

**INSTALLER: Leave this manual with the appliance.**  
**CONSUMER: Retain this manual for future reference.**

These instructions are supplementary to the Installation and Operating Instructions supplied with the fireplace and should be kept together. Refer to the Installation and Operating Instructions for proper gas supply, safety requirements and operating instructions.



**TOWN & COUNTRY**  
L U X U R Y F I R E P L A C E S

## **TCWS54 TRANQUILITY OUTDOOR BURNER KIT INSTRUCTIONS**



**SKU# 22150071**  
**For TCWS54 Series D**  
**OUTDOOR Fireplace**

**FOR OURDOOR USE  
ONLY**



## Contents of Package

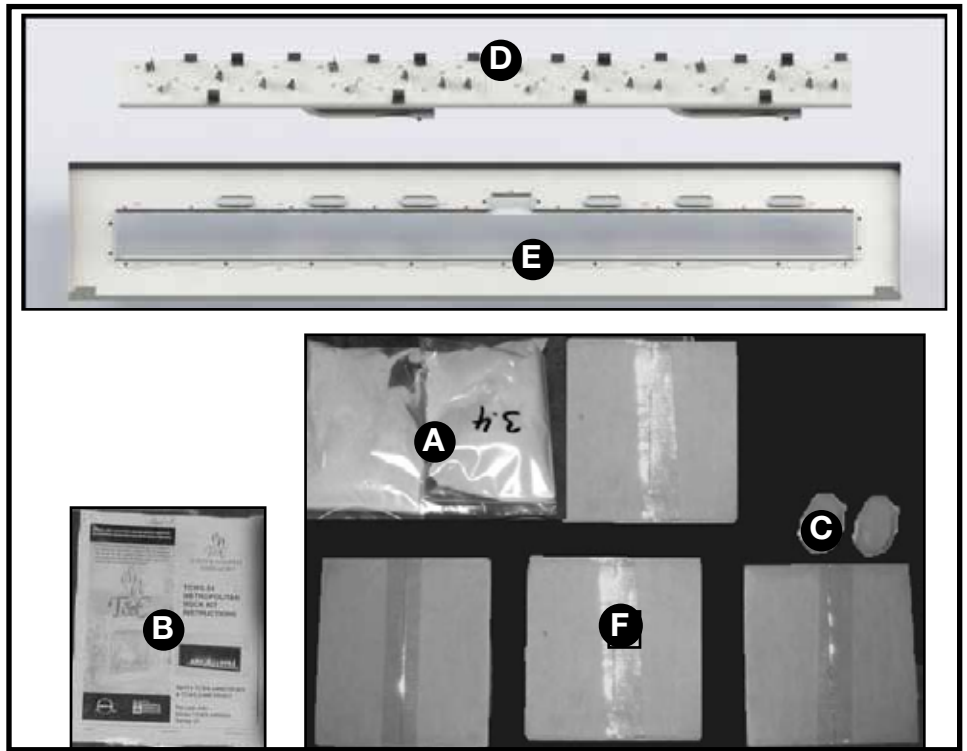


Figure 1: TCWS54 Black Diamond Burner parts.

- A** 2 3.4 LBS SAND
- B** 1 HARDWARE PACK
- C** 2 EQUALIZER ROCKS
- D** 2 BURNER ASSEMBLIES
- E** 1 BURNER TRAY ASSEMBLY
- F** 4 PEBBLE SETS

# Tranquility Burner Installation

If converting to propane see conversion instructions on page #7 before proceeding.

