni complète tant que le bon fonctionnement de l'appareil converti n'a pas été vérifié selon les instructions du fabricant fournies avec la trousse.

FOR CANADIAN CONVERSIONS: THE CONVERSION SHALL BE CARRIED OUT BY A MANUFACTURER'S AUTHORIZED REPRESENTATIVE, IN ACCORDANCE WITH THE REQUIREMENTS OF THE CANADIAN INSTALLATION CODES CAN/CGA-B149.1 & B149.2.

NOTE: WHERE "LP" OR "LPG" APPEAR IN THE ENCLOSED KIT LITERATURE OR ON THE ENCLOSED KIT LABELS, THE LP AND/OR LPG IS AN ACCEPTABLE ABBREVIATION FOR "PROPANE."



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This kit contains parts to convert GUJ, GHJ, GCJ, GCK, GUK, RGU80, RGH80, RGC80, RGU90, RGC90, and PGE, RPG series furnaces from LPG/Propane to natural gas (U.S.A. and Canada).

NOTE: Depending on the specific model being converted, some of the parts in this kit may not be required. RGU80, RGH80, RGC80, RGU90, RGC90 and PGE, RPG models use a direct ignition system and do not have a pilot burner. For these models, disregard references to the pilot burner, pilot bracket, pilot tubing, etc. in the Conversion Procedure below.

PARTS LIST

- (6) #42 Size orifices
- (1) Pilot orifice
- (1) Adapter kit for Honeywell VR8200 series gas valve
- (1) Installation Instructions
- (1) Gas valve conversion label
- (1) Conversion plate
- (1) Conversion gas installation label

If any damage to the contents is found at the time of delivery, proper notation should be made on the carrier's freight bill. Damage claims should be filed with the carrier at once. Claims of shortage should be filed with the manufacturer within five days.

CONVERSION PROCEDURE

To proceed with the conversion, follow these steps:

1. **CAUTION:** The gas supply shall be shut off prior to disconnecting the electrical power, before proceeding with the conversion.
2. Remove the access door panel.
3. Remove the regulator cap, adjusting screw, and spring from the gas valve (See Figure 1). Disconnect the pilot tubing.
4. Install the new regulator spring and adjustment screw. (Follow the instructions included with the valve adaptor kit). Wipe the manifold pipe beside the gas valve clean of any dirt, oily film, or residue. Remove propane conversion label. Place the gas valve conversion label, furnished in the kit from the furnace manufacturer, on this section of the manifold pipe so it is readily visible after the conversion is complete.
5. On models with a spark ignited pilot, disconnect the spark and sensor leads from the ignition control. On models with a "Smartvalve" hot surface pilot, remove the igniter plug from the gas valve.
6. GUK and RGU90 Models Only:
 - a) Remove the top panel of furnace.
 - b) Remove the front cover of burner box.
 - c) Remove the top cover of burner box.
 - d) Remove the burner shield.
7. Disconnect the rollout switch wire and remove the burner shield. (Not applicable to GUK or RGU90).
8. Remove the burners by removing the screw on each side of the burner.
9. Remove the two (2) screws that hold the pilot bracket assembly on the burner rack. **NOTE:** For models equipped with a hot surface pilot, the igniter is fragile; handle the pilot carefully.
10. Remove the burner rack by removing the two (2) screws on each side of the burner box. (GUK models only)
11. Replace the burner orifices on the manifold with the natural orifices supplied in the kit. Make sure to apply pipe compound resistant to natural gas to the orifice threads before installing the new orifices.
12. Remove the pilot assembly from the pilot bracket and replace the pilot orifice with the natural orifice found in adaptor kit. Tighten all fittings. (GUJ, GCJ, GHJ, GUK, GCK models only).
13. Install the pilot assembly to the burner rack.
14. Install the burner rack to the burner box. (GUK models only)

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15. Install the burners back on the burner rack, making sure they are aligned.
16. Install the burner shield cover.
17. Install the top cover and front cover of the burner box. (GUK and RGU90 models only)
18. Install the top panel on the furnace (GUK and RGU90 models only)
19. Reconnect all wiring.
20. Remove the outlet pressure plug on the gas valve and connect a water manometer.
21. Turn on the gas and electric supply to the unit.
22. With the unit operating, turn the pressure regulator screw to obtain 3.5" W.C. manifold pressure (gas valve outlet). Turn the adjustment clockwise to increase pressure and counterclockwise to decrease pressure. Be sure to install the regulator cap (See Figure 1) on the gas valve.
23. Check input rate of the furnace and compare it to the rating plate:

$$\frac{\text{Cubic feet per revolution}}{\text{No. seconds per revolution}} \times 3600 \times \text{Heating Value} = \text{Input Rate}$$

(If slightly off, turn regulator screw in or out to adjust.)

24. Check all fittings for leaks using a soap solution.

CAUTION: NEVER USE A FLAME TO CHECK FOR LEAKS. USE SOAPY WATER AND A BRUSH.

WARNING: NEVER USE AN OPEN FLAME TO CHECK FOR LEAKS. IF THERE IS A GAS LEAK, EXPLOSION OR INJURY CAN RESULT.

