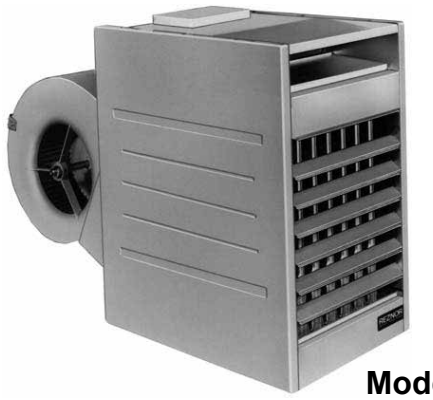
Gas Conversion Kits and Instructions

Applies to: **Models F, B, FE, and BE with spark pilot**

NOTE: Units with standing (match - lit) pilots must be converted to spark pilot before converting gas types.



Model B

Model F

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 .2 installation code.

WARNING: 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.

FOR YOUR SAFETY

— **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 phone remote from the building. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

— **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.

DANGER: 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.

HAZARD INTENSITY LEVELS

1. **DANGER: Failure to comply will result in severe personal injury or death and/or property damage.**
2. **WARNING: Failure to comply could result in severe personal injury or death and/or property damage.**
3. **CAUTION: Failure to comply could result in minor personal injury and/or property damage.**

DANGER: The gas burner in this gas-fired equipment is designed and equipped to provide safe and economically controlled 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 WHICH COULD CAUSE SERIOUS PERSONAL INJURY OR DEATH.

Always comply with the combustion air requirements in the installation codes and instructions. 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. Indoor units installed in a confined space must be supplied with air for combustion as required by Code and in the heater installation manual. MAINTAIN THE VENT SYSTEM IN STRUCTURALLY SOUND AND PROPERLY OPERATING CONDITION.

Description and Kit Selection

The gas conversion kits in these instructions are for a Model F, FE, B, or BE heater equipped with a single-stage valve.

In order to determine which conversion kit is compatible to your heater, it is necessary to know the type of valve that is on the heater. From the rating plate, copy the complete Model No. of the heater. Also, copy the manufacturer's number on the gas valve.

Gas Conversion Instructions - Models F, FE, B, BE

1. **Verify Kit Selection** - Check to be certain that the gas conversion kit is the appropriate kit for the unit being converted.

IMPORTANT: Compare the actual Model No. on the valve to those listed for the kit. If actual Model No. is different from the ones listed, do not install the kit. Contact your Reznor Representative to select and verify parts required for gas conversion.

2. **Additional Parts May Be Required** - If you are converting to propane, and your heater is a **Size 130-400 equipped with optional stainless steel burners**, it is necessary to order and install burner air shutters. (Air shutters may be used on aluminized burners but are not normally required.) A list of burner air shutter part numbers can be found on page 8. **Air shutters are not included in the conversion kits and must be ordered separately.**
3. **Turn off the gas supply** at the shutoff valve **upstream** of the control valve on the heater **and disconnect the electrical power.**
4. **Install the Regulator Spring Kit or Change the Valve**

To install a regulator spring kit, follow the valve manufacturer's installation instructions that are included with the regulator spring kit. After a new regulator spring kit is installed, it is necessary to adjust the spring for the correct manifold pressure. This adjustment can only be made after the heater is in operation. Instructions are included in Step No. 12 of the installation instructions.

WARNING: Manufacturer of regulator spring kit and gas valve must be the same. Spring kits of different manufacturers are not interchangeable, and each spring kit must be used only in the valve for which the kit is designated.

WARNING: The operating valve is the primary safety shutoff. The gas supply line must be free of dirt or scale before connecting the unit to ensure positive closure.

To change the valve, first mark the wires before removing them from the existing valve. Consult the valve manufacturer's instruction sheet for installation details and install the new valve. Field-supplied fittings may be required. If the heater is equipped with an ECO device, be certain to connect it (applies to Models F and B with match-lit pilot and all models with spark pilot manufactured prior to approximately 8/99; check the wiring diagram).

Wiring Terminal Identification

Valve Manufacturer	Common	Pilot *	Main
Honeywell (M/H)	TR	TH-TR	TH
	PV-MV	PV	MV
White Rogers (W/R) or Robertshaw (R)	C	P	M
Wire Color	White or Brown	Blue	Black
*Pilot terminal is not used on match-lit units.			