**Install panels according to the TCWS.540D Installation and Operating manual prior to burner installation. (Page 25)**

1. Install the right burner by tipping into location trough and slipping the venturi tube over the orifice. Test for connection by lifting at a location pin on the right side of the burner. Repeat with left burner. (Fig. #2)
2. Tilt burner tray length-wise and insert into the firebox. Be sure pilot is attached to burner support rail with screw in first hole position. (Fig. #3 & 4)
3. Attach pilot to burner tray. (Fig. #5)

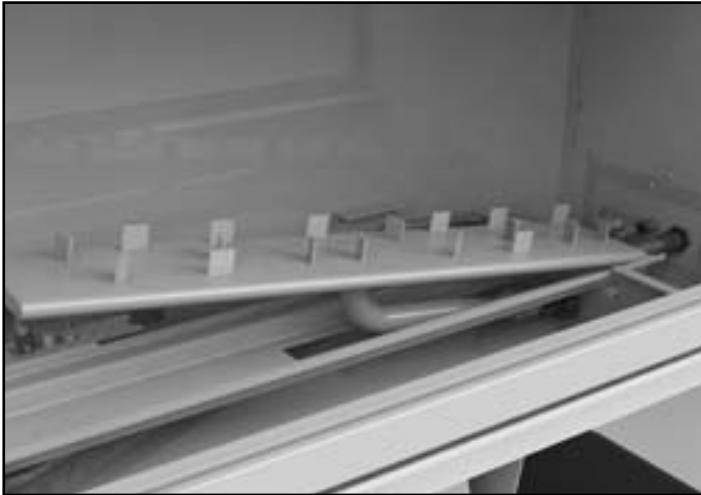


Figure 2: TCWS54 Black Diamond Burner parts.



Figure 3: TCWS54 Black Diamond Burner parts.  
FIRST HOLE POSITION

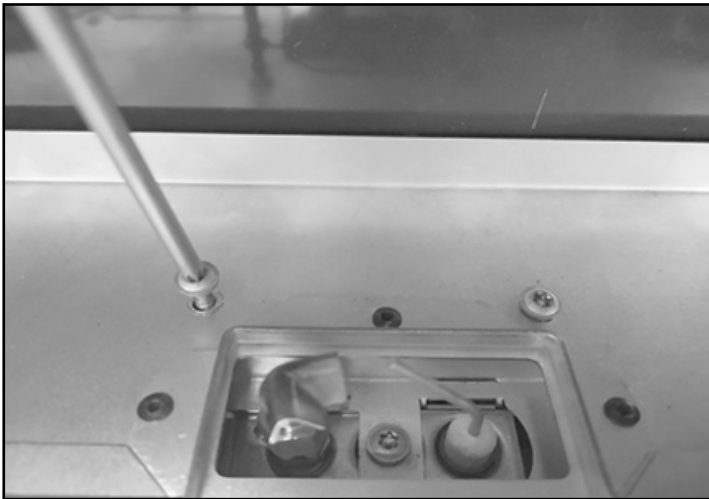


Figure 4: TCWS54 Black Diamond Burner parts.

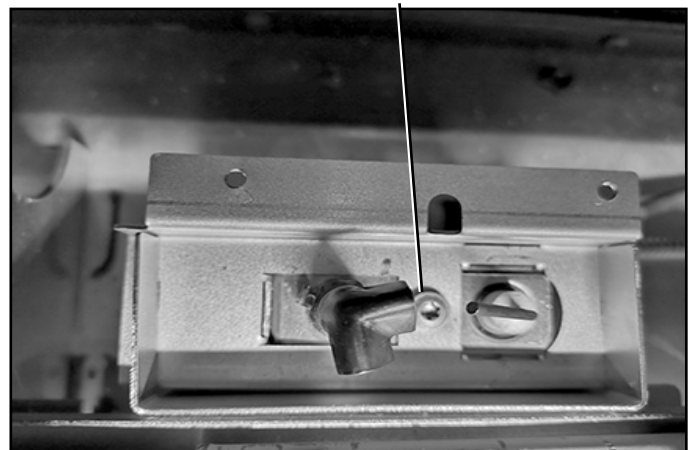


Figure 5: TCWS54 Black Diamond Burner parts.



