

GAS CONVERSION KIT INSTALLATION FOR UNIT HEATERS

STANDARD POWER VENT FAN TYPE

GENERAL INFORMATION

These gas conversion kits are for standard power vent heaters equipped with either a single-stage or two-stage gas valve.

Model Identification

When converting fuels, it is necessary to have the complete heater model. The identifying model number can be found on the heater rating plate. The rating plate identifies only original equipment so also compare the label on the gas valve with the description listed.

Important Safety Information

- Refer to the installation manual provided with the heater for important safety information.
- Pay attention to all dangers, warnings, cautions, and notes highlighted in this manual. Safety markings should not be ignored and are used frequently throughout to designate a degree or level of seriousness.

⚠ DANGER ⚠

- **All gas conversion must be done by a qualified service person in accordance with these instructions and in compliance with all codes and requirements. In Canada, gas conversion shall be carried out in accordance with the requirements of the Provincial Authorities having jurisdiction and in accordance with the requirements of the CAN/CGA-B149.1 and CAN/CGA-B149.2 installation code.**
- **The gas burner in this gas-fired equipment is designed to provide safe complete combustion. However, if the installation does not permit the burner to receive the proper supply of combustion air, complete combustion may not occur. The result is incomplete combustion, which produces carbon monoxide, a poisonous gas that can cause death.**
- **Safe operation of indirect-fired gas burning equipment requires a properly operating vent system which vents all flue products to the outside atmosphere. Failure to provide proper venting will result in a health hazard that could cause serious personal injury or death.**
- **Standard power vent heaters installed in a confined space must be supplied with air for combustion as required by code and in the heater installation manual. Combustion air at the burner should be regulated only by manufacturer-provided equipment. Never restrict or otherwise alter the supply of combustion air to any heater. Maintain the vent or vent/combustion air system in structurally sound and proper operating condition.**
- **Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operation and maintenance instructions thoroughly before installing or servicing this equipment.**
- **The conversion kit is to be selected and installed by a qualified service person in accordance with these instructions and in compliance with all codes and requirements of authorities having jurisdiction. Failure to follow instructions could result in death, serious injury, and/or property damage. The qualified agency performing this work assumes responsibility for this conversion.**

GENERAL INFORMATION—CONTINUED

Heater Component Locations

Heater component locations are shown in [Figure 1](#).

