RH PETERSON CO.

realfyre
PREMIUM GAS LOGS

INSTALLATION & OWNER'S MANUAL

SAFETY PILOT SYSTEM
FOR NATURAL OR PROPANE GAS

Models:
SPK-20
SPK-21

SPK-20
Knob control

SPK-21
Steel rod control

- **CONTROL OPERATED ON/OFF**

SUITABLE FOR THE FOLLOWING BURNERS:
- **G45 SERIES BURNERS**
- **G4 SERIES BURNERS**
- **GX4 SERIES BURNERS**
- **VG4 SERIES BURNERS**
- **F SERIES BURNERS**
- **P SERIES BURNERS**

SPK-20 AND SPK-21 SAFETY PILOT KIT

WARNING

If the information in this manual is not followed exactly, a fire or explosion may result, causing property damage, personal injury, or loss of life.

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS:

- Extinguish any open flame
- Open a window.
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in the building.
- Immediately call the gas supplier from a neighbor's phone and follow the gas supplier's instructions.
- If you cannot reach the gas supplier, call the fire department.

Installation and service must be performed by an NFI Certified or other qualified professional installer, service agency, or the gas supplier.

INSTALLER & CONSUMER
These instructions **MUST** be retained with this appliance

Important: Read these instructions carefully before starting installation of the log set and control.

The Peterson Real Fyre burner system is to be installed only in a solid-fuel-burning fireplace with a working flue constructed of noncombustible material. Solid fuels shall not be burned in a fireplace where the unit is installed. The installation, including provisions for combustion, ventilation air, and required minimum permanent vent opening, must conform with the *National Fuel Gas Code (ANSI Z223.1/NFPA 54)* and applicable local building codes. In Canada, the installation must conform with the *Natural Gas and Propane Storage and Handling Installation Code (CSA-B-149.1).* A damper stop clamp is included to maintain the minimum permanent vent opening and to prevent full closure of the damper blade. **The chimney damper must be fixed fully opened when burning the unit. The burner system is designed to burn with yellow flames; thus, adequate ventilation is absolutely necessary.**

NATIONAL FIREPLACE INSTITUTE NFI CERTIFIED www.nficertified.org

We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

IMPORTANT INFORMATION

CHECK TO BE SURE THAT THE SAFETY PILOT HAS BEEN ASSEMBLED FOR THE PROPER GAS.

(Reference FOR PROPANE GAS)

The installation, including provisions for combustion and ventilation air, must conform with local codes, or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 (latest edition).
This appliance and its individual shutoff valve must be disconnected from the gas-supply piping system when testing at pressures that exceed 1/2 psig. This is accomplished by closing the gas-supply line valve.
This appliance must be isolated from the gas-supply piping system by closing its individual manual shutoff valve during any testing of the gas-supply system at test pressures up to and including 1/2 psig.

WHEN GLASS FIREPLACE ENCLOSURES (DOORS) ARE USED, OPERATE THE BURNER SYSTEM WITH THE GLASS DOORS FULLY OPEN; BOTH SIDES IF THE FIREPLACE IS A SEE-THROUGH TYPE.

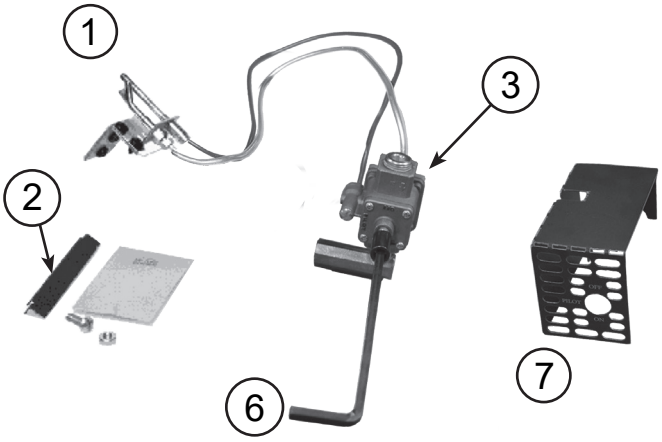
Do not use this appliance if any part has been underwater. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been underwater.

