

**LP AND HIGH ALTITUDE LP GAS CONVERSION KIT
FOR 50 HZ FURNACES**

INSTALLATION INSTRUCTIONS

For Model Series G7XA and G7XC Furnaces.

BEFORE THE CONVERSION

IMPORTANT: Please read all instructions before converting the furnace. Pay attention to all safety warnings and any other special notes highlighted in the manual. Safety markings are used frequently throughout this manual to designate a degree or level of seriousness and should not be ignored. **WARNING** indicates a potentially hazardous situation that if not avoided, could result in personal injury or death. **CAUTION** indicates a potentially hazardous situation that if not avoided, may result in minor or moderate injury or property damage

This conversion kit is only to be used to convert natural gas furnaces to LP/Propane gas. This kit may only be used in furnaces installed in altitudes between 2,000 and 10,000 feet above sea level.

Table 1 is a detailed listing of the components in the LP gas conversion kit. Please check the contents of the conversion kit with that of the parts listing, and familiarize yourself with each component.

DESCRIPTION	QTY
Installation Instructions	1
Honeywell Conversion Kit 396221 (to convert VR8205S 2288)	1
#59 Drill Size Burner Orifice Kit (contains (7) 661059)	1
Conversion Warning Label	1
Conversion Information Label	1

Table 1. LP Gas Conversion Kit

⚠ WARNING:

All gas piping must conform with local building codes, or in the absence of local codes, with the most recent edition of the International Fuel Gas Codes. DO NOT attempt to modify, or tap into existing gas lines yourself. Fire or explosion may result causing property damage, personal injury or loss of life. Failure to follow the safety warnings exactly could result in serious injury, death or property damage.

⚠ WARNING:

FIRE OR EXPLOSION HAZARD

- Failure to follow safety warnings exactly could result in serious injury or property damage.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Leave the building immediately.
- Immediately call your gas supplier from a neighbors phone. Follow the gas suppliers instructions.
- If you cannot reach your gas supplier, call the fire department.

⚠ WARNING:

FIRE OR EXPLOSION HAZARD

Never test for gas leaks with an open flame. Check all connections using a commercially available soap solution. A fire or explosion may result causing property damage, personal injury or loss of life. Failure to follow the safety warnings exactly could result in serious injury, death or property damage.

⚠ WARNING:

Electrical connections must be in compliance with local building codes, or in the absence of local codes, with regulations established by local electrical company. Failure to follow these instructions could result in possible damage to equipment, serious personal injury, or death.

CONVERTING TO LP/PROPANE GAS AT ALTITUDES BETWEEN ZERO AND 10,000 FT.

Converting gas valves to LP/propane requires the replacement of the burner orifices and/or the spring found under the cap screw in the pressure regulator.

⚠ WARNING:

Shut off the gas supply at the manual gas shutoff valve, before disconnecting the electrical power. A fire or explosion may result causing property damage, personal injury or loss of life. Failure to follow the safety warnings exactly could result in serious injury, death or property damage.

⚠ WARNING:

To avoid electric shock, personal injury, or death, turn off the electric power at the disconnect or the main service panel before making any electrical connections.

⚠ WARNING:

The reduction of input rating necessary for high altitude installation may only be accomplished with factory supplied orifices. Do not attempt to drill out orifices in the field. Improperly drilled orifices may cause fire, explosion, carbon monoxide poisoning, personal injury or death.

IMPORTANT NOTE: For altitudes between 2,000 and 10,000 feet it is required that either the orifice and/or regulator pressure to be changed. See Table 2 on page 5 to determine the correct orifice size and manifold pressure to use at different altitudes.

Removing The Burner Orifices

1. Set the thermostat to the "OFF" position, or its lowest temperature setting.
2. Shut OFF the gas supply at the manual shutoff valve located outside of the appliance.
3. Turn off all electrical power to the appliance.
4. Remove the door from the burner compartment.
5. Move the gas valve ON/OFF switch (4) to the "OFF" position (Figure 1).
6. Remove the wires from the terminals (3) of the gas valve (6).
7. Remove the supply gas piping from the gas valve inlet (5).
8. Carefully remove four screws (8) securing the gas manifold assembly (7) to the burner assembly (9).
9. Set aside the screws (8) and remove the gas manifold assembly (7) from the appliance.