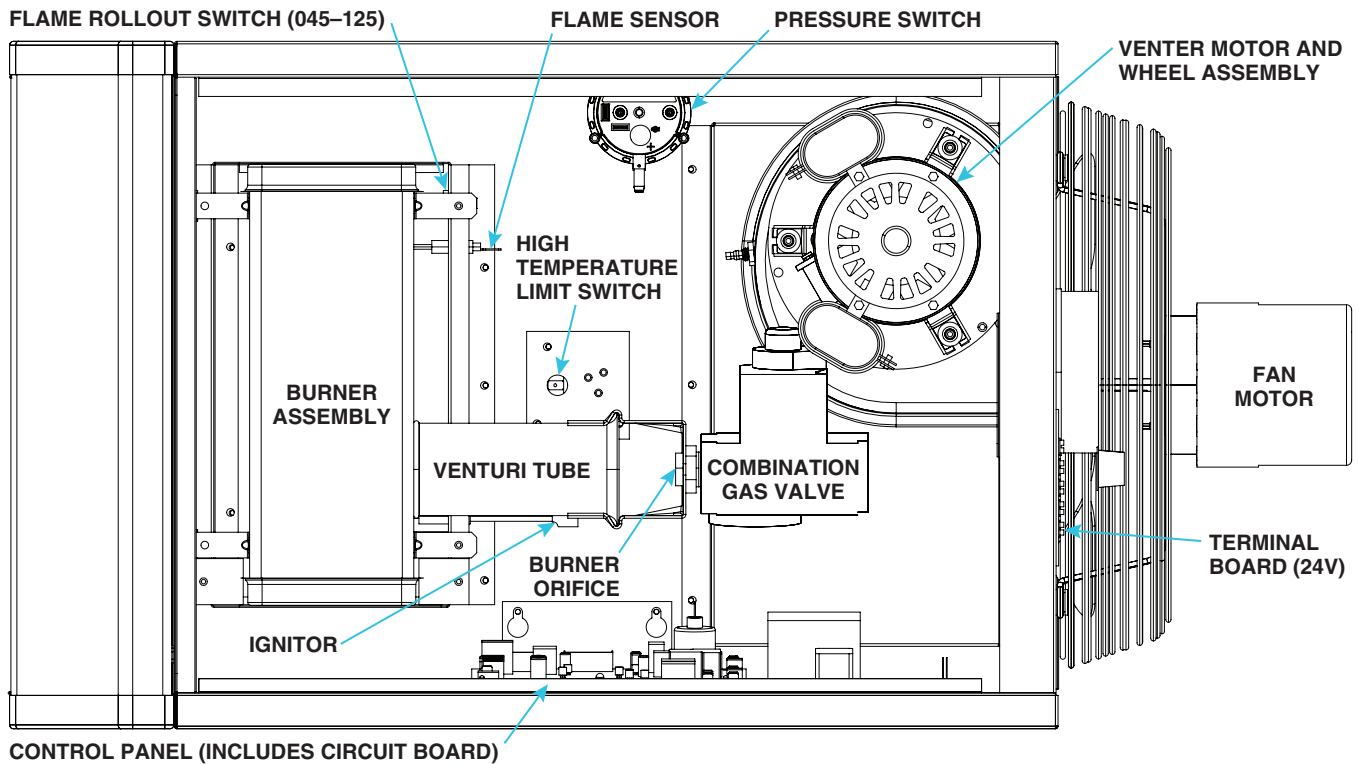


Figure 1. Heater Components

CONVERSION KIT SELECTION

Each conversion kit includes two or three spring kits and burner orifices for multiple unit sizes. Some parts will not be used—carefully select the parts to be used. Refer to [Table 1](#) for a list of natural gas to propane conversion kit components.

Table 1. Natural Gas to Propane Conversion Kit Components

Component	Description	Gas Valve (Manufacturer's PN)					
		1/2-inch, single-stage (VR8205K2957 or VR8215T1239)	1/2-inch, single-stage (VR8205K2957 or VR8215T1239) or 1/2-inch, two-stage (VR8205N2921)		1/2-inch, single-stage (VR8205K2957 or VR8215T1239), 3/4-inch single-stage (VR8305K4241), or 1/2-inch, two-stage (VR8205N2921 or VR8305N4297)	3/4-inch, single-stage (VR8305K4241) or 3/4-inch, two-stage (VR8305N4297)	
		Unit Size					
		045	060, 075	100, 125	150	200, 250	300, 400
		Kit PN					
		1037126R	1037127R	1037128R	1037129R	1037130R	1037131R
Component PN							
Air restrictor plate	1-3/8-inch (35-mm) diameter opening	196687	—		—		
	1-3/4-inch (44-mm) diameter opening	—	196688		—		
Spring kit	#396221 for single-stage valve VR8215	260605	260605		260605	—	
	#396021 for two-stage valve VR8105, VR8205, or VR8305	—	197207		197207		
	#393691 for single-stage valve VR8105, VR8205, or VR8305	98720					
Tape	Conversion	64391					
Disk	Propane	37752					
Elevation adjustment label	For installation elevations >2000 feet (>610 meters)	197062					
Orifices	Burner	Refer to Table 2					

INSTALLATION

Install the conversion kit in accordance with the following steps. Ensure that the kit is correct for the size of the heater being serviced (refer to [Table 1](#)).

1. Remove gas supply and electrical power:

- a. Turn OFF gas supply at manual shutoff valve outside of heater.
- b. Turn OFF electrical power.
- c. Open control access panel.

⚠ WARNING ⚠

Regulator spring kits are not interchangeable. Each kit must be used only in the model and type of gas valve for which the kit is designated. Verify compatibility before installing the regulator spring kit.

2. Install regulator spring kit:

- a. Select regulator spring kit that corresponds with gas valve on heater. All gas conversion kits include one or two regulator spring kits for single-stage valve and one regulator spring for two-stage valve. Other included regulator spring kits will not be used.
- b. Install regulator spring kit in accordance with gas valve manufacturer's instructions (included with regulator spring kit).

