INSTALLATION INSTRUCTIONS
90 PLUS TWO-STAGE GAS VALVE WITH DIRECT SPARK IGNITION RXGJ-FP31

BEFORE INSTALLING THIS KIT, CHECK THE "CONVERSION KIT INDEX" (92-21519-59) TO BE SURE YOU HAVE THE RIGHT KIT FOR THE FURNACE MODEL YOU ARE CONVERTING.

TO CONVERT FROM NATURAL TO LP GAS USE KIT NUMBER FP31 (US/CANADIAN)

PARTS LIST		
DESCRIPTION	**PART NUMBER**	**FP19**
Installation Instructions	92-22999-104	1
Conversion Label	92-18153-05	1
WR LP Conversion Kit 92-1008	60-21193-06	1
Orifice - Burner (1.15 mm)	62-22175-91	8

⚠ Recognize this symbol as an indication of Important Safety Information!

⚠ WARNING

THESE INSTRUCTIONS ARE INTENDED AS AN AID TO QUALIFIED, LICENSED SERVICE PERSONNEL FOR PROPER INSTALLATION, ADJUSTMENT AND OPERATION OF THIS UNIT. READ THESE INSTRUCTIONS THOROUGHLY BEFORE ATTEMPTING ANY MAINTENANCE OR OPERATION. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN IMPROPER INSTALLATION, ADJUSTMENT, SERVICE OR MAINTENANCE RESULTING IN FIRE, ELECTRICAL SHOCK, CARBON MONOXIDE POISONING, EXPLOSION, PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

FOR CANADIAN INSTALLATIONS, THE CONVERSION SHALL BE CARRIED OUT BY A MANUFACTURER'S AUTHORIZED REPRESENTATIVE, IN ACCORDANCE WITH REQUIREMENTS OF THE MANUFACTURER, PROVINCIAL OR TERRITORIAL AUTHORITIES HAVING JURISDICTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CAN/CGA-B149.1 OR CAN/CGA-B149.2 INSTALLATION CODES.

⚠ WARNING

TURN OFF ELECTRICAL POWER AND MAIN GAS SUPPLY BEFORE BEGINNING MODIFICATION. FAILURE TO DO SO CAN RESULT IN ELECTRICAL SHOCK OR EXPLOSION CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

IMPORTANT: DAMAGE TO THE PRODUCT RESULTING FROM FAILURE TO FOLLOW INSTRUCTIONS OR USE OF UNAUTHORIZED PARTS MAY BE EXCLUDED FROM THE MANUFACTURER'S PRODUCT WARRANTY COVERAGE.

The main burner orifices must be sized as shown below.

FURNACE INPUT BTU/HR 45000 - 120000	ELEVATION (FEET)		
	0'-4999'	5000'-7999'	8000' ABOVE
	1.15 MM	1.10 MM	#61

In USA: All gas piping must comply with the latest NFPA 54 National Fuel Gas Code and all state and local codes. All electrical wiring must comply with the latest NFPA 70, National Electrical code and all state and local codes.

In Canada: All gas piping must comply with the latest CAN1-B149-1 & 2 installation codes for gas burning appliances and all provincial and local codes, Part 1 – CSA Standard C22.1 and all provincial and local codes.

KIT INSTALLATION

1. **⚠ WARNING**

   TURN OFF ELECTRICAL POWER AND MAIN GAS SUPPLY BEFORE BEGINNING MODIFICATION. FAILURE TO DO SO CAN RESULT IN ELECTRICAL SHOCK OR EXPLOSION CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.
2. Disconnect union ahead of combination gas valve.
3. Disconnect leads from gas valve.
4. Remove the 4 screws holding the manifold assembly to the main burner assembly.
5. Install springs into gas valve per instructions included with the spring kit.
6. Remove each existing orifice from the manifold assembly using a ratchet with a 7/16 socket. Replace with orifices from the kit. Screw the orifices in hand tight and secure in place with a quarter turn with the ratchet.

7. Reinstall the manifold assembly on the burner assembly with the 4 screws removed in step 4.
8. Reconnect the leads to the gas valve, union, and electrical power to furnace.
9. Turn on the gas supply and check unit thoroughly for gas leaks using soap solution.
10. Follow lighting instructions to put furnace into operation.
11. Operate thermostat to check unit operation.

⚠ WARNING

DO NOT USE AN OPEN FLAME.

NOTE: If you have a single thermostat, the furnace will start on high fire then switches to low fire and will continue on low fire for 12 minutes and then if thermostat is not satisfied, shifts to high fire. With a 2-stage thermostat, when there is a call for low heat (1st stage), the furnace will start on high fire then switch to low fire until the call for heat is satisfied or 2nd stage contacts close.

CHECKING AND ADJUSTING GAS PRESSURE

1. The LP gas supply pressure must be set between 11 and 13" W.C. by means of the tank or branch supply regulators.
2. The furnace manifold pressure should be 10" W.C. for high fire and 4.8" W.C. for low fire. The valve comes from the factory preset at these pressures. These pressures can be checked by connecting a properly calibrated manometer or gauge to the manifold pressure tap on the outlet end of the valve. Check and adjust pressures as follows:
   a. For full input pressure remove adjustment screw cover on outlet end of valve and turn adjustment screw clockwise to increase pressure and counterclockwise to reduce pressure. Replace the adjustment cover screw securely.
   b. For low fire pressure, remove the regulator cover on top of valve and adjust as noted above.

   NOTE: Use 3/32" allen wrench for making pressure adjustments. See Figures 1 & 2.

COMPLETING CONVERSION

1. Using a ball point indelible pen, record the following information on the conversion label.
   a. Conversion kit number.
   b. Date of conversion.
   c. Installer's name, address and telephone number.
   d. Burner orifice size.
2. Place completed conversion label adjacent to the rating plate.
3. Install the burner compartment access door.
4. Run furnace through complete cycle to check operation.

FIGURE 1
GAS VALVE 60-101921-01