5. **Change the Pilot Orifice**

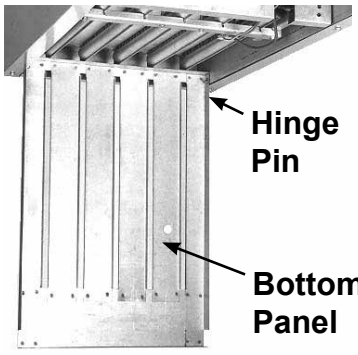


FIGURE 1 - Heater with Bottom Panel Hinged Down

a) Remove the two screws located at the rear of the bottom of the heater that retain the bottom panel. Allow the bottom panel to hinge down from the front. Completely remove the bottom panel by pushing in on one of the spring-loaded hinge pins.

Gas Conversion Instructions - Models F, FE, B, BE (cont'd)

b) The bottom of the pilot is now visible. Do the following:

(1) Disconnect the pilot tubing from the pilot burner.

(2) For match-lit (standing) pilot, disconnect the thermocouple from the valve.

(3) For spark pilot, disconnect the flame sensing wire and high tension (spark) lead from the ignition controller.

c) Heaters manufactured beginning 8/91 (Serial No. Date Code AQH) - While supporting the burner rack, remove the screws (two or three) that hold the indexed burner rack support. Remove the support, allowing the burner rack assembly to swing down. Lift up on the rear and slide the burner assembly up and out of the manifold support brackets.

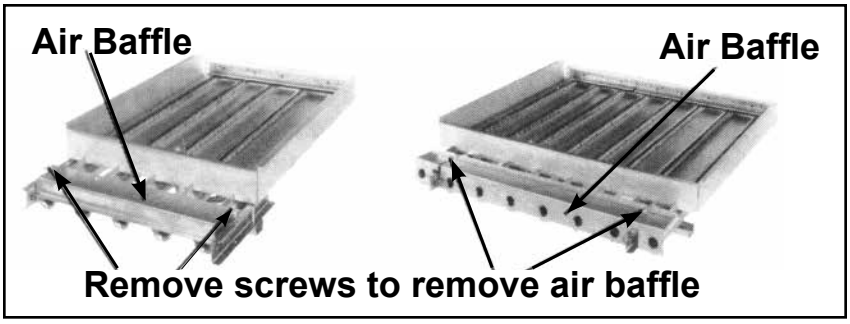
Heaters manufactured prior to 8/91 - Loosen the sheetmetal screws (two or three) located at the front of the burner rack assembly. (These screws retain the burner rack support.) While supporting the burner rack assembly, slide the burner rack support and remove it from the screws. Allow the burner rack assembly to swing down. Lift up on the rear and slide the burner assembly up and out of the manifold support brackets.

d) Remove the pilot from the burner rack and install the new pilot orifice. Re-install the pilot burner on the burner rack. On units equipped with a pilot shield, be certain that the pilot shield is in place when replacing the pilot burner.

6. Remove Air Baffle (if applicable)

If you are converting from natural to propane, you may have to remove a factory-installed air baffle from the burner rack. Look at the burner rack that you have just removed to see if it is equipped with one of the air baffles illustrated in **FIGURE 2**. Not all heaters are equipped with an air baffle. If your burner rack is factory-equipped with either of these air baffles, remove the air baffle before converting to propane. Refer to **FIGURE 2** showing which screws to remove.

FIGURE 2 - Burner Rack with Factory-Installed Air Baffles



7. Change Burner Orifices

With the burner rack removed, the burner orifices are visible in the manifold pipe at the rear of the heater. (See **FIGURE 3**.) Remove all existing orifices and replace with the orifices included in the conversion kit. (NOTE: Kits that apply to various sizes of heaters include the quantity of burner orifices required for the largest size of heater. When converting the smaller sizes, there will be extra burner orifices which will not be used.)

WARNING: Do not attempt to drill orifices. Use factory supplied orifices only.