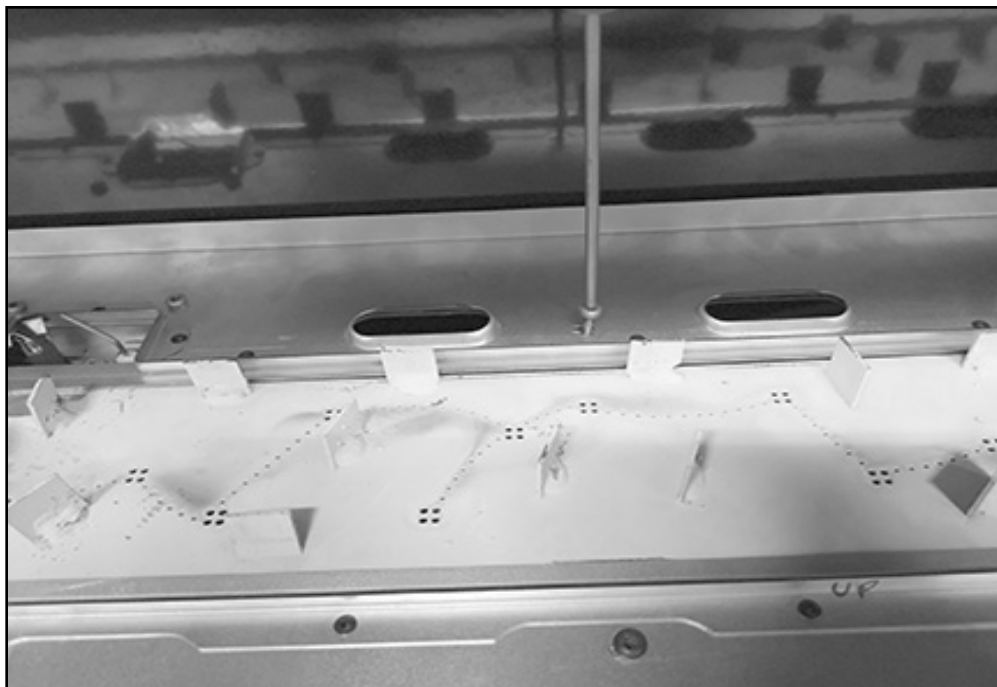


Figure 6: TCWS54 Black Diamond Burner parts.

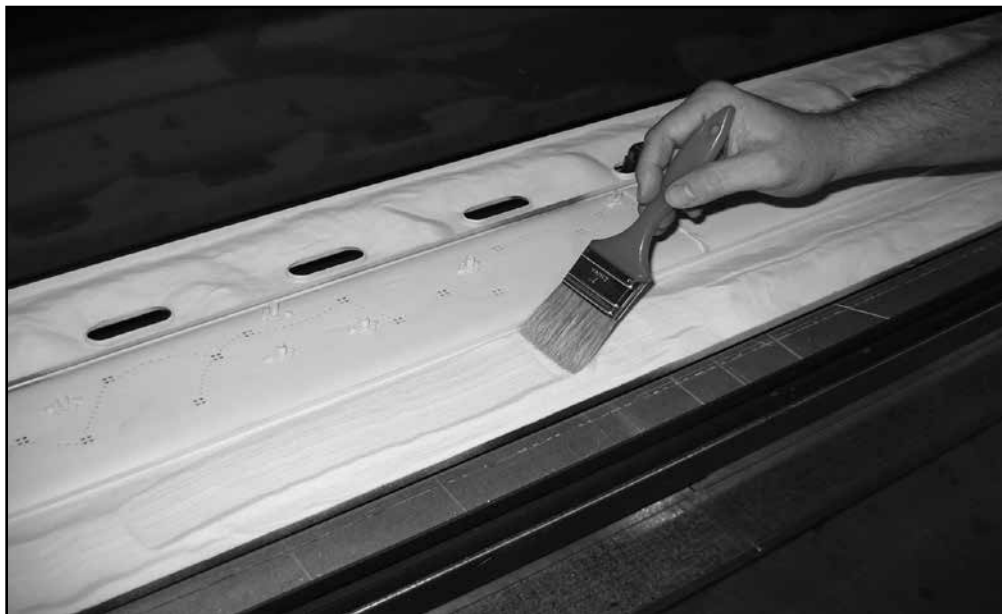


Figure 7: TCWS54 Black Diamond Burner parts.