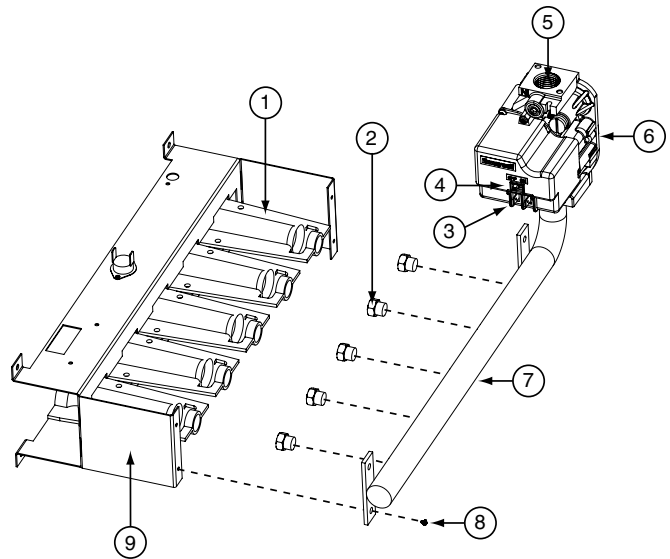


Figure 1. Burner and Manifold Assembly

10. Carefully remove the burner orifices (2) from the gas manifold assembly (7).
11. Read the rating plate affixed to the appliance to determine its rated input (Btu/hr) and the size of the factory installed orifices. **NOTE: Natural Gas furnaces may be equipped with one of three orifices.**

IMPORTANT NOTE: Before installing an orifice, check the face or side of the orifice for the drill number to ensure that it is the appropriate size.

12. Install the appropriate LP/Propane gas burner orifices (2) into the gas manifold assembly (7). **NOTE: To prevent cross threading, screw the orifices (2) into the gas manifold assembly (7) by hand until snug, then tighten with a wrench.**

⚠ WARNING:

Do not use Teflon tape or pipe joint compound on the orifice threads. The hole in the orifice may become blocked and cause fire, explosion, property damage, carbon monoxide poisoning, personal injury, or death.

13. Reinstall the gas manifold assembly (7) to the burner assembly (9) with the four screws (8), that were removed earlier. **NOTE: It is important that the center of the orifices (2) are aligned with the center of the burners (1).**
14. Reconnect the gas piping to the gas valve inlet (5).
15. Reconnect the wires to the gas valve terminals (3).

Converting To LP/Propane Gas

IMPORTANT NOTE: When converting to LP/Propane gas from natural gas, the black spring in the gas valve must be replaced by the red spring in the kit.

1. Remove the capscrew from the gas valve as shown in Figure 2.

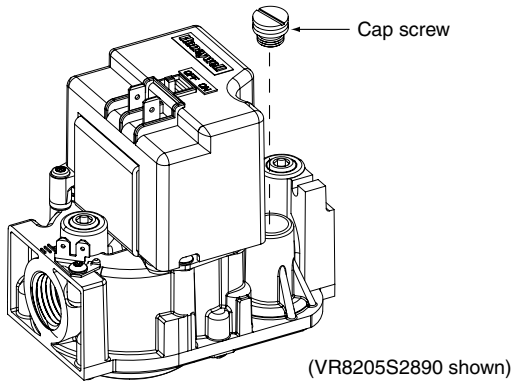


Figure 2. Gas Valve Capscrew

2. Remove and discard the plastic pressure regulator adjustment screw from the gas valve as shown in Figure 3.

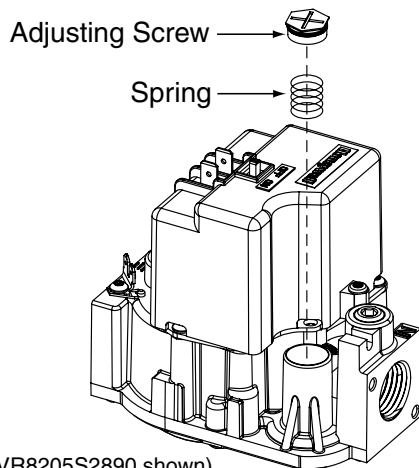


Figure 3. Pressure Regulator Adjusting Screw and Spring

3. Remove the black colored spring (Figure 3) from the gas valve.
4. Install the red spring from the conversion kit.
5. Install the new adjusting screw from the kit.
6. Check and adjust the regulator setting. See Gas Pressure Adjustment Section.
7. Reinstall the cap screw (Figure 2).
8. Affix the conversion label to the gas control.