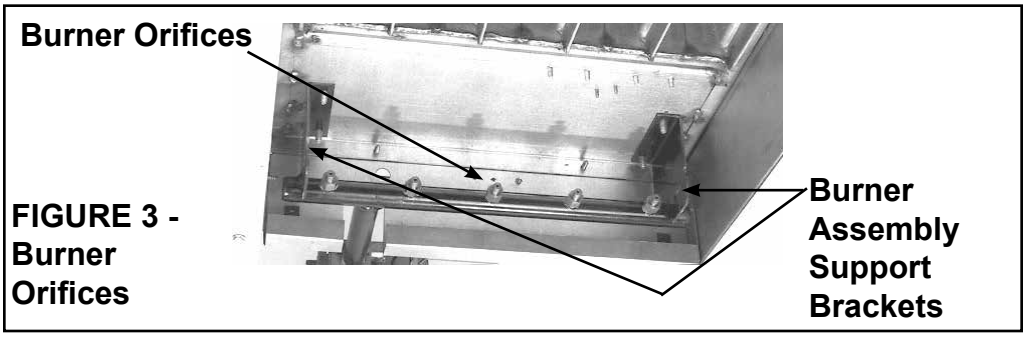


FIGURE 3 - Burner Orifices

8. Install Burner Air Shutters (if required)

Burner air shutters are required on Sizes 130-400 models equipped with optional stainless steel burners for use with propane gas. Air shutters may be used on aluminized burners but are not normally required.

Refer to the instructions included with the air shutter assembly for installation and adjustment.

DANGER: Failure to install and adjust burner air shutters according to directions could cause property damage, personal injury and/or death.

9. Re-Assemble the Heater

Reverse the above procedure to re-assemble the heater. Be certain that the burner rack is properly positioned and tight against the heat exchanger. If your conversion requires changing the ignition controller, do not re-connect the flame sensing wire and the high tension lead to the ignition controller.

Do not replace the bottom panel.

10. Change the Ignition Controller (if required) (Included in all natural to propane conversion kits)

If your conversion requires an ignition controller with 100% lockout, the ignition controller with new wires and a new wiring diagram are included in the conversion kit.

a) On the rear of the heater, locate the ignition controller. Disconnect the spark wire from the spike on the controller. Leave all other wires connected to the ignition controller; follow the wires and disconnect them from their various connections. Remove the ignition controller and attached wires.

b) In the same location, attach the ignition controller mounting bracket to the heater using the #10x3/8" long screws included in the kit. With the ignition controller positioned so that the terminals are across the bottom, attach it to the mounting bracket using the #8x3/8" long screws.

c) Refer to the new wiring diagram label in the kit and connect the wires.
All of the wires are connected to the ignition controller at the factory except to the "TH" Terminal. Attach the loose black wire in the kit to the "TH" terminal and connect it to the limit control. (The yellow wire in the kit will not be used.)

d) Select a location near the current wiring diagram on the unit to adhere the wiring label. Do not put the label on a surface that will be hot when the heater is operating and do not put it over the existing wiring diagram. Wipe the selected area with a clean dry cloth. Peel the backing and adhere the new label.

11. Turn on the electric and the gas. Relight, following the instructions on the heater. Check for gas leaks using a commercial leak detecting fluid or a rich soap and water solution. Leaks are indicated by the presence of bubbles. Check all connections which were worked on during the conversion including the pilot connections. If a leak cannot be stopped by tightening, replace the part.

Observe the pilot flame through the lighting hole. The flame should extend 1/2 to 1 inch past the flame sensing device (**See FIGURE 4**).

Ignition Controller with Lockout, P/N 257010

Minimum flame proving signal strength is 0.2 microamps.

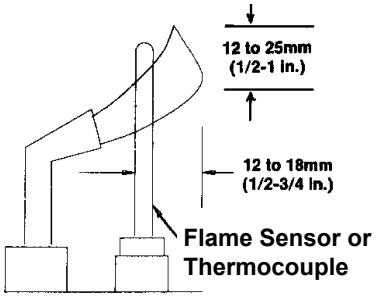
Special Wiring Instructions when using an automatic vent damper:

Remove the plug from the ignition controller and plug in the wiring harness from the vent damper. The wiring harness electrically interlocks the vent damper to the control. Unplugging either end results in a system shutdown.

FIGURE 4 - Pilot Flame Adjustment

To adjust the pilot flame :

1) Remove the pilot adjustment cover screw on the valve.
2) Turn the inner adjustment screw clockwise to decrease or counterclockwise to increase the pilot flame
3) Replace the cover screw after adjustment.



Gas Conversion Instructions - Models F, FE, B, BE (cont'd)

12. Adjust the manifold pressure. Follow these requirements and instructions to adjust manifold gas pressure.

1) The correct pressure adjustment depends on the area of the country in terms of elevation. If you don't know the elevation, check with your local gas company.

2) Determine the required manifold pressure for that elevation.