4. Secure the burner tray to legs using 12 screws (Fig. #6)

**NOTE:** a light will aid aligning the holes in the tray with the leg

**CAUTION:** The burners should be tightly butted up against each other at the center to ensure correct operation.

5. Place sand into the burner tray and brush smooth. Use caution not to get sand near the burner ports. (Fig. #7)

**NOTE:** check air shutter for correct fuel setting before proceeding further. Both burners are the same. Fully closed for natural gas. 13/64 (0.2)" open for LP.

6. Each rock has a slot in its base and is marked with a letter and an arrow. (Fig. #8)



Figure 8: Rock markings

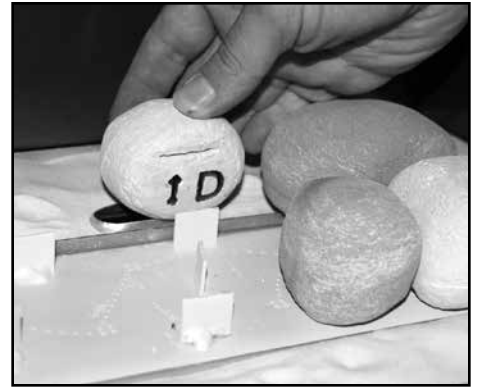


Figure 12: Rock D

7. Place each rock as per the following photographs, start from the right hand side of the burner and ensure that the arrow on each rock points towards the front of the fireplace. (Fig. #7 to 15)