TO PREVENT VALVE DAMAGE AND FAILURE:

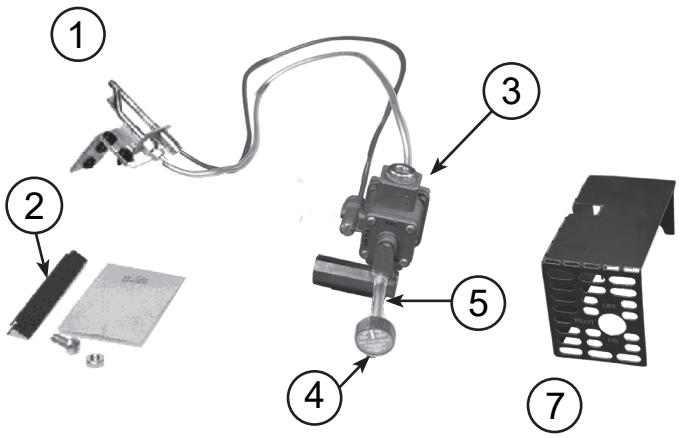
IT IS CRITICAL THAT THE HEAT SHIELD BE PLACED CORRECTLY OVER THE VALVE PRIOR TO OPERATION.

KEEP LAVA GRANULES/COALS, SAND/VERMICULITE, EMBERS/GLASS, AND ALL FOREIGN OBJECTS AWAY FROM THE PILOT ASSEMBLY, VALVE ASSEMBLY, AND HEAT SHIELD DURING MEDIA PLACEMENT AND AT ALL TIMES.

REPLACEMENT PARTS LIST



SPK-21/P



SPK-20/P

Item	Description	Part No.	Qty.
1. or	Pilot assembly (natural) Pilot assembly (propane)	PAC-1 NAT PAC-1LP	1 1
2.	Flame diverter bracket	SH-1	1
3.	Safety control valve	SV-12	1
4.	Knob	KNOBS2	1
5.	Extension handle (for knob)	EH-2	1
6.	Steel rod handle	EH-1	1
7.	Heat shield	HS-9	1

INSTALLATION

This safety pilot system must be installed by a qualified professional service technician. Instructions must be followed carefully when installing to ensure proper performance and full benefit from the burner system and safety pilot system.

These instructions must be used as a supplement to the instructions supplied with the R.H. Peterson burner system. Follow the burner system instructions and make adjustments as appropriate for the addition of a safety pilot system. Use gas pipe sealing compound that is resistant to all gasses (or Teflon tape) and apply to all male pipe connections. DO NOT apply pipe sealing compound to any flare connections. Make sure that all connections are tight and do not leak. **Refer to the REPLACEMENT PARTS LIST when following these instructions.**

FOR L.P. (PROPANE) GAS (if applicable)

The safety pilot kit is shipped with a natural gas orifice installed unless the safety pilot kit was received in the same box as the propane burner. To change from natural to propane gas, remove the pilot gas supply line at the pilot end. Replace the natural gas orifice with the propane gas orifice contained in the yellow envelope marked "L.P.-GAS", provided in the bag. Reattach the pilot gas supply line to pilot. See Fig. 4-1.

CONNECT SAFETY CONTROL VALVE TO BURNER

1. Remove the heat shield, extension handle, and knob, if required.
2. Screw the brass adapter of the control valve to the fuel injector or air mixer on the burner (see Fig. 4-1).