Manifold Pressure Settings by Elevation			
Elevation Ranges		Natural Gas	Propane
Feet	Meters	(inches W.C.)	
0- 2000	1-610	3.5	10.0
2001-3000	911-915	2.8	7.7
3001-4000	916-1220	2.5	7.1
4001-5000	1221-1525	2.3	6.4
5001-6000	1526-1830	2.1	5.8
6001-7000	1831-2135	1.9	5.2
7001-8000	2136-2440	1.7	4.6
8001-9000	2441-2745	1.5	4.1

3) With the manual valve positioned to prevent flow to the main burners, connect a manometer to the 1/8" pipe outlet pressure tap in the valve. Use a water column manometer that is readable to the nearest tenth of an inch. NOTE: A manometer (fluid-filled gauge) is recommended rather than a spring type gauge due to the difficulty of maintaining calibration of a spring type gauge.

4) Remove the cap from the pressure adjusting screw and adjust the manifold pressure to the pressure selected from the table above. Cycle the main burners once or twice to properly seat the adjustment spring in the valve.

5) Measure the manifold pressure. If adjustment is necessary, correct pressure setting by turning the regulator screw IN (clockwise) to increase pressure. Turn regulator screw OUT (counterclockwise) to decrease pressure. When the pressure is correct, remove the manometer and replace the cap. Check for leaks at the pressure tap fitting.

CAUTION: DO NOT bottom out the gas valve regulator adjusting screw. This can result in unregulated manifold pressure causing excess overfire and heat exchanger failure.

WARNING: Manifold gas pressure must never exceed 3.5" w.c. for natural gas or 10" w.c. for propane gas.

6) With the heater operating, determine that the inlet pressure to the heater is between 5 and 14 inches w.c. for natural gas or between 11 and 14 inches w.c. for propane gas. Take this reading as close as possible to the heater. (Most heaters are equipped with gas valves that have an inlet pressure tap.) If the inlet pressure is not within the specified range, the inlet pressure must be corrected and the manifold pressure re-checked.

7) If the gas valve has been adjusted for operation above 2000 ft, find the high altitude manifold pressure label in the kit. Using a permanent marker, fill-in the pressure setting and adhere the label to the heater in a conspicuous location close to the gas valve.

WARNING: Wait at least five minutes before attempting to relight heater in the event of pilot outage or improper ignition.

13. Check for safe and proper operation by operating the heater for at least one cycle. Observe main burners for complete flame carryover. Observe cautiously from beneath the heater after ignition is established. Flame must be present on the full length of each burner.

If air shutters are used, adjust them according to the instructions supplied with the air shutters.

Replace the bottom panel.

Safety check the installation and equipment. Check that all safety devices are functioning properly.

14. Complete the information required on the gas conversion tape and affix the tape to the heater near the rating plate. Attach the disk to the heater near the gas valve.

Conversion Kits - Natural to Propane

TABLE 1 - Natural to Propane Conversion Kits

Natural to Propane Conversion Kit for Heater Equipped with Single Stage Gas Valve			
Conversion Kit P/N	**Models F, B, FE, BE Size**	**Valve Manufacturer**	**See kit components listed in:**
99249	**25**	M/H VR8204M1000	**TABLE 2**, page 8
		M/H VR8104M2505	
99250	**50**	M/H VR8204M1000	**TABLE 3**, page 9
		M/H VR8104M2505	
99251	**75**	M/H VR8204M1000	**TABLE 4**, page 9
		M/H VR8104M2505	
99252	**100, 125**	M/H VR8204M1000	**TABLE 5**, page 9
		M/H VR8104M2505	
99253	**130, 165, 200, 250**	M/H VR8204M1000	**TABLE 6**, page 9
		M/H VR8104M2505	
	200, 250	M/H VR8440A2159	
		M/H VR8304M2816	
99255	**200, 250**	M/H VR8440A2159	**TABLE 7**, page 10
		M/H VR8304M2816	
	300, 400	W/R 36C68-452	
		W/R 36H32-441	

Conversion Kits - Natural to Propane (cont'd)

Natural to Propane Conversion Requirements

- Propane requires ignition controller with 100% lockout
- Propane on Sizes 130-400 requires burner air shutters

Propane units equipped with spark pilot **require** an ignition controller with 100% lockout. When converting Models F, FE, B, and BE equipped with spark pilot without 100% lockout (Safety Pilot Code 66 or 94) from natural to propane, the ignition controller must be changed. **Where it is required, the conversion kit includes the ignition controller with 100% lockout.**

Heater sizes 130-400 that are **equipped with optional stainless steel burners require** the addition of burner air shutters when converting from natural to propane gas.

Air shutters are NOT included in the conversion kit. If air shutters are required in your installation, order P/N listed in the table below.