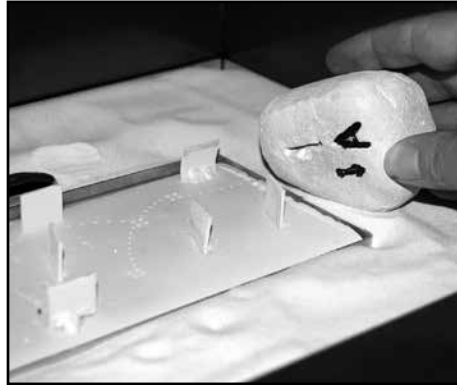


Figure 9: Rock A



Figure 13: Rock E

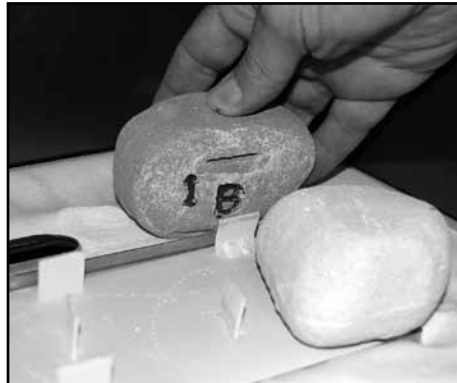


Figure 10: Rock B



Figure 14: Rock F

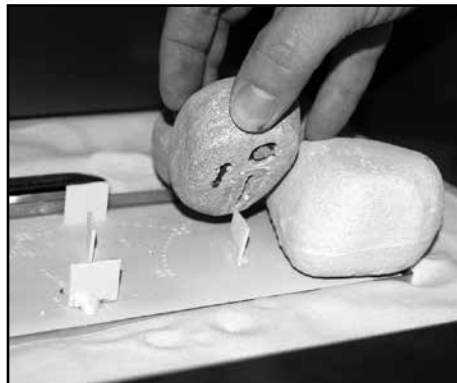


Figure 11: Rock C



Figure 15: Rock G

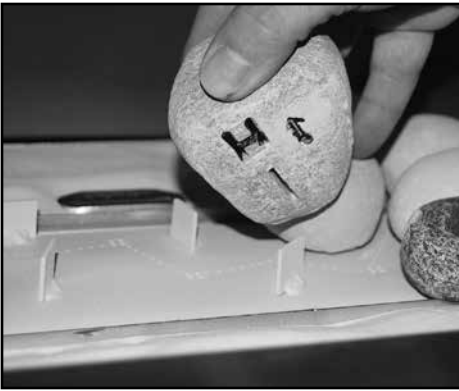


Figure 16: Rock H

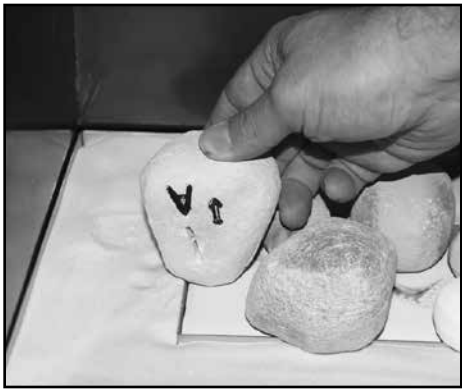


Figure 18: Rock A

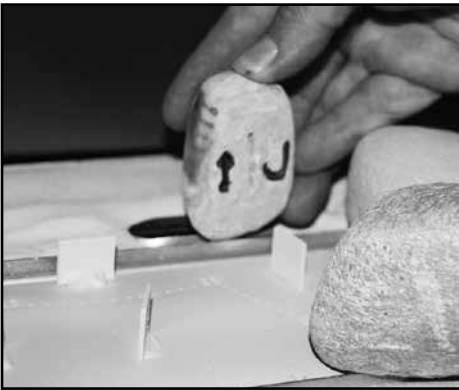


Figure 17: Rock J

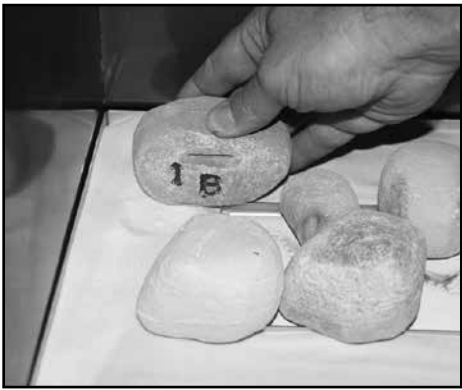


Figure 19: Rock B

9. Place the two remaining rocks on the left hand end of burner as shown. (Fig. #18 and 19)

8. Repeat the sequence of placing the rocks three more times until the burner is covered.

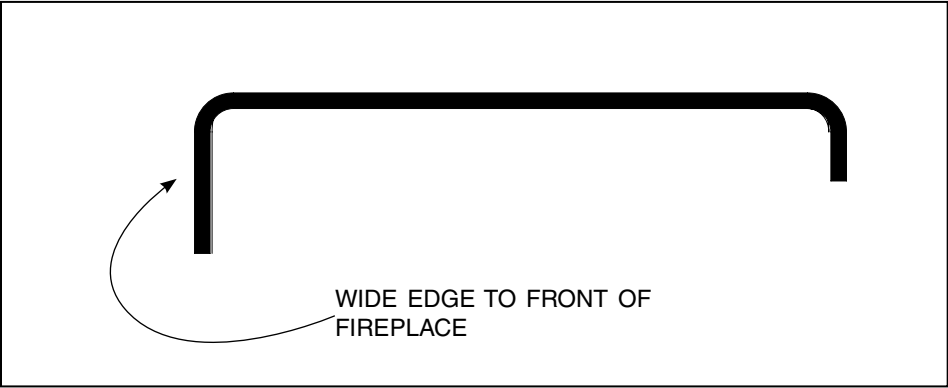
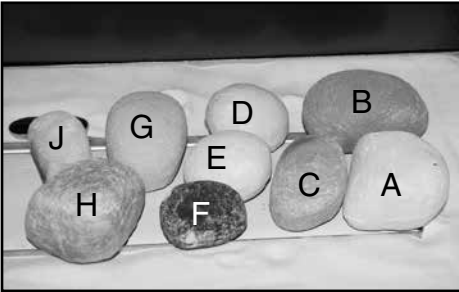


Figure 20: Front cover.

10. Install front porcelain cover (wide edge should face the front). (Fig. #20)

# Propane Conversion

If the unit is to be used on propane convert as follows using the components supplied with this burner:

## CAUTION

**The gas supply and electrical power shall be shut off before proceeding with the conversion.**

Note:

Factory supplied components must be used to ensure correct input. After conversion confirm proper manifold pressure.

