GAS CONVERSION INSTRUCTIONS
DIRECT-VENT GAS FIREPLACE

DVLL48BP92P-2 CONVERSION KIT PART NUMBER 40511

FOR CONVERSION TO **NATURAL GAS**

⚠WARNING

This conversion kit is to be installed by an Empire Comfort Systems, Inc., distributor (or other qualified agency[1])*in accordance with the manufacturer's instructions and all codes and requirements of the authority having jurisdiction. Failure to follow instructions could result in serious injury or property damage. The qualified agency performing this work assumes responsibility for this conversion.

1National Fuel Gas Code Z223.1 (Latest Edition)

***The term "qualified individual, firm, corporation or company which either in person or through a representative is engaged in and is responsible for (a) the installation of gas piping or (b) the connection, installation repair, or servicing of equipment, who is experienced in such work, familiar with all precautions required, and has complied with all the requirements of the authority having jurisdiction.**

CHECK SAFETY SHUTDOWN PERFORMANCE

⚠WARNING

Perform the safety shutdown test anytime work is done on a gas system to avoid the possibility of fire or explosion with property damage, personal injury or loss of life.

SAFETY SHUTDOWN SYSTEM
Full Function Control

1. Turn off unit with remote. Main burner and pilot should go off.
2. Pilot gas flow should stop within 30 seconds.
3. Relight pilot burner and operate system through one complete cycle to make sure all controls operate properly.

PARTS LIST		
Part Description	**Conversion Kit - 40511**	**Quantity Supplied**
Main Burner Orifice	#31 (P209)	1
SIT Gas Valve Conversion Kit	R11381	1
Gas Conversion Label	2139	1

Tools Needed:

- 1/4 Inch Hex Driver
- 5/16 Inch Hex Driver
- 3/8 Inch, 7/16 Inch, and 1/2 Inch Wrenches

GAS INPUT FOR DIRECT VENT FIREPLACE CONVERTED TO NATURAL GAS:

DVLL48BP9 (NAT) - 38,000 BTU per hour

The direct vent gas fireplace when converted to Natural Gas will have a manifold pressure of approximately 3.5" w.c. (.871kPa) at the valve outlet with the inlet pressure to the valve from a minimum of 4.5" w.c. (1.120kPa) for the purpose of input adjustment to a maximum of 14.0" w.c. (3.484kPa).

INSTRUCTIONS FOR CONVERSION

1. If the fireplace is installed, turn OFF the gas and electric supply to the fireplace before making a gas conversion.
2. Locate the Fireplace Installation Instructions for reference as how to remove the Barrier screen front and Glass Door assembly. Remove these two items and set aside.
3. Remove all interior decorative elements such as Logs, Rocks, and/or glass media if present.
4. If the fireplace is installed with no outside access to the outer service panel, then all conversion steps will need to be performed from inside the fireplace.
5. If access is available to the valve through the outer service panel, then changing of the stepper motor will be much easier.
6. If no outer access is available, then follow the remaining steps for converting the gas type.
7. Lift the front Glass Retainer bracket to remove. **See Figure 1.**

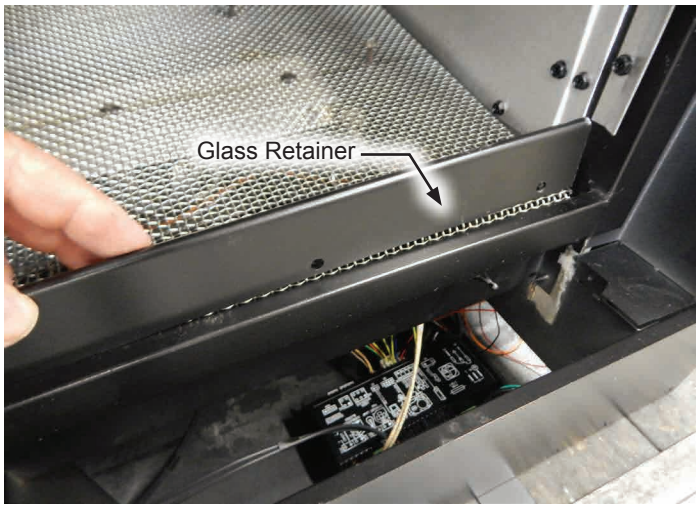

Figure 1

8. If installed, remove the interior Liner Panel(s). Refer to the Liner installation instructions for removal.
9. Remove (9) Phillips Truss head screws that secure the Burner Screen to the burner. **See Figure 2.** Lift up the Burner Screen Cover to remove and set aside.