Heater Size	Air Shutter Assembly P/N
130	98478
165	98479
200	98480
250	98481
300	98482
400	98483

To determine if your heater is equipped with stainless steel burners, check the replacement parts tag located on the inner panel (next to the fan or blower) on the rear of the heater. If the heater is equipped with stainless steel burners, the tag will read **"EQUIPPED WITH SS BURNERS"**.

Conversion Kit Components - Natural to Propane

TABLES 2 - 7 list the components included in each conversion kit as well as the heater(s) to which that kit applies. Kits that apply to various sizes of heaters include the quantity of orifices required for the largest size of heater. Excess burner orifices may not be returned for credit.

TABLE 2 - Natural to Propane Conversion Kit, P/N 99249			
Applies to Models F/FE/B/BE 25			
Equipped with either of the following valve combinations			
Manufacturer's No.		**M/H VR8204M1000**	
		M/H VR8204M1000	
Components:			
Qty	**P/N**	Description	
1	**98720**	Regulator Spring Kit, M/H 393691	
2	**95936**	Burner Orifice, #60 (sea level)	
1	**98695**	Pilot Orifice, J/C #9733-410 (black)	
1	**257475**	Ignition Controller Assy including:	
1	**257010**	Ignition Control w/100% Lockout, UTEC 1003-514	
1	**133108**	Black Wire Assy (I.C. “MV”)	
1	**98215**	Brown Wire Assy (I.C. “MV/PV”)	
1	**98214**	Blue Wire Assy (I.C. “PV”)	
1	**257074**	Green Wire Assy (I.C. “GND BURNER”)	
1	**98215**	Brown Wire Assy I.C. “24V GND”)	
1	**173303**	Red Wire Assy (I.C. “24V”)	
1	**257014**	Red Wire Assy (I.C.”SENSE”)	
1	**122655**	Yellow Wire Assy (I.C. “TH”)	The loose yellow wire is not used in this application.
1	**173307**	Black Wire Assy (I.C. “TH”)	
1	**257012**	Ignition Controller Mounting Bracket	
2	**96426**	Screws, #10LGM x 3/8" long (for attaching bracket)	
4	**195638**	Screws, #8 x 3/8" long (for attaching controller)	
1	**37752**	Propane Gas Disk	
1	**64391**	Conversion Tape	
1	**257478**	Wiring Diagram Label	

Conversion Kit Components - Natural to Propane (cont'd)

TABLE 3 - Natural to Propane Conversion Kit, P/N 99250			
Applies to Models F/FE/B/BE 50			
Equipped with Valve			
Manufacturer's No	**M/H VR8204M1000**		
	M/H VR8104M2505		
Components:			
Qty	**P/N**	Description	
1	**98720**	Regulator Spring Kit, M/H 393691	
3	**63003**	Burner Orifice, 1.2MM (sea level)	
1	**98695**	Pilot Orifice, J/C #9733-410 (black)	
1	**257475**	Ignition Controller Assy including:	
1	**257010**	Ignition Control w/100% Lockout, UTEC 1003-514	
1	**133108**	Black Wire Assy (I.C. “MV”)	
1	**98215**	Brown Wire Assy (I.C. “MV/PV”)	
1	**98214**	Blue Wire Assy (I.C. “PV”)	
1	**257074**	Green Wire Assy (I.C. “GND BURNER”)	
1	**98215**	Brown Wire Assy I.C. “24V GND”)	
1	**173303**	Red Wire Assy (I.C. “24V”)	
1	**257014**	Red Wire Assy (I.C.”SENSE”)	
1	**122655**	Yellow Wire Assy (I.C. “TH”)	The loose yellow wire is not used in this application.
1	**173307**	Black Wire Assy (I.C. “TH”)	
1	**257012**	Ignition Controller Mounting Bracket	
2	**96426**	Screws, #10LGM x 3/8" long (for attaching bracket)	
4	**195638**	Screws, #8 x 3/8" long (for attaching controller)	
1	**37752**	Propane Gas Disk	
1	**64391**	Conversion Tape	
1	**257478**	Wiring Diagram Label	

