

# NATURAL GAS SAFETY PILOT KIT

## MODEL: CVS-303

### Supplemental Installation Instructions for use on Natural Gas Vented Log Sets

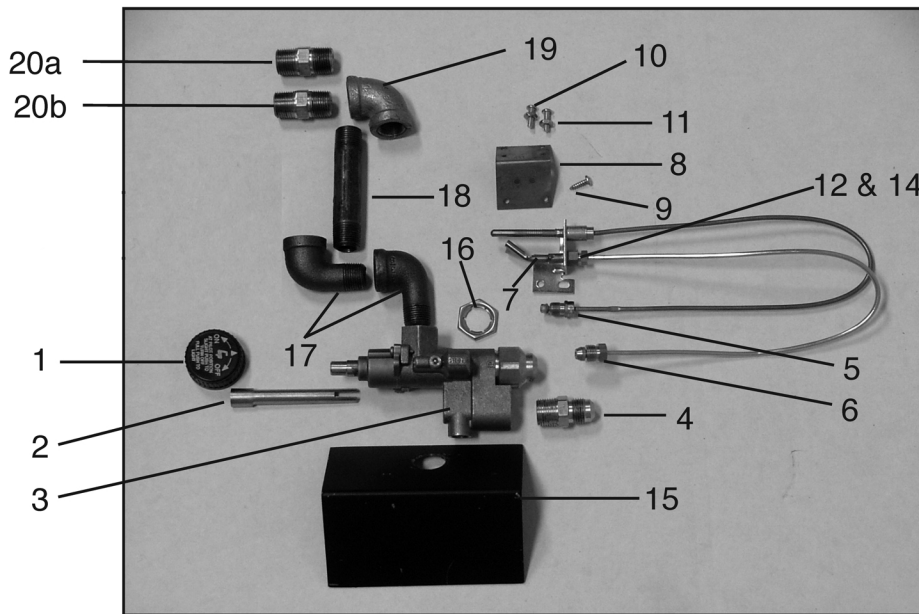
**NOTE:** This kit is for Natural Gas and L.P. Gas applications. For L.P. or Propane Gas installation see separate instructions packaged with necessary hardware. (Do not use the Natural Gas orifice supplied with this kit on L.P. or Propane Gas Installations as improper combustion will occur.)

#### IMPORTANT

Read and follow all instructions carefully as these supplemental Pilot Assembly instructions are to be used in conjunction with the General Installation Instructions supplied with all Emberglow Natural Gas log sets.

#### PARTS LIST & ILLUSTRATION

**NOTE:** Be sure to turn Pilot adjust screw counter-clockwise (⤵) two (2) turns to get gas flow to the pilot.



Part No.	Description	Part No.	Description	Part No.	Description
1	Control Knob	9	Sheet Metal Screw (1)	18	3" Pipe Nipple
2	Extension Handle	10	Bolt (2)	19	3/8" Female Elbow
3	Gas Control Valve	11	Nut (2)	20a	3/8" Natural Gas Orifice - 18" Small Center Hole
4	3/8" Straight Flare Fitting	12	Pilot Orifice - Natural Gas	20b	3/8" Natural Gas Orifice - 24" & 30" Large Center Hole
5	Thermocouple Lead	14	Pilot Supply Line Nut*		
6	Pilot Gas Supply Line	15	Heat Shield		
7	Pilot Burner	16	Lock Nut		
8	Pilot Bracket	17	90 Degree Street Elbow (2)		

\*Packaged separately in LP Conversion bag

**National Code requirements mandate the use of a Pilot Safety Valve on all L.P. or Propane gas applications. These regulations must be followed on all installations of this type.**

# SINGLE & DUAL SYSTEMS

## INSTALLATION OF NATURAL GAS PILOT VALVE

This Safety Pilot Kit contains a Control Valve certified by C.S.A., which provides a safe and convenient way to ignite your energy efficient gas log set.