GAS PRESSURE ADJUSTMENT

Measuring the Supply Gas Pressure

1. Turn OFF the gas supply at the manual valve located on the outside of the unit.
2. Using a 3/16 inch Allen wrench, remove the Inlet Pressure Tap Plug located on the INLET side of the gas valve as shown in Figure 4.
3. Install an 1/8 inch NPT pipe thread fitting, which is compatible with a Manometer or similar pressure gauge.
4. Connect the Manometer or pressure gauge to the Inlet Pressure Tap.
5. Turn ON the main gas supply at the manual valve.
6. Check and adjust the incoming gas line pressure to 11.0-14.0 inches Water Column for LP/Propane gas.
7. Turn OFF the gas supply at the manual valve.
8. Disconnect the Manometer or pressure gauge.
9. Remove the NPT fitting and reinstall the INLET pressure tap plug. Hand tighten the plug first to prevent cross-threading. Tighten with 3/16 Allen wrench.

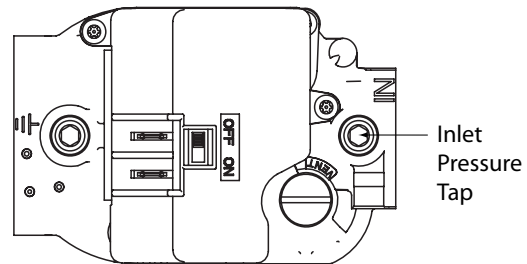


Figure 4. Inlet Pressure Tap Locations

Lighting and Adjustment of the Appliance

1. Turn ON the manual gas valve, located on the outside of the unit to the ON position.

⚠ WARNING:

FIRE OR EXPLOSION HAZARD

Never test for gas leaks with an open flame. Check all connections using a commercially available soap solution. A fire or explosion may result causing property damage, personal injury or loss of life. Failure to follow the safety warnings exactly could result in serious injury, death or property damage.

2. Check all gas connections for leaks with a soap and water solution. If the solution bubbles there is a gas leak which must be corrected.
3. Turn on the electrical power to the appliance.
4. Move the gas valve switch to the "ON" position.
5. Set the thermostat to a point above room temperature to begin the heating cycle of the furnace.
6. Check that the furnace ignites and operates properly. Refer to the installation instructions provided with the unit for the normal operating sequence.

- After ignition, visually inspect the burner assembly to ensure that the flame is drawn directly into the center of the heat exchanger tube as shown in Figure 5. In a properly adjusted burner assembly, the flame color should be blue with some light yellow streaks near the outer portions of the flame.

NOTE: Until all of the air is bled from the gas line, the ignitor may not ignite the gas. If the ignition control locks out, turn the thermostat to its lowest setting and wait one minute then turn the thermostat to a point above room temperature and the ignitor will try again to ignite the main burners. This process may have to be repeated several times before the burners will ignite. Once the burners are lit, check all gas connections for leaks again with the soap and water solution.

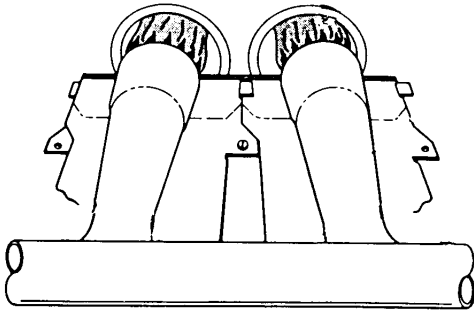


Figure 5. Burner and Manifold Assembly

Measuring the Manifold Pressure

The manifold pressure must be measured by installing a pressure gauge (Manometer, Magnehelic Meter, etc.) to the outlet end of the gas valve as follows:

- Turn off all electrical power to the appliance.
- Shut OFF the gas supply at the manual shutoff valve located outside of the appliance.
- Using a 3/16 inch Allen wrench, remove the manifold pressure tap plug located on the outlet side of the gas valve as shown in Figure 6.