1. If installed remove the rocks from the burners.
2. If installed remove the burner tray from the manifold brackets. (8 screws)  
(Fig. #21)
3. Remove burners by gently lifting up the left end and disengaging from the orifice.
4. Using a 1/2" wrench, undo the natural gas burner orifice, (marked "NC"). Apply a small amount of pipe joint compound to the threads of the propane burner orifice (marked "LC") to ensure a good seal, before screwing it into the fitting.

## WARNING

**This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction.**

**If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life.**

**The qualified service agency is responsible for the proper installation of this kit.**

**The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.**



Figure 21: Remove tray.



Figure 22: Remove NG Orifice

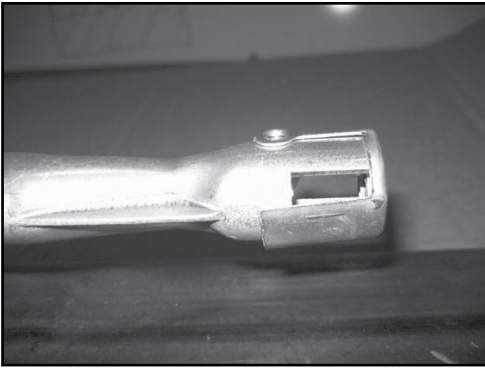


Figure 23: Adjust shutter.

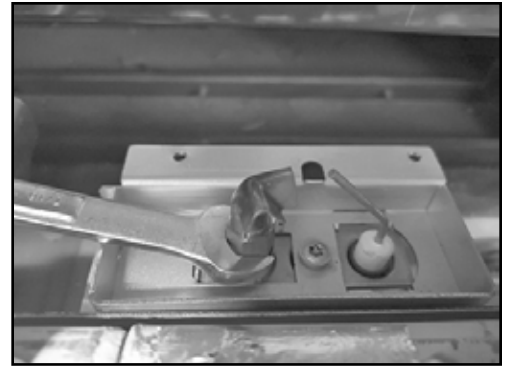


Figure 24: Adjust shutter.

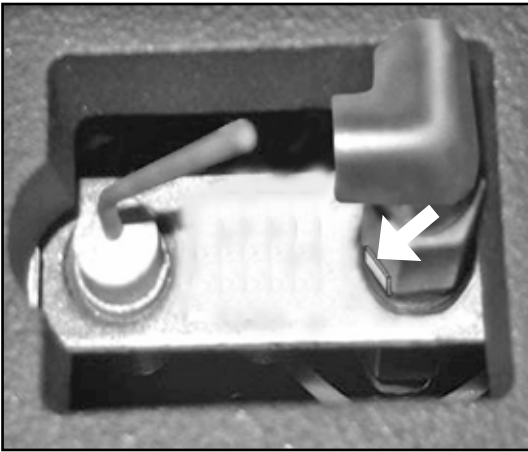


Figure 25: NG Position.

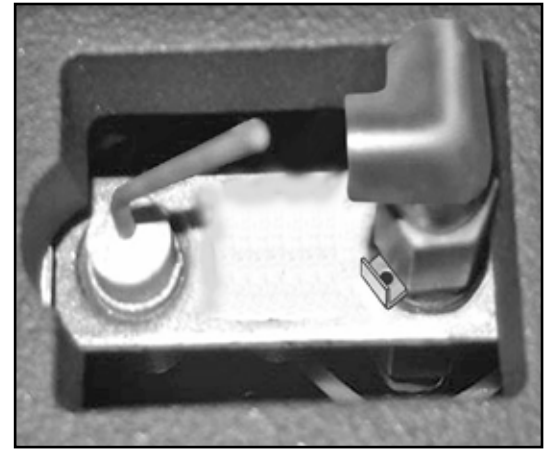


Figure 26: LP Position.

Loosen the primary air shutter screw, open shutter to give a gap of 13/64" (0.2") and re-tighten. Repeat on other burner. (Fig. #23)

5. With a 7/16" wrench loosen the pilot head on the pilot assembly. (Fig. #24)
6. Slide the pilot adjustment band over and ensure that the hole in the orifice band is showing.