**Note: Use pipe compound on all male threads to seal joints.**

- A. This Safety Pilot Kit contains a Natural Gas Orifice and L.P. Gas hardware. Instructions are packaged separately in this kit.
- B. Attach Pilot Bracket (Part #8) to the Burner Pan using one sheet metal screw (Part #9). Install sheet metal screw into top left hole of the bracket (See Figure 1)
- C. Attach the 3/8" straight Flared Fitting (Part #4) to the Gas Control Valve using pipe compound. (See Figure 2)
- D. Attach Pilot Gas Supply Line (Part #6) and the Thermocouple Lead (Part #5) to the Gas Control Valve. Attach valve extension rod (Part #2) to knob and control valve. (See Figure 2)

**NOTE: When screwing into the Control Valve, hand tighten both the Pilot Gas supply line and Thermocouple lead, then tighten 1/8 turn with a wrench. **DO NOT OVER TIGHTEN** as this will cause the Pilot to not function properly.**

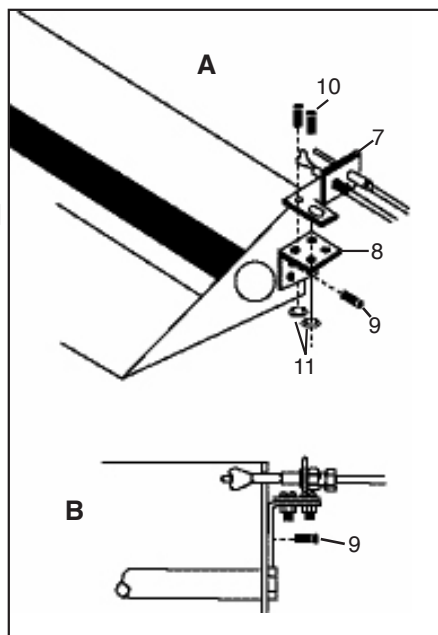


Figure 1  
(A&B) Pilot Burner Assembly

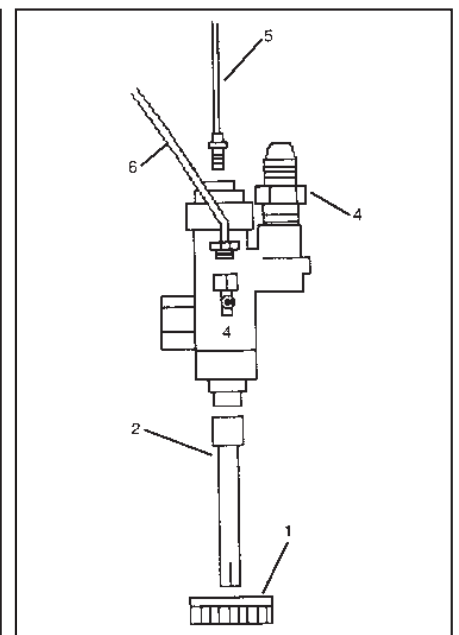


Figure 2

# SINGLE & DUAL SYSTEMS cont.

## INSTALLATION OF NATURAL GAS PILOT VALVE (cont.)

- E. Connect the two 3/8" Street Elbows (Part #17) and screw the 3/8" Locknut (Part #16) down on the male threads of the elbow. Place the hole of the Heat Shield (Part #15) over the elbow and slide it down against the locknut. Apply pipe compound to the male threads of the elbow and attach it to the control valve.

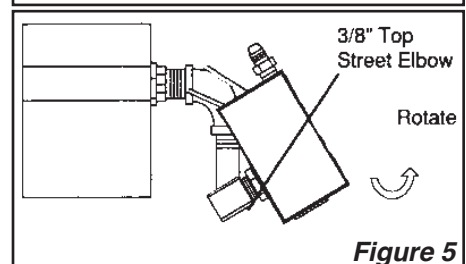
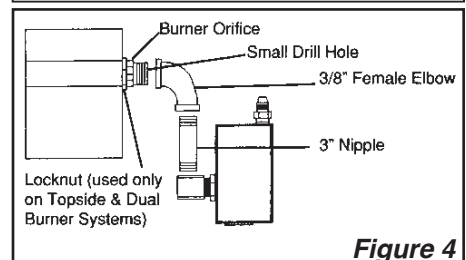
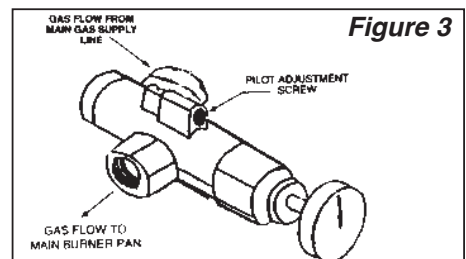
(See Figure 3)