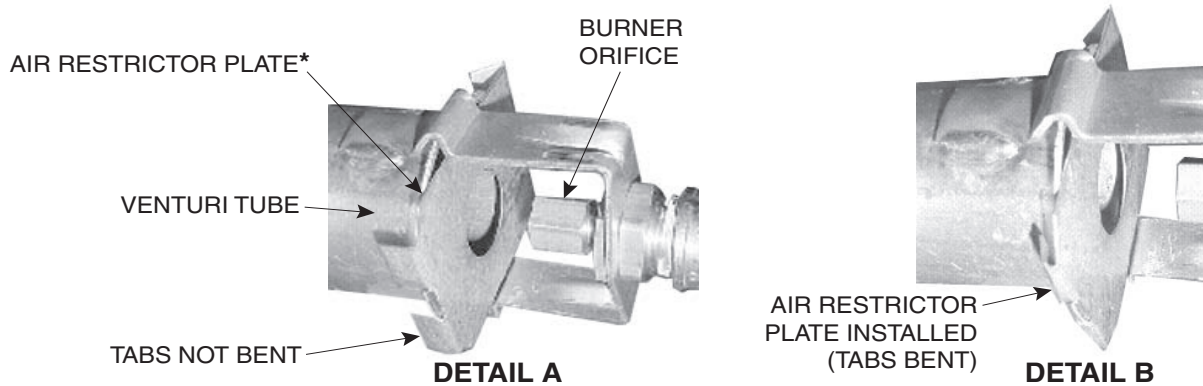
INSTALLATION—CONTINUED

⚠ CAUTION ⚠

After a new regulator spring kit is installed, it is necessary to adjust the spring by adjusting the manifold pressure. This adjustment can be made only after the heater is in operation (refer to step 7).

3. Remove or install air restrictor plate as necessary and replace burner orifice:

- a. Carefully remove existing burner orifice (see [Figure 2](#), DETAIL A).



*USED ONLY ON UNIT SIZES 045, 060, 075, 100, AND 150.

Figure 2. Burner Orifice and Air Restrictor Plate

⚠ DANGER ⚠

The air restrictor plate **MUST BE INSTALLED** when converting unit sizes 045, 060, 075, 100, and 150 to propane. Failure to install the air restrictor plate in accordance with the following directions can cause death or injury and/or property damage.

- b. For unit sizes 045, 060, 075, 100, and 150, proceed to step c. For all other unit sizes, proceed to step d.
- c. For unit sizes 045, 060, 075, 100, and 150, install air restrictor plate as follows:
 - (1) Refer to [Table 1](#) to select correct air restrictor plate. Slide plate in place over venturi tube opening so that its 45-degree angle is hooked over rear of venturi tube (see [Figure 2](#)).
 - (2) While holding plate in position, use pliers to carefully bend tabs to lock plate in place (see [Figure 2](#), DETAIL B). Ensure that air restrictor is aligned and secure.
- d. For all conversions, select replacement burner orifices in accordance with [Table 2](#). All conversion kits include two or three burner orifices. Other included orifice(s) will not be used.

Table 2. Replacement Propane Burner Orifices

Unit Size	Orifice Size/Marking	PN
045	#48	196845
060	2.25 mm	1034350
075	#40	120137
100	#32	120141
125	3.10 mm	120144
150	3.50 mm	120148
200	4.10 mm	196900
250	4.60 mm	1034352
300	#8	196903
400	5.80 mm	196905

⚠ WARNING ⚠

Do not attempt to drill burner orifice. Use factory-supplied orifice only.

- e. Install replacement burner orifice (see [Figure 2](#), DETAIL A).
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⚠ CAUTION ⚠

- If the heater will be operated at an elevation >6,000 feet (>1,830 meters), a high-elevation pressure switch must be installed.
 - If the installation elevation is >6,000 feet (>1,830 meters), verify that the elevation on the rating plate or high-elevation label is >6,000 feet (>1,830 meters). If the rating plate or label does not indicate an elevation of >6,000 feet (>1,830 meters), order and install the appropriate high pressure switch kit.
 - If the heater is equipped for installation at an elevation of >6,000 feet (>1,830 meters) and is being installed at a lower elevation, order and install the appropriate switch.
 - Contact your distributor (refer to replacement parts manual) to select the factory-authorized replacement part.
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4. For installations at elevations >6,000 feet (>1,830 meters), replace pressure switch in accordance with *Pressure Switch Replacement* section in installation/operation/maintenance manual provided with unit.
 5. Restore electrical power and gas supply:
 - a. Turn on electrical power.
 - b. Turn on gas supply and relight heater, following instructions on heater.
 6. Perform leak test:
 - a. Check all connections for gas leaks using commercial leak-detecting fluid or rich soap and water solution. Leaks are indicated by presence of bubbles.
 - b. If leak is detected, tighten connection. If leak cannot be stopped by tightening connection, replace part(s).
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NOTES:

- Conversion of a unit using these kits does not alter the input rate. Refer to the rating plate on the heater for the input rate and other appropriate information.
 - If adjusted for high-elevation operation, the input rate will be affected.
 - The high-elevation adjustment label is not used on units operated at elevations of $\leq 2,000$ feet (≤ 610 meters).
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7. Adjust manifold (outlet) gas pressure in accordance with *Measure and Adjust Manifold (Outlet) Gas Pressure* section in installation/operation/maintenance manual provided with unit.
 8. Close control access panel.

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