

# GAS KITS AND ACCESSORIES

507781-02  
10/2017  
Supersedes 507781-01

## GAS CHANGEOVER KIT

### INSTALLATION INSTRUCTIONS FOR NATURAL TO REGULATED LP/PROPANE GAS CHANGEOVER KITS USED WITH FOAN AND TUA UNIT HEATERS

#### WARNING

**WARNING** - This conversion kit is to be installed by a qualified service technician or other qualified agency in accordance with the manufacturer's instructions, all codes and requirements of the authority having jurisdiction in the USA or Canada. If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life. The qualified agency performing this work assumes responsibility for this conversion.

#### Shipping and Packing List

##### Package 1 of 1 contains:

- 5 - Burner orifices size #56 0.0465" (1.18mm) 82M93
- 3 - Burner orifices size 0.0453" (1.15mm) 16H69
- 1 - White Rodgers pressure measuring adapter kit 69M1701
- 1 - Honeywell VR8205 series gas valve conversion kit 48G2201
- 1 - White Rodgers 36 series gas valve conversion kit 28G6101
- 1 - LP kit label (580051-01 82M92 / -87 16H69)
- 1 - Unit conversion sticker (65296600)

#### Application

This natural to regulated LP/propane gas changeover kit is for use on FOAN-45,-60, -75 and TUA45S, 60S, 75S separated combustion unit heaters equipped with the Honeywell VR8205 and White Rodgers 36 series gas valves. See table 1.

TABLE 1

KIT APPLICATION		
Cat No.	Assembly	Unit KBtuh
82M93	LB-115314D	45, 60, 75
16H69	LB-115314G	40

#### WARNING



**WARNING** Electric shock hazard. Can cause injury or death. Before attempting to perform any service or maintenance, turn the electrical power to unit OFF at disconnect switch(es). Unit may have multiple power supplies.

#### Installation

- 1 - Set thermostat to lowest setting. The gas supply must be shut off prior to disconnecting the electrical power and proceeding with the conversion.
- 2 - Turn automatic gas valve to **OFF** position.
- 3 - Remove the gas manifold assembly. See figure 1.
- 4 - Remove existing burner orifices. Apply pipe thread compound to threads of orifices provided in kit. Install orifices in manifold.

**IMPORTANT** - Do not allow pipe thread compound to enter orifice bore.

- 5 - Install gas valve conversion kit. Refer to manufacturer's instruction packed in valve conversion kit. See figures 2 and 3.

**IMPORTANT** - Make sure the correct conversion kit is used for the gas valve. Use **ONLY** White Rodgers conversion kit for White Rodgers gas valve and specific Honeywell conversion kit for specific Honeywell gas valve **ONLY**.

- 6 - Replace the gas manifold assembly using two of the screws removed in step 3.
- 7 - Connect gas supply to gas valve. Connect wiring to gas valve. Replace wiring to ignitor electrode and sensor electrode.
- 8 - Affix unit conversion sticker (provided) next to unit rating plate.