**IMPORTANT:** Be sure to turn the pilot adjust screw with a screwdriver two full turns in a counter-clockwise (↺) direction to enable pilot operation. (See Figure 3)

- F. Attach the 3/8" Natural Gas Orifice (Part #20a or #20b) through the Burner Pan to the Burner Bar using the 3/8" Locknut supplied only with Dual Burner log sets. When installing a single burner log set, a 3/8" locknut is not used. Be sure the small drill hole on the 3/8" Natural Gas Orifice is facing the gas control valve and the large hole is facing the burner pan. (See Figure 4)
- G. Using pipe compound, connect the 3" Nipple to the Street Elbow attached to the valve assembly and to the 3/8" Female Elbow. Connect the 3/8" Female elbow, which is now connected to the entire valve assembly, to the Burner Orifice using pipe compound. (See Figure 4)
- H. The valve assembly can be rotated to better conceal the controls. Simply rotate the entire valve assembly by turning the top 3/8" Street Elbow with a wrench. (See Figure 5)
- I. Attach Pilot Burner Assembly (Part #7) to the Pilot Bracket (Part #8) using the two bolts (Part #10) and two nuts (Part #11). See Figure 1A on the previous page. Carefully bend the Pilot tubing (Part #6) when attaching the Pilot Burner Assembly to the Burner Pan. Care should be taken not to kink the tubing which would restrict gas flow to the Pilot Burner.

**NOTE:** The Pilot Bracket utilizes four mounting holes for adjustment of the Pilot Burner Assembly should your installation require repositioning. Repositioning of the Pilot Burner Assembly may be necessary if the log set is experiencing intermittent shutdown. Shutdown is caused by overheating of the Pilot Burner Assembly by the main burner flame. If shut down is occurring, move the Pilot Burner Assembly over to the next mounting hole so that only the tips of the Pilot Burner Assembly are hanging over the Burner Pan. Only one Mounting Screw (Part #10) will be used in this application.

- J. Place the assembled Burner Pan with the Gas Control Valve in the center of the fireplace.
- K. Connect the 1/2" gas supply line from the fireplace to the 3/8" Straight Flared fitting (Part #4) with the 3/8" Flared Tubing supplied with the gas log set. Refer to the General Installation Instructions section titled "Connecting Gas Supply to Burner Pan" for full instructions.
- L. Test connections for leaks with soapy water. Retighten if necessary, and retest the connections to determine if any other leaks are present.
- M. Refer the General Installation Instructions for Granule, Ember, Grate and Log placement.



# LIGHTING YOUR GAS LOGS WITH THE SAFETY PILOT KIT

## 1. Light Pilot

Turn Control Knob to **Pilot** Position (Figure 17), push knob fully in and hold a long lighted match at the Pilot Burner Assembly. After lighting the Pilot, hold the Control Knob in the ignition position for approximately 45 seconds. This is an adequate time for the Thermocouple to reach an operational temperature in order to keep the Pilot lit once the Control Knob is released. If the Pilot does not remain lit, turn the Control Knob to the Off position, **wait 5 minutes**, then repeat the process as outlined above.

**NOTE:** If the Pilot continues to go out, check to be sure the Pilot Thermocouple lead (Part #5) has not been overtightened to the Gas Control Valve.