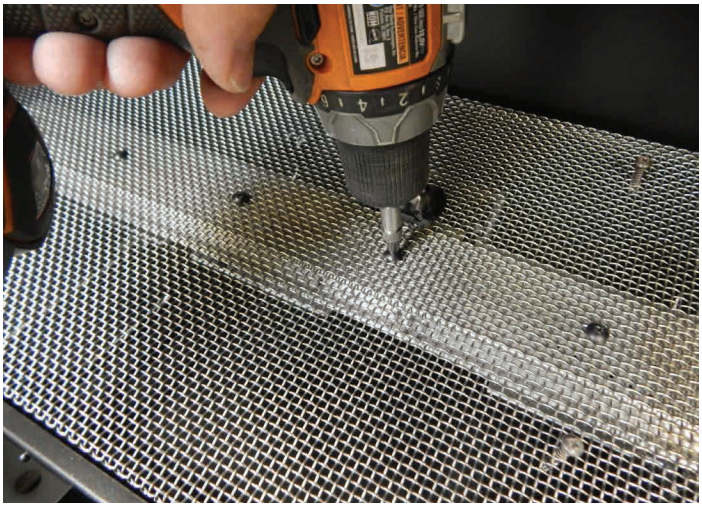

Figure 2

10. To change the burner orifice, remove (4) 5/16" Hex screws that secure the outside burner brackets. Each end bracket is secured with (2) screws. **See Figure 3** for the location of the front screw, and **Figure 4** for the location of the rear screw location.

Figure 3

Figure 4

11. The Burner assembly can now be shifted to the left about 1 inch to release the air shutter off of the orifice holder. The outer burner brackets may need to be gently tapped to the left to assist in the burner to move to the left. There are (4) burner lock down tabs under the center of the burner assembly. These tabs interlock with slots in the two center burner brackets. **See Figure 5.** Once these tabs are unlocked from the center burner brackets, the Burner assembly can be lifted upward a few inches to gain access to the orifice and air shutter. It is recommended that the burner assembly be supported.

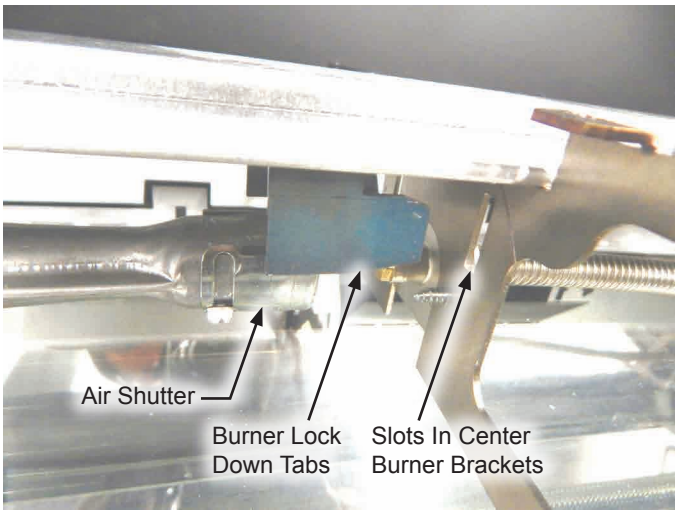

Figure 5

12. Using a 3/8" wrench, remove the #50 orifice from the orifice holder and discard. **See Figure 6.**
13. Install the new #31 orifice into the orifice holder. Do not overtighten. **See Figure 6.**

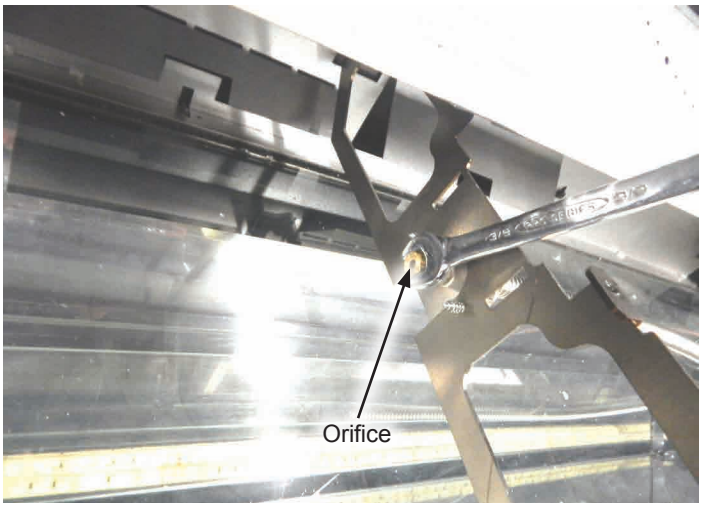

Figure 6

14. Using a 1/4" wrench, loosen the air shutter screw, then adjust the air shutter by rotating it to 1/8" open position. **See Figure 7.**