For left-sided installation (if applicable):

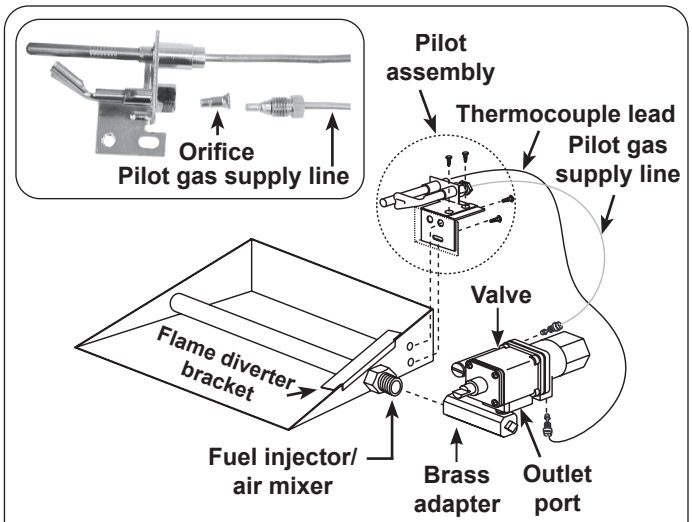
1. Make sure the fuel injector/air mixer and burner cap are reversed so the fuel injector/air mixer is on the left side of the burner and the cap is on the right (see Fig. 4-2).
2. Turn the brass adapter 180 degrees on the control valve so the opening is to the right and then mirror for left-sided installation as shown in Fig. 4-3.
3. Reconfigure heat shield to protect the valve body.

INSTALL FLAME DIVERTER BRACKET

The flame diverter bracket, when properly installed onto G45, G4, GX4, VG4, and P series burner pans equipped with a safety control system, will promote quicker ignition of the burner system and protect the safety control system from overheating.

Note: Install the flame diverter bracket before installing the pilot assembly.

1. Place flame diverter bracket over the side edge of the burner pan where the safety control system pilot bracket will be attached. It should be placed **approximately 1 1/4"** from the back of burner pan. See Fig. 4-2 & 4-3.
2. Tap bracket lightly with hammer to secure in place.



Note: Heat shield is not shown, but must be in place when operating the log set.

Fig. 4-1 Overall installation diagram

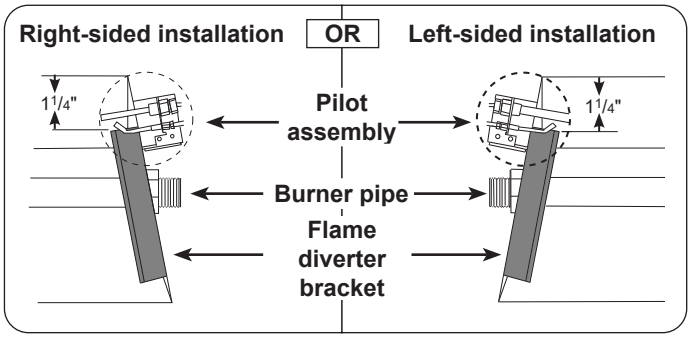


Fig. 4-2 Right-sided / left-sided setup

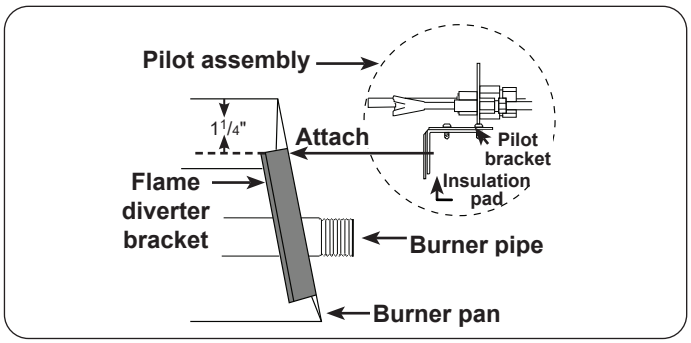


Fig. 4-3 Place flame diverter bracket

INSTALL PILOT ASSEMBLY TO BURNER

CAUTION: Do not get granules into the pilot burner. Do not kink or damage the pilot gas supply line or thermocouple. Do not unscrew the gas line from the valve.