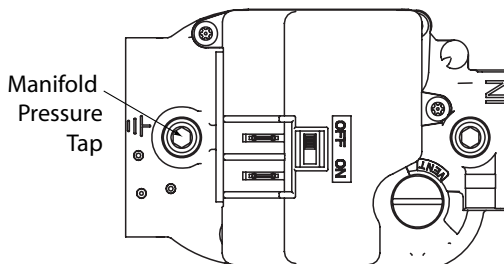


Figure 6. Manifold Pressure Tap Locations

- Install an 1/8 inch NPT pipe thread fitting, which is compatible with a Manometer or similar pressure gauge.
- Connect the Manometer or pressure gauge to the manifold pressure tap.
- Set the room thermostat to a point above room temperature to start the furnace.

- Allow the furnace to operate for 3 minutes and then check the manifold pressure. Compare the measured value with the value shown in Table 2 on page 5. If the manifold pressure is not set to the appropriate pressure, then it must be adjusted.

Adjusting the Manifold Pressure

- If the manifold pressure must be adjusted, remove the capscrew from the top of the gas valve regulator, as shown in Figure 2.
- Using a short screwdriver, slowly turn the adjustment screw (Figure 3) to obtain the appropriate manifold pressure as listed in Table 2. **Note: Turning the screw clockwise increases the pressure, turning the screw counter-clockwise decreases the pressure. To prevent backing the screw all the way out from the valve, turn the screw slowly.**
- Replace and tighten the capscrew (Figure 2) over the adjustment screw.

Removing the Manometer/Pressure Gauge

Once the manifold pressure has been properly adjusted, the Manometer or pressure gauge must be removed from the gas valve.

- Turn the thermostat to its lowest setting.
- Turn OFF the main gas supply to the unit at the manual shut-off valve, which is located outside of the unit.
- Turn OFF all of the electrical power supplies to the unit.
- Remove the pressure gauge adapter from the gas valve and replace it with the 1/8 inch NPT manifold pressure plug that had been removed earlier. Ensure that the plug is tight and not cross-threaded.
- Turn ON the electrical power to the unit.
- Turn ON the main gas supply to the unit at the manual shut-off valve.

COMPLETING THE CONVERSION

WARNING:

Do not alter or remove the original rating plate from the furnace.

- Affix the conversion warning label (P/N 703935) provided in the kit to the outside of the unit door. Next, affix the conversion information label (P/N 703942) near the rating plate on the inside of the control area. Finally, affix the gas valve conversion label found in the Gas Valve Conversion Kit on the gas valve. Each label should be prominent and visible after installation.
- Reinstall the appliance door.
- Run the appliance through three complete cycles to assure proper operation.

		ALTITUDE ABOVE SEA LEVEL											
		0 to 1,999 FT		2,000 to 2,999 FT		3,000 to 4,999 FT		5,000 to 5,999 FT		6,000 to 7,999 FT		8,000 to 10,000 FT	
FURNACE MODEL	INPUT	ORIFICE SIZE	MANIFOLD PRESSURE	ORIFICE SIZE	MANIFOLD PRESSURE	ORIFICE SIZE	MANIFOLD PRESSURE	ORIFICE SIZE	MANIFOLD PRESSURE	ORIFICE SIZE	MANIFOLD PRESSURE	ORIFICE SIZE	MANIFOLD PRESSURE
G7XA	46,000	57	10.0	57	9.0	57	8.5	59	10.0	59	9.0	59	8.5
	61,000	57	10.0	57	9.0	57	8.5	59	10.0	59	9.0	59	8.5
	76,000	57	10.0	57	9.0	57	8.5	59	10.0	59	9.0	59	8.5
	107,000	57	10.0	57	9.0	57	8.5	59	10.0	59	9.0	59	8.5
G7XC	46,000	57	10.0	57	9.0	57	8.5	59	10.0	59	9.0	59	8.5
	61,000	57	10.0	57	9.0	57	8.5	59	10.0	59	9.0	59	8.5
	76,000	57	10.0	57	9.0	57	8.5	59	10.0	59	9.0	59	8.5
	102,000	57	10.0	57	9.0	57	8.5	59	10.0	59	9.0	59	8.5

Table 2. Liquid Propane Conversion Chart

The installer performing this work assumes all responsibility for this conversion. These instructions are primarily intended to assist qualified individuals experienced in the proper installation of these components. Some local codes require licensed installation/service personnel for this type of equipment. Safety should always be the deciding factor when installing this product and using common sense plays an important role as well. Improper installation of the components or failure to follow safety warnings could result in serious injury, death, or property damage. After completing the installation, return these instructions to the Homeowner's Package for owner-user's future reference.