**Fig. #25 shows NG position**

**Fig. #26 shows LP position).**

7. Update the Propane Conversion Label with date and name when finished. (Fig #27)

**WARNING: Both the control box shield and the access panel must be reinstalled after conversion/ installation or servicing has been completed. Failure to do so will overheat and cause premature failure of the control system.**



MAIN BURNER ORIFICES  
(marked "LC")

This appliance was converted to propane gas	
Kit Number	<b>PACIFIC ENERGY</b> 5052.52001-B
dd / mm / yy	conversion a été correctement faite.
Company	responsabilité que cette ci-dessus accepte la l'entreprise désignée
Address	Adresse
The above accepts the responsibility that this conversion has been properly performed.	Signature
5052.52001-B	Numéro d'assemblage
<b>PACIFIC ENERGY</b>	Cet appareil a été converti en gaz propane

Figure 27: Conversion label.

**For complete conversion valve installation instructions, refer to the instruction book included in the SIT conversion kit.**



# Gas Pressure Check

**Note:** To test the gas pressure, turn off the gas supply before removing the plug from the supply pressure test port or manifold pressure test port.

Verify gas pressures with the fireplace lit and on the highest setting.



Figure 28: Test ports.

1. Remove the plug from the pressure test port using a 3/16" hex key. The plug is located between the right side lintel and firebox side. (Fig. #28)
2. Thread the extension test fitting into the open port. (Fig. #29)
3. Attach a pressure gauge onto the fitting.
4. When testing is complete shut off the gas, remove the fitting and replace the plug. Thread sealant will be required to ensure a gas tight connection.

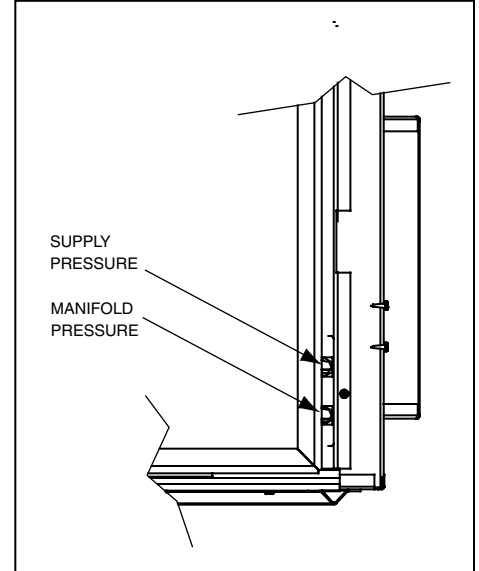


Figure 29: Pressure Adjustment.

## Correct gas pressure requirement:

Supply Pressure	Natural Gas	Propane
Min. Pressure (For purpose of input adjustment)	5.0" WC	12.5" WC
Max. Pressure	13.9" WC	13.9" WC
Manifold Pressure		
Maximum	3.5" WC	10" WC
Minimum	1.6" WC	6.4" WC

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## Burner Flame Adjustment

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The air shutter on the burner tube controls the primary combustion air. It is set to the closed position at the factory for natural gas fuel. For LP see Pg.8. Some adjustment may be necessary to obtain desired flame and to eliminate carbon deposits. Evaluate flame appearance after the fireplace has reached operating temperature. See Fig. #30 for proper flame pattern.

Open primary air if the window glass and firebox have carbon accumulation and/or the flames are long, dark and stringy. The shutter may also be opened to lessen the flame height.



Figure 30: Conversion label.