Glowing ember- G45, G4, GX4 & VG4 series

Place the insulating pad between the mounting bracket and the pan. Insert the screws through the pilot bracket and the holes at the end of the pan, as shown in Fig 5-1.

Place the remainder of the insulation pad between the top portion of the mounting bracket and pilot assembly and fasten in place with the screws provided.

Carefully bend the thermocouple lead and the pilot gas supply line so the pilot assembly is positioned as shown in Fig 5-1.

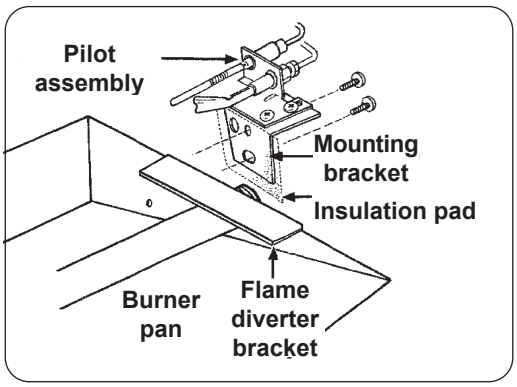


Fig. 5-1 Install pilot - G45, G4, GX4 & VG4 series

Front flame- F series

Place the insulating pad between the mounting bracket and the pilot assembly. Fasten with the screws provided.

Place the remainder of the insulation pad between the mounting bracket and the flame chute. Insert the screw (provided in bag) through the hole in the first flame chute (nearest the control) and attach the pilot assembly to the burner in the position as illustrated. Attach the nut (provided in bag) and tighten. See Fig 5-2.

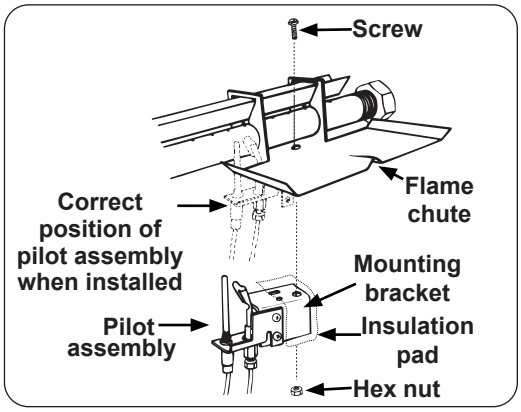


Fig. 5-2 Install pilot - F series

Flame pan - P series

Place the insulating pad between the mounting bracket and the pan. Insert the screws through the pilot bracket and the holes at the end of the pan, as shown in Fig 5-3.

Place the remainder of the insulation pad between the top portion of the mounting bracket and pilot assembly and fasten in place with the screws provided.

Carefully bend the thermocouple lead and the pilot gas supply line so the pilot assembly is positioned as shown in Fig 5-3.

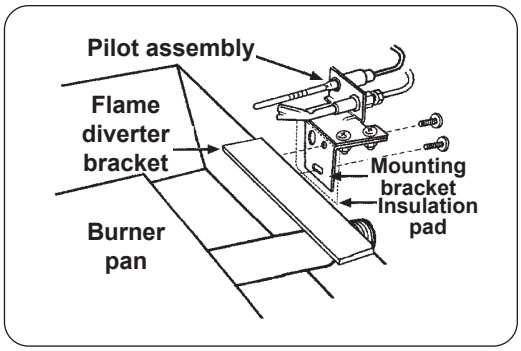


Fig. 5-3 Install pilot - P series

CONNECT TO GAS SUPPLY

To connect the valve to the gas supply, the flex connector kit and component parts will be needed, which are included with the burner system. Refer to the PARTS LIST in the instructions supplied with the burner to identify the key parts needed.

1. MAKE SURE THE FIREPLACE GAS SUPPLY IS TURNED OFF.
2. Locate the gas-supply stub inside the fireplace and remove the cap, if attached.