CAUTION: SOME SOAPS USED FOR LEAK DETECTION ARE CORROSIVE TO CERTAIN METALS. CAREFULLY RINSE PIPING THOROUGHLY AFTER LEAK DETECTION HAS BEEN COMPLETED.

25. Check for normal operation of the ignition system (see "Sequence of Operation" section). Cycle the main burners (See Figure 3) on and off. Ignition and extinction should be smooth. The pilot flame should cover approximately 1/2" of sensor. Adjustments to the pilot can be made by adjusting the pilot adjustment screw. (See Figures 1&2) Disconnect the manometer, replace the plug, and check for leaks at the plug. Refer to these Installation Instructions for proper sequence of operation.
- 25a. Remove inlet pressure plug on gas valve and connect water manometer.
- 25b. Turn on furnace and check inlet gas pressure. Minimum permissible inlet gas pressure is 5.0" W.C., maximum permissible inlet gas pressure is 9.0" W.C.
26. Attach the conversion plate in the kit adjacent to the unit rating plate. Make sure to remove propane conversion marking or cover them with new natural conversion kit labels.
27. Mark the conversion gas installation label in a permanent manner to show natural kit model number, conversion date, your organization and address. Then apply this label near the unit rating plate.

NOTE: BTU RATINGS SHOWN ON THE RATING PLATE ARE FOR ELEVATIONS UP TO 2,000 FEET. RATINGS SHOULD BE REDUCED AT THE RATE OF 4 PERCENT FOR EACH 1,000 FEET ABOVE SEA LEVEL (U.S.A. ONLY).

SEQUENCE OF OPERATION - RG(U,C,H)80; RG(U,C)90; PGE & RPG

A call for heat from the thermostat closes R and W, and the combustion air blower is energized. The pressure switch senses normal combustion air flow and closes. Several seconds later the ignition sequence is started by energizing the igniter and then energizing the gas valve. The main burners will light. Once flame has been established and proven the circulating air blower will be energized several seconds (not adjustable) later.

When the call for heat is satisfied, R to W is opened and the burners and combustion blower are de-energized. This starts the "blower off" timing for the circulating blower. After the selected (adjustable) time period elapses, the blower is de-energized.

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SEQUENCE OF OPERATION - G(U,C,H)J; G(U,C)K

A call for heat from the thermostat closes R to W, and the combustion blower is energized. The pressure switch senses normal combustion air flow, and closes. After a delay varying from zero to several seconds, depending on model, power is applied to the ignition control, which energizes the pilot gas solenoid in the gas valve and the pilot igniter. Pilot ignition occurs, is sensed by the flame sensor, and the main gas valve is energized (pilot igniter is de-energized). Main burner ignition occurs.

Energization of the main valve starts the "blower on" timing for the circulating blower. Several seconds later (not adjustable), the heating speed of the blower is energized.

When the call for heat is satisfied, R to W is opened, and the burners and combustion blower are de-energized. This starts the "blower off" timing for the circulating blower. After the selected (adjustable) time period elapses, the blower is de-energized.

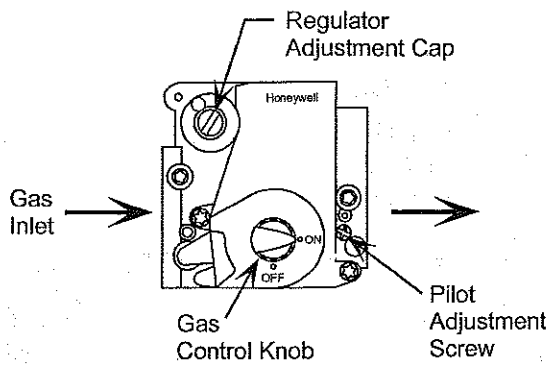


Figure 1

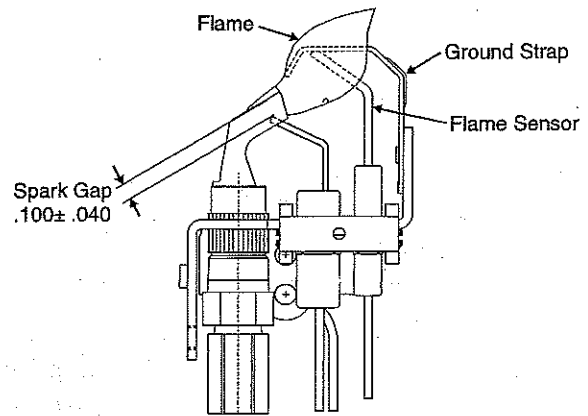


Figure 2

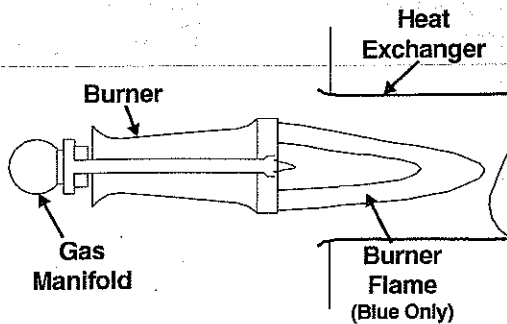


Figure 3