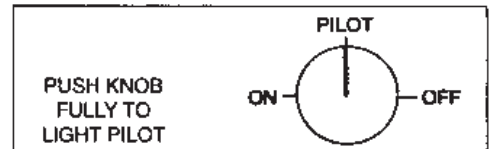


Figure 17-Rotate control valve to Pilot Position

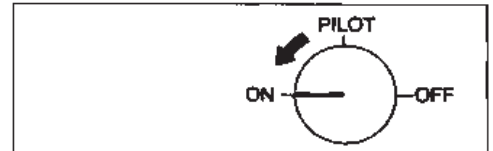


Figure 18-Rotate control valve to On Position to ignite burner

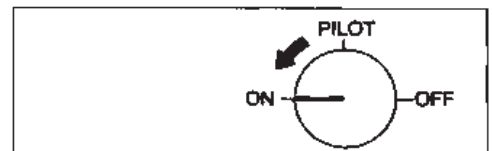


Figure 19-Rotate control valve to Off Position for both Pilot and Burner shutdown

## 2. Burner Ignition

To light the Burner, turn the Control Knob counter clockwise from the Pilot Position to the On Position (Figure 18). In this position, both the Pilot Burner and Main Pan Burner will be lit.

## 3. Burner Shutdown

To turn off the Burner Pan, move the Control Knob clockwise back to the Pilot Position. This will extinguish the Main Burner Pan, but will keep the Pilot Burner lit for instantaneous ignition of the Main Burner Pan the next time you wish to use your gas log set.

## 4. Total Burner Shutdown

To turn off the gas supply to the Main Burner Pan and the Pilot Burner, move the Control Knob clockwise from the Pilot Position to the "OFF" Position (Figure 19).

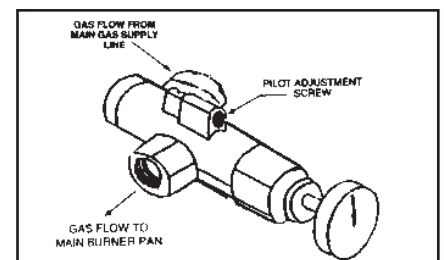


Figure 20-Pilot Flame Adjustment

**NOTE:** The Control Knob will need to be depressed slightly in order to move it from the Pilot Position to the "OFF" Position.

## 5. Pilot Flame Adjustment

The Pilot Thermocouple should be engulfed by the Pilot Flame by approximately 1/2". Should the Pilot Flame become unable to heat the Thermocouple properly, you will need to adjust the Pilot. Adjust the height of the Pilot Burner flame by rotating the Pilot Adjustment Screw to the desired 1/2" flame height (Figure 20).

**NOTE:** Be sure to turn Pilot Adjust Screw counter-clockwise (↺) two turns to get gas to flow to the Pilot. (See Figure 20). Off Position.

## **TROUBLESHOOTING**

<b>PROBLEM</b>	<b>CAUSE</b>	<b>CORRECTIVE ACTION</b>
1. Pilot noise	Excess pressure	<ul style="list-style-type: none"><li>• Check line pressure and adjust to 7 inch water column.</li><li>• Adjust pilot flame.</li></ul>
2. Pilot will not light	Inadequate gas flow  Thermocouple too tight	<ul style="list-style-type: none"><li>• Check all valves</li><li>• Clear obstructions</li><li>• Check for line kinks</li> <li>• Loosen Thermocouple slightly</li></ul>
3. Pilot & Burner go out after burning for several minutes (up to one hour)	Overheating of Thermocouple	<ul style="list-style-type: none"><li>• Check to see that Main Burner Flames are not hitting the Thermocouple (move Pilot Assembly so only the tips of the Thermocouple and pilot are hanging over the burner pan).</li><li>• Reposition logs, if that is the cause, move Main Burner flames away from the Thermocouple.</li><li>• If you have glass doors, open them fully when operating your gas logs.</li></ul>

## LIMITED WARRANTY

**Limited Warranty shall apply to the original purchaser at the original installation point only.**

Pilot, valves and thermocouples are guaranteed for a period of one (1) year under the original manufacturers warranty.

**General Warranty:** This warranty does not apply in the case of improper installation, neglect, accident, misuse or as a result of modifications of the original product.

All costs for removal and re-installation are the expressed responsibility of the purchaser.

For repair, replacement, or service to defective part(s) please contact our Customer Service Hotline, number below. Thereafter with valid warranty registration and proof of purchase, call the Customer Service Hotline for authorization to ship defective part prepaid and insured in original carton to Sure Heat Manufacturing, 1861 West Oak Parkway, Marietta, GA 30062. Goods returned improperly packaged are the sole responsibility of purchaser.