CAUTION: When removing the cap, make sure the stub does not turn, loosening the connection inside the wall.

3. Locate the burner flex connector kit. Remove the small adapter connected to the flex connector. Attach the adapter to the nipple found on the control valve using a pipe compound resistant to all gasses. Tighten securely. Then attach the flex connector to the adapter. Tighten securely.
4. Place the burner system in the fireplace. Center the burner in the fireplace.
5. **Be sure gas to the fireplace is off.** Attach the large adapter (included with burner flex connector kit) to the gas-supply stub using a pipe compound resistant to all gasses. Tighten securely. Then attach the open end of the flex connector to the large adapter. Tighten securely.
6. LEAK TEST: Follow the LIGHTING INSTRUCTIONS to ignite the burner. Test at all connections for leaks using the appropriate soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. NEVER USE A FLAME TO CHECK FOR LEAKS.
7. Follow the instructions supplied with the Peterson burner system for any additional requirements regarding specific burner setup and placement.

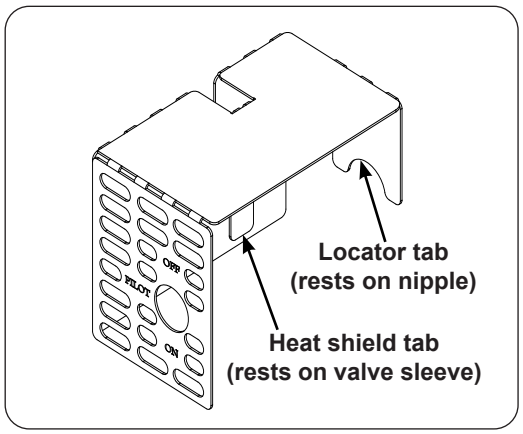


Fig. 6-1 Heat shield detail

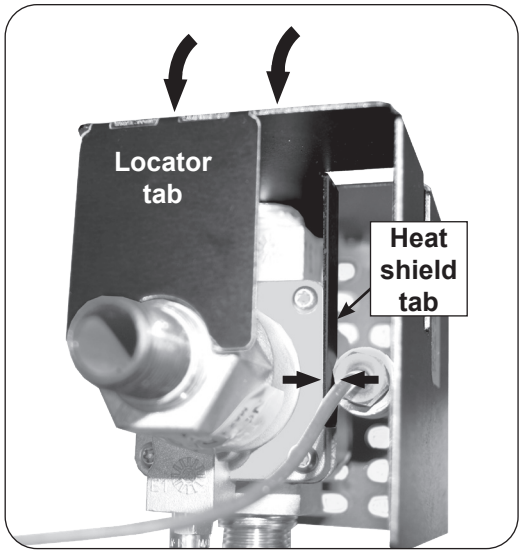


Fig. 6-2 Tab placement

ATTACH HEAT SHIELD TO SAFETY CONTROL VALVE

TO PREVENT VALVE DAMAGE AND FAILURE:

IT IS CRITICAL THAT THE HEAT SHIELD BE PLACED CORRECTLY OVER THE VALVE PRIOR TO OPERATION.

The heat shield is assembled so that it can be placed with the shield's closed side between the valve and the burner.

1. If using an SPK-20, pull off the extension handle w/ control knob.
2. Place the assembled heat shield over the safety control valve by inserting the valve stem through the hole of the heat shield face so the locator tabs rest on the valve system sleeve at the front of the valve and on the nipple in the rear of the valve. The heat shield tab will insert between the valve body and pilot supply line, keeping the heat shield in place. See Fig. 6-2
3. If using an SPK-21, attach the steel rod control handle onto the valve stem and tighten the screw clamp on the handle.
4. If using an SPK-20, attach the knob onto the extension handle and attach to the valve stem.