**IMPORTANT** - Install gas valve changeover sticker provided in valve conversion kit to visible area of gas valve.



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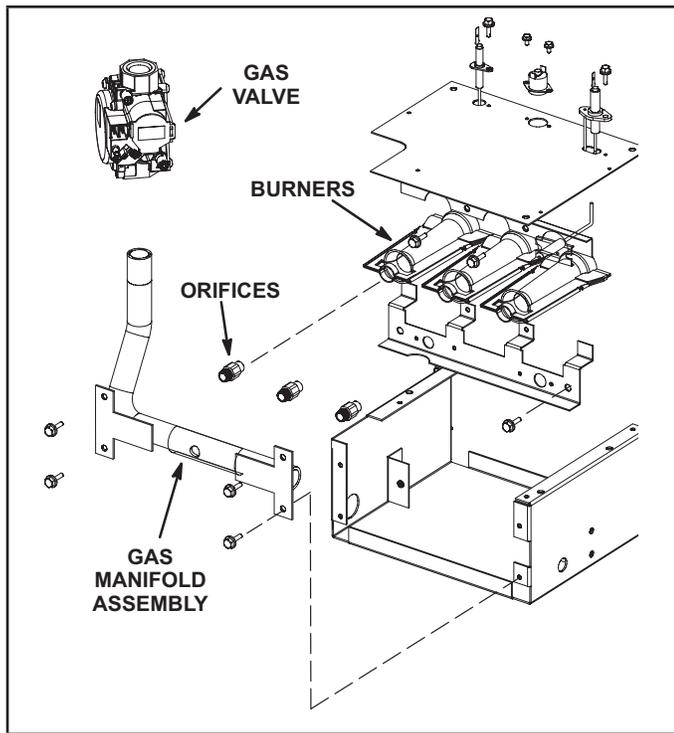
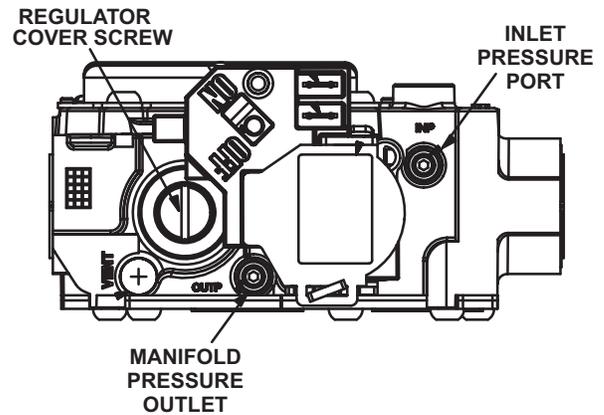


Figure 1

### WHITE RODGERS 36G GAS VALVE CONVERSION



- 1- Remove pressure regulator adjusting cover screw.
- 2- Remove pressure regulator adjusting screw beneath cover screw.
- 3- Remove pressure regulator spring from regulator housing.
- 4- Insert the stronger spring contained in this kit into the regulator housing.
- 5- Replace the pressure regulator adjusting screw. Adjust outlet pressure to heating unit manufacturer's LP specifications.
- 6- Replace pressure regulator adjust cover screw.
- 7- Attach warning label contained in envelope to gas valve where it can be readily seen. Also attach the small round label to top of regulator adjusting cover screw.

Figure 3

### CONVERSION OF HONEYWELL VR8205 GAS VALVE (Natural to LP)

1. Remove regulator cap screw and pressure regulator adjusting screw.
2. Remove existing spring.
3. Insert replacement spring.
4. Install the new plastic pressure regulator adjustment screw so that the top of the screw is flush (level) with the top of the regulator. Turn the pressure regulator adjusting screw clockwise six complete turns. This adjustment provides a preliminary pressure setting of about 10" w.c. (2.5 kPa) for the LP regulator.
5. Check regulator setting either with a manometer or by clocking the gas meter.
6. Install new cap screw.

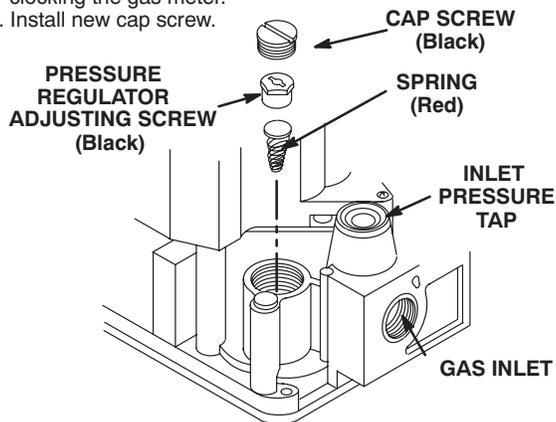


Figure 2

### Start-Up and Adjustment

**IMPORTANT** - Carefully check all piping connections. DO NOT use matches, candles, open flame or other means of ignition to check for gas leaks. Use a soap solution or other preferred means.