It is agreed that any repair or replacement is the exclusive remedy from Sure Heat Manufacturing. In no case shall Sure Heat be liable for any consequential damage or breach of this or any other warranty expressed or implied whatsoever. This limitation as to consequential damages shall not apply in states where prohibited.

Purchased From: \_\_\_\_\_ Date: \_\_\_\_\_

Size:  18"  24"  30"

Model:

Name: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**Please photocopy and return registration along with proof of purchase  
within 14 days of purchase to  
SHM Int. 1861 West Oak Parkway, Marietta, GA 30062**

**If you have other questions, please contact the  
Customer Service Hotline — (800) 229-5647**

# Liquid Propane Conversion Kit

## Supplemental Installation Instructions for LP/NG Pilot Kit (CVS303)

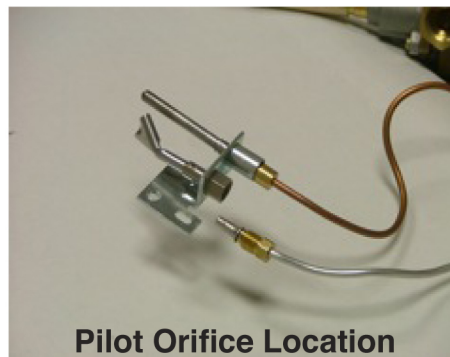
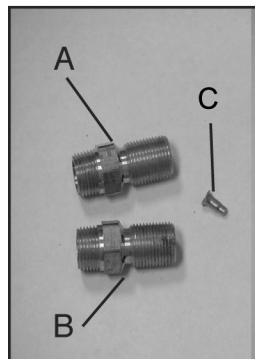
***For use with Dual Burner Systems  
(Used on Vented Gas log sets only)***

**NOTE: SAFETY PILOT SYSTEM MODEL CVS-303 MUST BE USED  
WHEN INSTALLING THIS CONVERSION KIT.**

### IMPORTANT

Please read and follow all instructions carefully. These instructions are to be used in conjunction with the General Installation Instructions supplied with all Vented Natural Gas sets. These instructions are also used in conjunction with the Safety Pilot Kit instructions (Model CVS-303) included with this kit.

**National Code requirements mandate the use of a Safety Pilot Valve on all Liquid Propane Gas log installations. These regulations must be followed on all installations of this type.**



### CONVERSION KIT PARTS LIST:

PART NO.	DESCRIPTION
A	18" L.P. Air Shutter Orifice - small hole size
B	24" & 30" L.P. Air Shutter Orifice - large hole size
C	Pilot Burner Orifice

***NOTE: Be sure to use pipe compound on all male threads to seal joints.***

## DUAL BURNER LOG SETS

- A. Replace the *Natural Gas Orifice (Part #20)* included in the Safety Pilot Kit (Model CVS-303) with the *L.P. Air Shutter Orifice*. This kit contains (2) L.P Air Shutter Orifices, *Part A* and *Part B*. The orifice with the small inner hole is used on the 18" Log Sets. The orifice with the larger hole is used on 24" and 30" log sets. Be sure to attach the short stem on the appropriate *L.P. Air Shutter Orifice* directly to the Burner System for proper operation. (See Figure 1)

**NOTE: Refer to the Safety Pilot Valve instructions supplied with the Model CVS-303 for detailed instructions on pilot installation.**

- B. Replace the *Natural Gas Pilot Burner Orifice* with the *L.P./ Propane Orifice (Part C)* supplied with this kit.
1. Remove *Pilot Supply Line Nut (Part #14)* from the *Pilot Burner (Part #7)*. Replace *Natural Gas Orifice* with the *L.P. Gas Orifice (Part C)* included with this conversion kit.

**NOTE: Refer to the detailed Safety Pilot Illustration on front cover for placement of the L.P. Pilot Orifice.**

- C. Replace *Heavy Media (Granules)* supplied with the Natural Gas Log set with *Vermiculite Granules*, sold separately. **DO NOT USE Heavy Media Granules** as improper combustion will occur. After the *Vermiculite Bed* has been put in place, spread the *Glowing Embers* (insulation type material) supplied with the Gas Log Set over the *Vermiculite Bed*.