SPK-20 • SPK-21 LIGHTING INSTRUCTIONS

We recommend that before you install the log set you familiarize yourself with the control valve layout. This will help you to be confident operating the log set when fully installed (see figures below for typical control positions).

LIGHTING THE PILOT

To light the pilot from the **PILOT** position (see Fig. 7-2), push in slightly on the knob or rod handle and turn to the **OFF** position (see Fig. 7-1). Wait five minutes, then turn the knob or rod handle to the **PILOT** position (see Fig. 7-2). Push the knob or rod handle fully in and at the same time place a long lighted match at the pilot burner. The pilot should light. Hold the knob or rod handle in approximately 60 seconds. If the pilot does not stay lit, turn to the full **OFF** position (see Fig. 7-1). Wait five minutes and repeat the LIGHTING INSTRUCTIONS.

TURNING BURNER ON AND OFF USING SAFETY PILOT KIT

BE SURE THE DAMPER IS FULLY OPEN WHEN OPERATING THE GAS LOG SET.

TO TURN ON THE BURNER FROM THE **PILOT** POSITION when pilot is lit (see Fig. 7-2):Turn the knob or handle 90° counter-clockwise to the **ON** position (see Fig. 7-3).

TO TURN OFF THE BURNER FROM THE **ON** POSITION (Fig. 7-3): Turn the knob or handle 90° clockwise to the **PILOT** position (see Fig. 7-2).

TO TURN OFF THE BURNER AND THE PILOT FROM THE **PILOT** POSITION (see Fig. 7-2): Push in slightly on the knob or rod handle and turn 90° clockwise to the **OFF** position (see Fig. 7-1).

PILOT BURNER CHECK/ADJUSTMENT

Should the pilot require adjustment, the following steps should be taken:

With the pilot lit and the control knob in the **PILOT** position, carefully remove the cap screw located on the SV-12 valve (see Fig. 7-4). Using a long, narrow screwdriver, turn the pilot adjustment screw slowly clockwise to reduce the pilot flame or counter-clockwise to increase the flame. The adjustment screw can be turned so that the pilot flame is completely extinguished. Some tightening of the screw may occur during adjustment; this is normal. The pilot flame should be a soft blue color with slightly yellow tipping that encircles the thermocouple tip.

Reassemble the cap screw and the gasket to valve body, ensuring that the cap screw and the gasket are firmly seated on the valve body. Turn the control knob to the **ON** position to ensure proper ignition of the log burner.

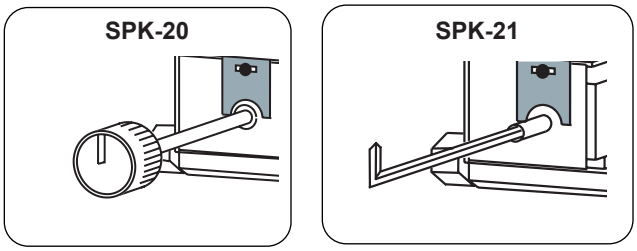


Fig. 7-1 OFF position (burner and pilot off)

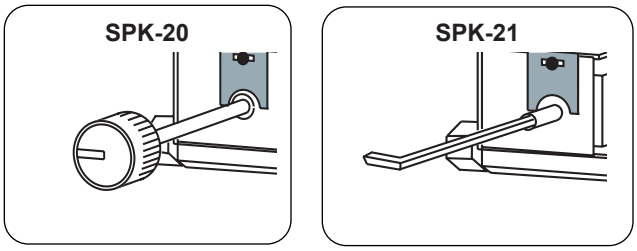


Fig. 7-2 PILOT position (burner off and pilot on)

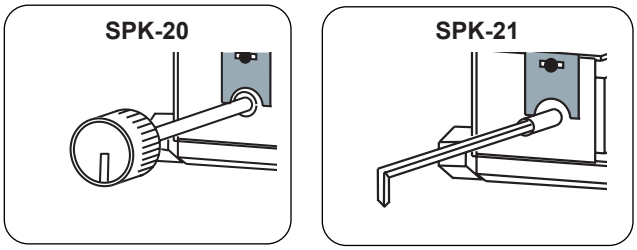


Fig. 7-3 ON position (burner and pilot on)