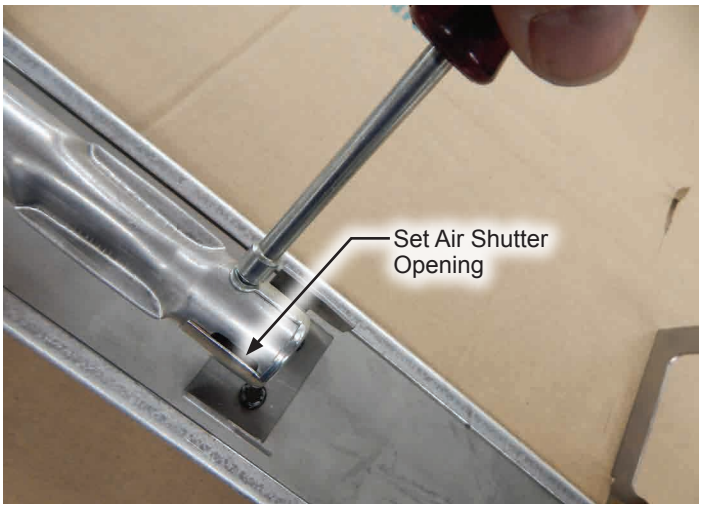

Figure 7

15. Re-install the Burner assembly. Align the air shutter over the orifice holder then shift burner assembly to the right. Make sure the center burner retainer tabs are fully engaged with the center support brackets. **See Figure 8.**

Figure 8

16. Re-install the (4) 5/16" Hex screws removed in step 10 above to secure the Burner assembly.
17. To convert the pilot from Propane gas to Natural gas, loosen the pilot hood assembly slightly using a 7/16" wrench. **See Figure 9.** Just below the pilot hood and nut is a small orifice tab that slides sideways. **See Figure 10.** A small screwdriver may be used to gently move the small orifice tab over to change the gas type. Do not force. The orifice tab has gas types stamped on the tab. Make sure the type of gas being converted to is indicated on the tab, then re-tighten the Pilot hood so that the hood flame points forward to the burner, and left to the sensor. Do not overtighten. **See Figure 9.**

Figure 9

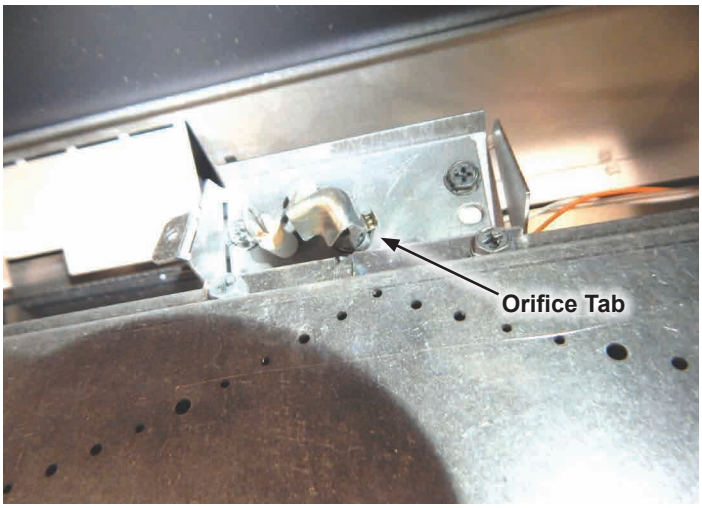

Figure 10

18. To access the valve, locate and remove (4) 5/16" Hex screws that secure the outside Access Cover plate. If outside access is not possible, then you will have to access the valve from the inside of the fireplace. In that case, locate and remove (12) 5/16" Hex screws that secure the internal access plate (located on the right side of the firebox).
19. Convert the gas valve as instructed in the S.I.T. (Propane) Gas Valve Conversion kit.
20. The converted fireplace must be connected to a supply of the conversion gas and checked for leaks at all connections.
21. The fireplace must be checked to ensure it is operating at the correct pressure of 3.5 w.c.
22. Replace the internal and/or external Access Cover(s) removed in step 18.
23. Install the Liner kit. Refer to Liner installation instructions as needed.
24. Install decorative media such as a log set and/ or crushed glass as specified using the fireplace installation manual instructions as a guide.
25. Replace the Glass Door assembly.
26. Replace the Barrier Screen assembly.
27. Gas conversion is complete.

The main burner flame and pilot burner flame must be checked for proper flame characteristics, as outlined in the Installation Instructions and Owner's Manual.

VERIFYING INPUT RATE OF CONVERTED FIREPLACE

The input of the fireplace must be checked as follows:

1. Turn off all other gas appliances. Clock the gas meter and determine the number of seconds required to consume one cubic foot of gas.
2. 3600 ÷ time (in seconds) = cu. Ft. per hour.
3. Then cu. Ft. per hour x heating value of gas = input rate (Btuh). On installation without gas meters, check manifold for proper pressure.

If fireplace is not installed or warranty card has not been returned to Empire Comfort System's, Inc., check off type of gas converted to on card. Also, indicate conversion by adding "Conv." behind type of gas.