TABLE 4 - Natural to Propane Conversion Kit, P/N 99251			
Applies to Models F/FE/B/BE 75			
Equipped with Valve			
Manufacturer's No.	**M/H VR8204M1000**		
	M/H VR8104M2505		
Components:			
Qty	**P/N**	Description	
1	**98720**	Regulator Spring Kit, M/H 393691	
4	**64676**	Burner Orifice, 1.3MM (sea level)	
1	**98695**	Pilot Orifice, J/C #9733-410 (black)	
1	**257475**	Ignition Controller Assy including:	
1	**257010**	Ignition Control w/100% Lockout, UTEC 1003-514	
1	**133108**	Black Wire Assy (I.C. “MV”)	
1	**98215**	Brown Wire Assy (I.C. “MV/PV”)	
1	**98214**	Blue Wire Assy (I.C. “PV”)	
1	**257074**	Green Wire Assy (I.C. “GND BURNER”)	
1	**98215**	Brown Wire Assy I.C. “24V GND”)	
1	**173303**	Red Wire Assy (I.C. “24V”)	
1	**257014**	Red Wire Assy (I.C.”SENSE”)	
1	**122655**	Yellow Wire Assy (I.C. “TH”)	The loose yellow wire is not used in this application.
1	**173307**	Black Wire Assy (I.C. “TH”)	
1	**257012**	Ignition Controller Mounting Bracket	
2	**96426**	Screws, #10LGM x 3/8" long (for attaching bracket)	
4	**195638**	Screws, #8 x 3/8" long (for attaching controller)	
1	**37752**	Propane Gas Disk	
1	**64391**	Conversion Tape	
1	**257478**	Wiring Diagram Label	

Conversion Kit Components - Natural to Propane (cont'd)

TABLE 5 - Natural to Propane Conversion Kit, P/N 99252			
Applies to Models F/FE/B/BE 100 and 125			
Equipped with Valve			
Manufacturer's No.		**M/H VR8204M1000**	
		M/H VR8104M2505	
Components:			
Qty	**P/N**	Description	
1	**98720**	Regulator Spring Kit, M/H 393691	
6	**11830**	Burner Orifice, #55 (sea level)	
1	**98695**	Pilot Orifice, J/C #9733-410 (black)	
1	**257475**	Ignition Controller Assy including:	
1	**257010**	Ignition Control w/100% Lockout, UTEC 1003-514	
1	**133108**	Black Wire Assy (I.C. “MV”)	
1	**98215**	Brown Wire Assy (I.C. “MV/PV”)	
1	**98214**	Blue Wire Assy (I.C. “PV”)	
1	**257074**	Green Wire Assy (I.C. “GND BURNER”)	
1	**98215**	Brown Wire Assy I.C. “24V GND”)	
1	**173303**	Red Wire Assy (I.C. “24V”)	
1	**257014**	Red Wire Assy (I.C.”SENSE”)	
1	**122655**	Yellow Wire Assy (I.C. “TH”)	The loose yellow wire is not used in this application.
1	**173307**	Black Wire Assy (I.C. “TH”)	
1	**257012**	Ignition Controller Mounting Bracket	
2	**96426**	Screws, #10LGM x 3/8" long (for attaching bracket)	
4	**195638**	Screws, #8 x 3/8" long (for attaching controller)	
1	**37752**	Propane Gas Disk	
1	**64391**	Conversion Tape	
1	**257478**	Wiring Diagram Label	

TABLE 6 - Natural to Propane Conversion Kit, P/N 99253			
Applies to Models F/FE/B/BE 130, 165, 200, 250			
Equipped with either of the following valve combinations			
Manufacturer's No.		**M/H VR8204M1000**	
		M/H VR8104M2505	
		M/H VR8440A2159	
		M/H VR8304M2816	
Components:			
Qty	**P/N**	Description	
1	**98720**	Regulator Spring Kit, M/H 393691	
1	**51749**	Regulator Spring Kit, M/H 391937	
8	**96344**	Burner Orifice, #1.65MM (sea level)	
1	**98695**	Pilot Orifice, J/C #9733-410 (black)	
1	**257475**	Ignition Controller Assy including:	
1	**257010**	Ignition Control w/100% Lockout, UTEC 1003-514	
1	**133108**	Black Wire Assy (I.C. “MV”)	
1	**98215**	Brown Wire Assy (I.C. “MV/PV”)	
1	**98214**	Blue Wire Assy (I.C. “PV”)	
1	**257074**	Green Wire Assy (I.C. “GND BURNER”)	
1	**98215**	Brown Wire Assy I.C. “24V GND”)	
1	**173303**	Red Wire Assy (I.C. “24V”)	
1	**257014**	Red Wire Assy (I.C.”SENSE”)	
1	**122655**	Yellow Wire Assy (I.C. “TH”)	The loose yellow wire is not used in this application.
1	**173307**	Black Wire Assy (I.C. “TH”)	
1	**257012**	Ignition Controller Mounting Bracket	
2	**96426**	Screws, #10LGM x 3/8" long (for attaching bracket)	
4	**195638**	Screws, #8 x 3/8" long (for attaching controller)	
1	**37752**	Propane Gas Disk	
1	**64391**	Conversion Tape	
1	**257478**	Wiring Diagram Label	