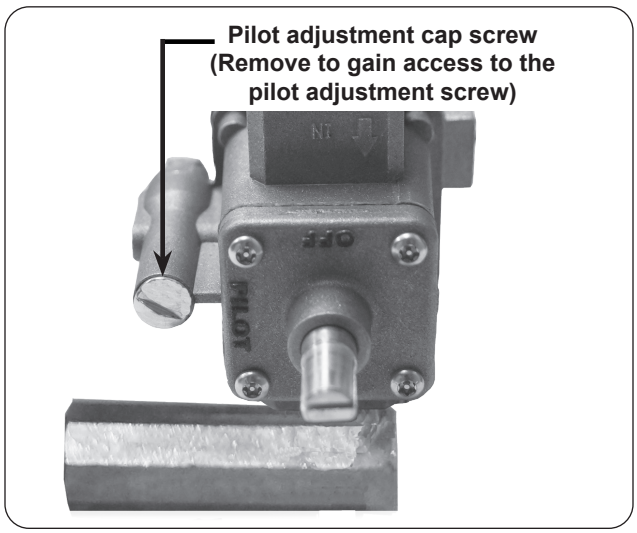


Fig. 7-4 Pilot adjustment screw detail

NOTES PAGE

Please use this page to record any information that you may want to have at hand.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
1. Pilot will not light	a. Obstruction in pilot gas supply or pilot gas supply line is kinked	a. Clear out obstruction. Replace pilot gas supply line if kinked.
	b. Inadequate gas supply	b. Have gas pressure checked by installer or gas supplier.
	c. Pilot out of adjustment	c. Adjust pilot (see PILOT BURNER CHECK/ADJUSTMENT).
	d. Air in line	d. Air should clear, attempt to relight.
2. Pilot will not stay lit after releasing knob	a. Pilot flame out of adjustment (tip of flame should encircle tip of thermocouple)	a. Adjust pilot (see PILOT BURNER CHECK/ADJUSTMENT).
	b. Thermocouple (SPK) either too tight or too loose	b. Thermocouple should be finger tight and then 1/8" turn with a wrench.
	c. Bad thermocouple	c. Replace thermocouple.
3. Log set extinguishes a few minutes after lighting	a. Inadequate gas supply causes pilot flame to reduce after burner lights	a. Using pilot adjustment, increase gas to pilot. Pilot flame must be in contact with the thermocouple tip.
4. Log set extinguishes after burning for some time (approximately 10 minutes to 1 hour)	a. Thermocouple has overheated; glass doors are closed	a. Be sure glass doors are open during operation.
	b. Thermocouple has overheated; insulation pad is not in place	b. Be sure that the insulation pad is in place between the burner pan and the pilot bracket.
	c. Thermocouple has overheated; burner flames are heating the thermocouple cold junction	c. Be sure the pilot assembly and the flame diverter are in their proper position. Rearrange logs so that flame is not deflected to the thermocouple.
5. Pilot will light without holding in knob or gas flows to burner without pilot being lit	a. Valve is installed backward	a. Reinstall valve with inlet port attached to gas supply and outlet port attached to burner.

Periodically inspect the pilot assembly and maintain it free of obstruction or debris. If the pilot flame is not blue with possibly yellow tips and does not impinge on the electrodes or if the pilot does not stay lit, contact a qualified professional service technician to service the pilot system.

IMPORTANT

For all valves, the air **MUST** be purged from the gas line before the pilot will light properly. The time taken to do this will depend on the length of gas line from the meter to the unit and the length of time since the unit or gas line was last used (in the case of non-use during warm weather for example). It may take from 3-15 minutes before all the air is purged and the pilot will light properly. This is done using the method for lighting the pilot, but holding in the control valve for a longer period. Follow the LIGHTING INSTRUCTIONS in this manual for your specific valve type.