**NOTE:**

**Proper air shutter setting is required.**

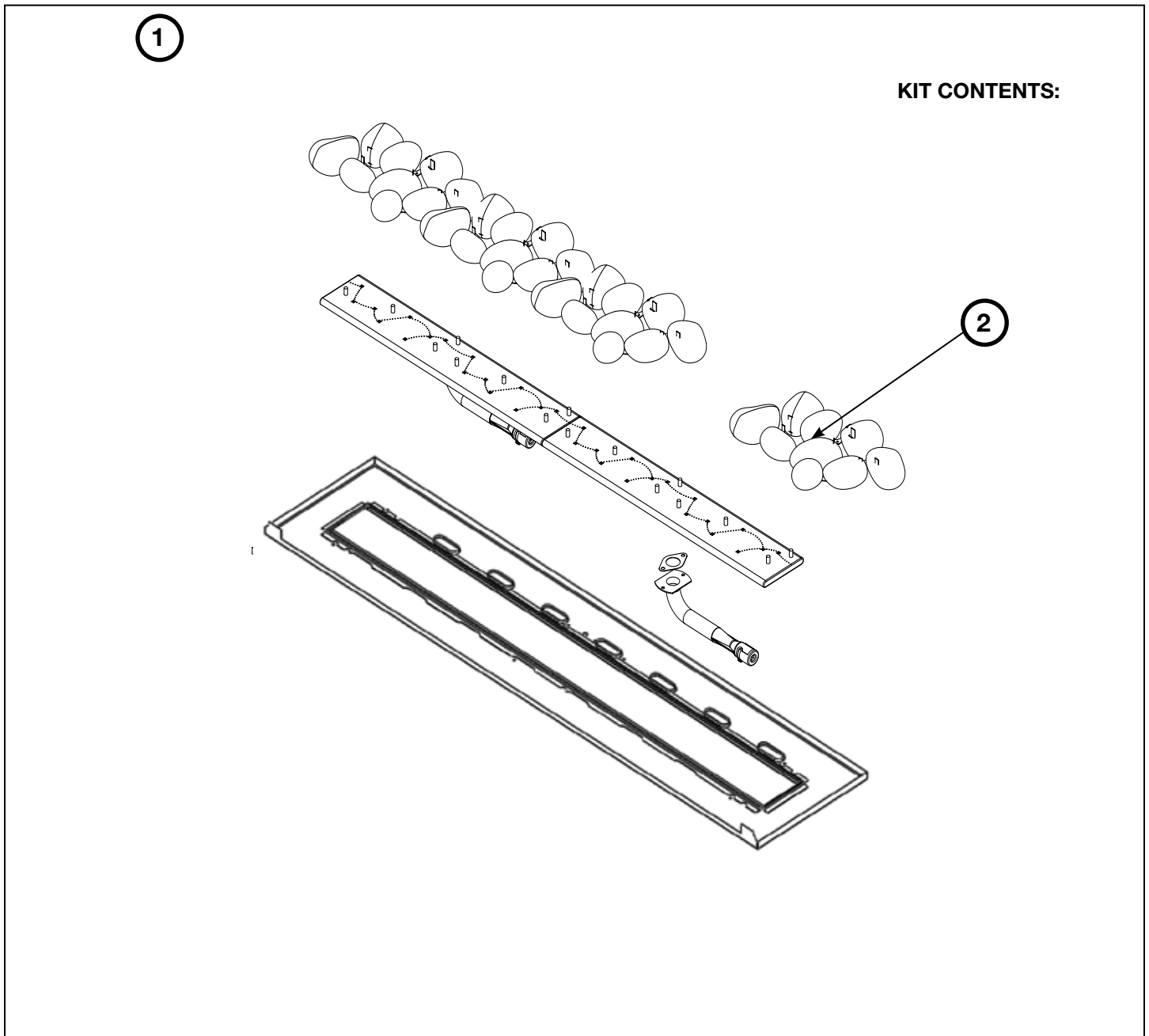
**The flame should be just orange and “lazy”. It should NEVER be set to create sooting on internal parts and window glass.**

# Parts Diagram

(WHEN ORDERING, INCLUDE PART NUMBER WITH DESCRIPTION)

ITEM.....	DESCRIPTION.....	PART NO.
#1.....	TRANQUILITY BURNER KIT.....	22150071
#2.....	PEBBLE ASSEMBLY.....	5096.921
* #3.....	SAND.....	TC42.SAND34
	(Two Bags Per Kit)	
* #4.....	TRIM ROCK "A".....	5096.922
* #5.....	TRIM ROCK "B".....	5096.923

★NOT SHOWN



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**For technical support, please call your retailer.**

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