**⚠ CAUTION**

Some soaps used for leak detection are corrosive to certain metals. Carefully rinse piping thoroughly after leak test has been completed. Do not use matches, candles, flame or other sources of ignition to check for gas leaks.

BEFORE LIGHTING, smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, do not try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

#### A - Placing Unit In Operation:

**IMPORTANT** - Follow the lighting instructions provided on the unit. If lighting instructions are not available, see section below.

Separated combustion unit heaters are equipped with an automatic spark ignition system. DO NOT attempt to manually light burners on these unit heaters. Each time ther-

mostat calls for heat, the burners will automatically be lit.

- 1 - Make sure thermostat is set below room temperature and power is turned off to unit.
- 2 - This appliance is equipped with an ignition device which automatically lights the burners. DO NOT try to light the burners by hand.
- 3 - Turn gas valve to **OFF**. Do not force. For Honeywell valves, turn knob clockwise to **OFF**. For White Rodgers valves, move the lever to **OFF**.
- 4 - Wait 15 minutes to clear out any gas. If you then smell gas, immediately call your gas supplier from an outside phone. Follow the gas supplier's instructions. If you do not smell gas go to next step.
- 5 - Turn gas valve to **ON**. For Honeywell gas valves, turn the knob 90° counterclockwise to **ON**. For White Rodgers valves, move the lever to **ON**.
- 6 - Turn on all electrical power to unit.
- 7 - Close unit door.
- 8 - Set thermostat to desired setting.

**NOTE** - When unit is initially started, steps 1 through 8 may need to be repeated to purge air from gas line.

### B - Gas Pressure Adjustment

- 1 - Check gas line supply pressure with unit firing at maximum rate. A minimum of 10.4" w.c. should be maintained.
- 2 - After gas line pressure has been checked and adjusted, check manifold pressure at the pressure tap on the outlet side of the gas valve. The correct manifold pressure for LP/propane gas is given in table 2. Refer to figures 2 and 3 for gas manifold pressure adjustment screw location and unit rating plate for input value.

**TABLE 2**

LP/PROPANE GAS MANIFOLD PRESSURES		
Input Btuh	ALTITUDE (FT)*	
	0-2000 (AGA/CGA)	2000-4500 (CGA ONLY)
40	9.5" w.c.	7.2 w.c.
45/60	9.5" w.c.	9.5 w.c.
75	9.5" w.c.	9.2 w.c.

\*See unit installation instructions for installations at higher altitudes.

### C - Burner

Start burner and allow to operate for a few minutes. Observe flame. Flame should be predominantly blue (with some yellow), strong and steady. Flame should burn continuously from all burners.

### D - Means To Verify Gas Rate

Input must not exceed amount shown on unit rating plate. In cases where gas is not metered, the service technician performing the conversion will need to supply the meter. Input may then be checked by the following method:

The utility company or LP/propane gas distributor may be contacted for the heating value of the gas. All other appliances should be shut off during the input check. Locate meter just upstream in regulated pressure (10.4" w.c. to 13.0"w.c.). To check the Btu input rate, the dial hand on the gas meter should be timed for at least one revolution, using the one cubic foot dial. To assure accurate measurements, use temperature and pressure correction factors for the meter. To determine the number of seconds required for the flow of one cubic foot of gas, use the following formula:

$\frac{\text{(BTUH CONTENT)} \\ \text{HEATING VALUE OF GAS X 3600}}{\text{UNIT BTUH INPUT}}$
<p>Example:      2500 BTU gas                     Unit input 45,000 BTUH</p>
<p>Seconds for one cubic foot =</p> $\frac{2500 \times 3600}{45,000} = 200 \text{ seconds}$

### E - Ignition System

Check the normal operation sequence of the ignition system after conversion. See instruction manual supplied with the unit.