WARRANTY

PETERSON VENTED DECORATIVE GAS APPLIANCE
LIMITED WARRANTY

R.H. Peterson Co. ("RHP") warrants your Real Fyre® vented decorative gas appliance to be free from defects in material and workmanship.

RHP vented refractory gas logs are warranted for **as long as the original purchaser owns them (lifetime) when used indoors and for THREE (3) YEARS when used outdoors.**

RHP vented fiber-ceramic blended gas logs are warranted for **FIVE (5) YEARS when used indoors and for THREE (3) YEARS when used outdoors.**

RHP **indoor** vented gas log burners and stainless steel burners (excluding controls) are warranted for **TEN (10) YEARS**.

RHP **outdoor** vented stainless steel burners (excluding controls) are warranted for **FIVE (5) YEARS**.

The **SPK-26** is warranted for **THREE (3) YEARS** and **APK-17** (including -17 valve) is warranted for **TWO (2) YEARS**.

All other valves, pilots, and controls are warranted for **ONE (1) YEAR** (excluding batteries).

RHP glass, gems, and nuggets are warranted for **TEN (10) YEARS**.

A COPY OF YOUR SALES SLIP FOR PROOF OF PURCHASE IS REQUIRED

This warranty applies to the original purchaser for products which are installed in the United States or Canada and which are operated and maintained as intended for single family residential usage. This warranty is valid only with proof of purchase, commences on the date of purchase, and terminates (both as to original and any replacement products) on the anniversary date of the original purchase of the product per the above schedules.

This warranty covers defects in material and workmanship. This warranty **does not** cover parts which become defective as a result of negligence, misuse, use not in compliance with the Installation and Owner's Manual, accidental damage, improper handling, improper storage, improper installation, **lack of required routine maintenance** (as specified in the Installation and Owner's Manual), electrical damage, local gas impurities or failure to protect against combustible materials. Product must be installed (and gas must be connected) as specified in the Installation and Owner's Manual by a **qualified professional installer**. This warranty **does not** apply to rust, corrosion, oxidation, or discoloration unless the affected part becomes inoperable. RHP products including valves, pilots and controls, are designed and certified to be used as a system. Modifications to products which are not specifically authorized will void this warranty and could render the product to be unsafe. Burners, valves, parts, accessories, remotes, etc. used with this product must be RHP products or this warranty is void.

Warrantied items will be repaired or replaced at RHP's sole discretion. This warranty **does not** cover labor or labor related charges, except as provided by separate specific written programs from RHP. All repair work must be performed by a qualified professional service person and requires prior approval of RHP.

RHP may require the defective product or part to be returned to the factory to determine the cause of failure. RHP will pay freight charges if the product or part is determined to be defective. This warranty does not cover breakage in shipment from our independent distributor to its customer if the damage is determined to have occurred during that shipment.

This warranty specifically excludes liability for **indirect**, **incidental**, or consequential damages. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. This warranty gives you specified legal rights, and you may have other rights that vary from state to state or province.

For additional information regarding this warranty, or to place a warranty claim, contact the RHP dealer where the product was purchased.

When contacting your RHP dealer or the R.H. Peterson Co., please provide the following information:

- Your name, address, telephone number, e-mail
- Sales receipt showing where purchased and date purchased
- Model number, serial number of product, date code
- Relevant information: installer, additions, repairs, when defect was first noted

TO REGISTER YOUR PRODUCT ONLINE GO TO: WWW.RHPETERSON.COM, AND CLICK ON PRODUCT REGISTRATION. THANK YOU FOR YOUR PURCHASE.

Quality Check		**Date:**_____	
Leak Test: _____	**Burn Test:** _____	**Gas Type:**	**Nat. / L.P.**
Inspector: _____			