

# AC04338

## FOR CONVERSION TO NATURAL GAS

## **WARNING**

This conversion kit is to be installed by an Empire Comfort Systems, Inc., distributor (or other qualified agency¹)\* 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.

1: National 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	QUANTITY
	AC04338	SUPPLIED
Main Burner Orifice #31	49707	1
SIT Gas Valve Conversion Kit	49701	1
Gas Conversion Label	27831	1

Tools Needed: 1/4" Hex Driver, 5/16" Hex Driver, 3/8", 7/16", and 1/2" Wrenches

Gas input for direct vent fireplace converted to Natural gas: L48 - 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. Remove the front accent light cover.
- 8. Remove the interior liner panel(s).
- 9. Remove the two Accent Glass Panels and set aside.
- 10. Remove the burner cover assembly. Lift up and forward to remove
- 11. Using a 5/16" hex drive or Philips screwdriver, remove one screw securing each end of the burner assembly.
- 12. Shift the burner to the left about 3/4" to pull air shutter off of the orifice holder, then lift upward to remove the burner from the fireplace.
- 13. Using a 3/8" wrench, remove the #50 orifice from the orifice holder and discard.
- 14. Install the new # 31 orifice. Do not overtighten.
- 15. Using a 1/4" wrench, adjust the air shutter to 1/16" Open (Nat), and re-tighten air shutter screw.
- 16. Úsing a 7/16" wrench, slightly unscrew the pilot head assembly and slide the lower tab to "NAT". Then tighten the pilot head assembly.
- 17. Re-install the burner assembly. Align the air shutter over the orifice holder, shift burner assembly to the right, and reinstall the screws removed in step # 11 to secure the burner.
- 18. To access the valve, remove twelve screws that secure the internal access door plate (located on the right side firebox wall).
- 19. Convert the gas valve as instructed in the S.I.T. (Natural) 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  $10.0^\circ$  w.c.
- 22. Replace the access door plate over the right side firebox wall opening, and secure with twelve screws.
- 23. Re-install the burner screen over the burner. Align the cutout with the pilot bracket.
- 24. Re-install the burner cover. Be sure it lays flat over the burner screen, and the end flanges engage the slots in the side wall brackets.
- 25. Install the liner kit.
- 26. Replace the two Accent Glass Panels.
- 27. Replace the Light Cover
- 28. Install decorative media such as a log set and/or crushed

glass as specified using the fireplace installation manual instructions as a guide.

- 29. Replace the Glass Door assembly.
- 30. Replace the Barrier Screen assembly.
- 31. 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:

- 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.  $3600 \div \text{time (in seconds)} = \text{cu. Ft. per hour.}$
- 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 SBI - Stove Builder International, check off type of gas converted to on card. Also, indicate conversion by adding "Conv." Behind type of gas.

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