TABLE 7 - Natural to Propane Conversion Kit, P/N 99255			
Applies to Models F/FE/B/BE 300, 400			
Equipped with Valve			
Equipped with Valve		**W/R 36C68-452**	
		M/H VR8440A2159	
		M/H VR8304M2816	
		W/R 36 H32-441	
Components:			
Qty	**P/N**	Description	
1	**82524**	Regulator Spring Kit, W/R *92-0659	
1	**51749**	Regulator Spring Kit, M/H 391937	
12	**96344**	Burner Orifice, 1.65MM (sea level)	
1	**98695**	Pilot Orifice, J/C #9733-410 (black)	
1	**257475**	Ignition Controller Assy including:	
1	**257010**	Ignition Control w/100% Lockout, UTEC 1003-514	
1	**133108**	Black Wire Assy (I.C. “MV”)	
1	**98215**	Brown Wire Assy (I.C. “MV/PV”)	
1	**98214**	Blue Wire Assy (I.C. “PV”)	
1	**257074**	Green Wire Assy (I.C. “GND BURNER”)	
1	**98215**	Brown Wire Assy I.C. “24V GND”)	
1	**173303**	Red Wire Assy (I.C. “24V”)	
1	**257014**	Red Wire Assy (I.C.”SENSE”)	
1	**122655**	Yellow Wire Assy (I.C. “TH”)	The loose yellow wire is not used in this application.
1	**173307**	Black Wire Assy (I.C. “TH”)	
1	**257012**	Ignition Controller Mounting Bracket	
2	**96426**	Screws, #10LGM x 3/8" long (for attaching bracket)	
4	**195638**	Screws, #8 x 3/8" long (for attaching controller)	
1	**37752**	Propane Gas Disk	
1	**64391**	Conversion Tape	
1	**257478**	Wiring Diagram Label	

Conversion Kits - Propane to Natural

Conversion Kit Components - Propane to Natural

TABLES 8-16 list the components included in each conversion kit as well as the heater(s) to which that kit applies. Kits that apply to various sizes of heaters include the quantity of orifices required for the largest size of heater. Excess burner orifices may not be returned for credit.

Table 8 - Propane to Natural Conversion Kit for Heater Equipped with a Single Stage Gas Valve

Conversion Kit P/N	Models F, B, FE, BE Size	Valve Manufacturer	See kit components listed in:
99257	**25**	M/H VR8204M1018	**TABLE 9**, page 11
99258	**50**	M/H VR8204M1018	**TABLE 10**, page 11
99259	**75**	M/H VR8204M1018	**TABLE 11**, page 11
99260	**100, 125**	M/H VR8204M1018	**TABLE 12** page 11
99261	**130, 165**	M/H VR8204M1018	**TABLE 13**, page 12
99263	**200**	M/H VR8204M1018	**TABLE 14**, page 12
99266	**250, 300**	W/R 36C68-325 W/R 36H32-442	**TABLE 15**, page 12
99267	**400**	W/R 36C68-325 W/R 36H32-442	**TABLE 16**, page 12

TABLE 9 - Propane to Natural Conversion Kit, P/N 99257

Applies to Models F/FE/B/BE 25

Equipped with any of the following pilot and valve combinations

	Pilot		Valve	
Type	**Serial No. Code**	**Manufacturer's No.**	**Serial No. Code**	**Manufacturer's No.**
Spark w/100% lockout				**M/H V8204M1018**

Components:

Qty	P/N	Description
1	**98721**	Spring Regulator Kit, M/H #394588
2	**39650**	Burner Orifice, #51 (sea level)
1	**103034**	Pilot Orifice, J/C #9731-715 (brass)
1	**1401**	Natural Gas Disk
1	**64391**	Conversion Tape

TABLE 10 - Propane to Natural Conversion Kit, P/N 99258

Applies to Models F/FE/B/BE 50

Equipped with any of the following pilot and valve combinations

	Pilot		Valve	
Type	**Serial No. Code**	**Manufacturer's No.**	**Serial No. Code**	**Manufacturer's No.**
Spark w/100% lockout				**M/H VR8204M1018**

Components:

Qty	P/N	Description
1	**98721**	Regulator Spring Kit, M/H #394588
3	**84853**	Burner Orifice, #47 (sea level)
1	**103034**	Pilot Orifice, J/C #9731-715 (brass)
1	**1401**	Natural Gas Disk
1	**64391**	Conversion Tape

TABLE 11 - Propane to Natural Conversion Kit, P/N 99259

Applies to Models F/FE/B/BE 75

Equipped with any of the following pilot and valve combinations

	Pilot		Valve	
Type	**Serial No. Code**	**Manufacturer's No.**	**Serial No. Code**	**Manufacturer's No.**
Spark w/100% lockout				**M/H VR8204M1018**

Components:

Qty	P/N	Description
1	**98721**	Regulator Spring Kit, M/H #394588
4	**38678**	Burner Orifice, #45 (sea level)
1	**103034**	Pilot Orifice, J/C #9731-715 (brass)
1	**1401**	Natural Gas Disk
1	**64391**	Conversion Tape

TABLE 12 - Propane to Natural Conversion Kit, P/N 99260

Applies to Models F/FE/B/BE 100 and 125

Equipped with any of the following pilot and valve combinations

	Pilot		Valve	
Type	**Serial No. Code**	**Manufacturer's No.**	**Serial No. Code**	**Manufacturer's No.**
Spark w/100% lockout				**M/H VR8204M1018**

Components:

Qty	P/N	Description
1	**98721**	Regulator Spring Kit, M/H 394588
6	**11833**	Burner Orifice, #44 (sea level)
1	**103034**	Pilot Orifice, J/C #9731-715 (brass)
1	**1401**	Natural Gas Disk
1	**64391**	Conversion Tape

Conversion Kit Components - Propane to Natural (cont'd)

TABLE 13 - Propane to Natural Conversion Kit, P/N 99261				
Applies to Models F/FE/B/BE 130, 165				
Equipped with any of the following pilot and valve combinations				
Pilot			**Valve**	
Type	**Serial No. Code**	**Manufacturer's No.**	**Serial No. Code**	**Manufacturer's No.**
Spark w/100% lockout				**M/H VR8204M1018**
Components:				
Qty	**P/N**	Description		
1	**98721**	Regulator Spring Kit, M/H #394588		
5	**11831**	Burner Orifice, #35 (sea level)		
1	**103034**	Pilot Orifice, J/C #9731-715 (brass)		
1	**1401**	Natural Gas Disk		
1	**64391**	Conversion Tape		

TABLE 14 - Propane to Natural Conversion Kit, P/N 99263				
Applies to Models F/B/FE/BE 200 (This size requires a valve change when converting from propane to natural.)				
Equipped with				
Pilot			**Valve**	
Type				**Manufacturer's No.**
Spark w/100% lockout				**M/H VR8204M1018**
Components:				
Qty	**P/N**	Description		
1	**121599**	Valve, M/H #VR8304M2816		
6	**11831**	Burner Orifice, #35 (sea level)		
1	**103034**	Pilot Orifice, J/C #9731-715 (brass)		
1	**1401**	Natural Gas Disk		
1	**64391**	Conversion Tape		

TABLE 15 - Propane to Natural Conversion Kit, P/N 99266				
Applies to Models F/FE/B/BE 250, 300				
Equipped with				
Pilot			**Valve**	
Type	**Serial No. Code**	**Manufacturer's No.**	**Serial No. Code**	**Manufacturer's No.**
Spark w/100% lockout				**W/R #36C68-325**
Components:				
Qty	**P/N**	Description		
1	**82525**	Regulator spring Kit, W/R #92-0656		
9	**11831**	Burner Orifice, #35 (sea level)		
1	**103034**	Pilot Orifice, J/C #9731-715 (brass)		
1	**1401**	Natural Gas Disk		
1	**64391**	Conversion Tape		

TABLE 16 - Propane to Natural Conversion Kit, P/N 99267				
Applies to Models F/FE/B/BE 400 (This size model requires a valve change when converting from propane to natural.)				
Equipped with				
Pilot			**Valve**	
Type				**Manufacturer's No.**
Spark w/100% lockout				**W/R #36C68-325**
				W/R #36H32-442
Components:				
Qty	**P/N**	Description		
1	**222037**	Replacement Valve Kit including P/N 221525 Valve, W/R #36H32-441; Compression Nut, P/N 97572; and Instruction Sheet, P/N 222038		
12	**11831**	Burner Orifice, #35 (sea level)		
1	**103034**	Pilot Orifice, J/C #9731-715 (brass)		
1	**1401**	Natural Gas Disk		
1	**64391**	Conversion Tape		

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