

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 SEE THRU DIAMOND BURNER INSTALLATION KIT INSTRUCTIONS



PART# TCWS.54NGST03D
For TCWS54ST and
TCWS54ST Indoor/Outdoor
Series D Fireplaces



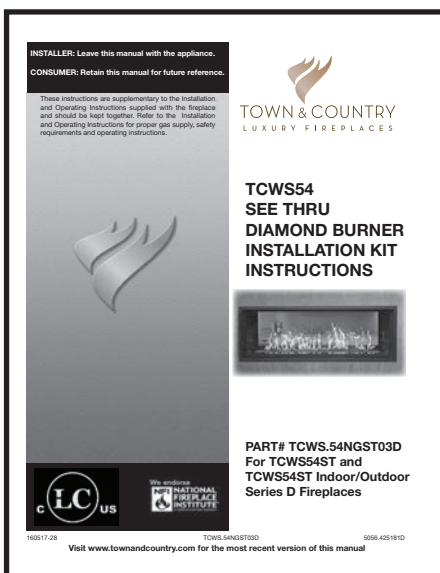
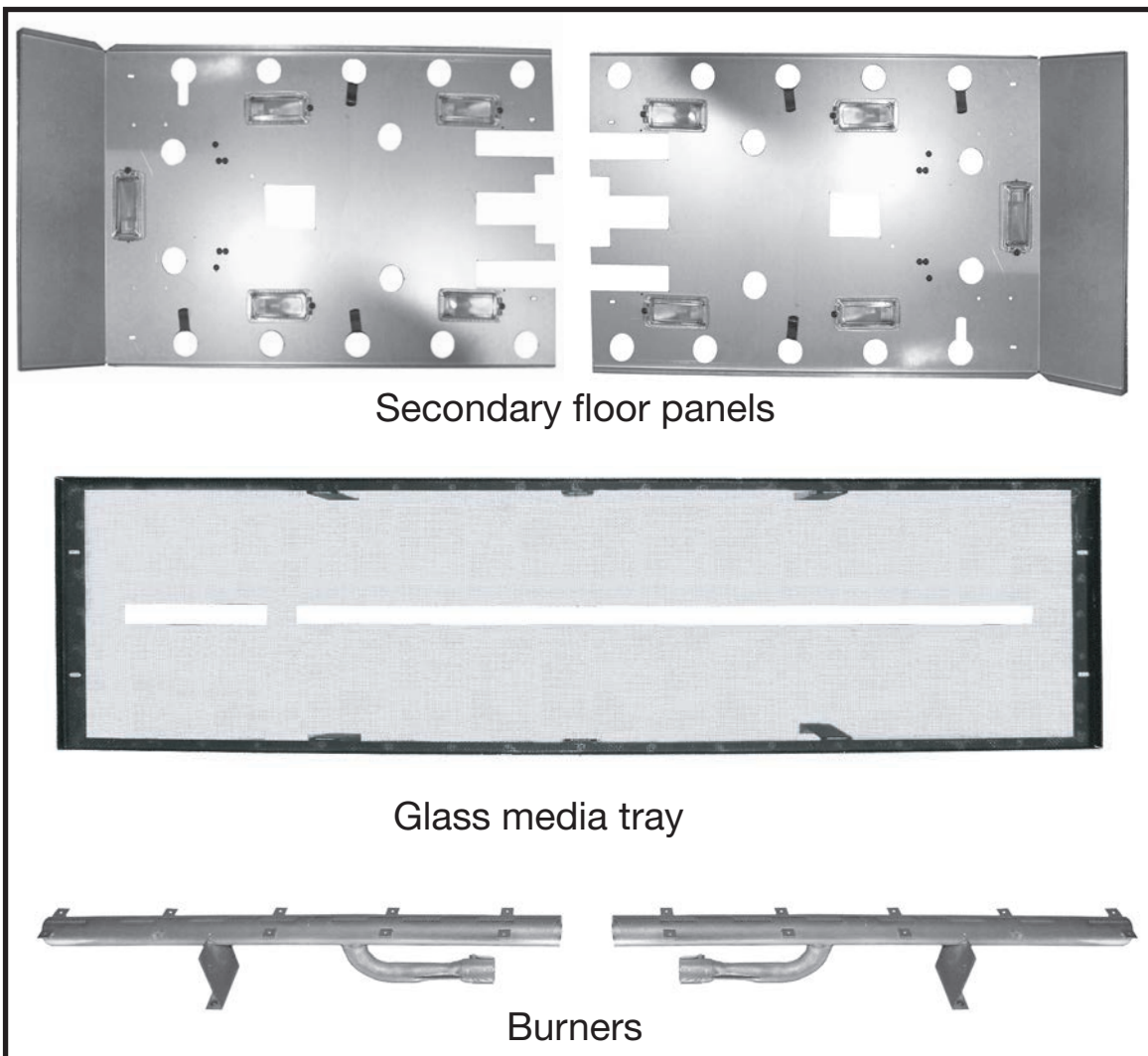
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Contents of Package



Diamond Burner Installation

If converting to propane see “Propane Conversion” on page 13 before proceeding.

NOTE: For purposes of clarity, the “Front” of the fireplace shall be the side which has access to the electrical connection compartment cover, the connection to the gas valve and the side which places the control compartment cover and the coaxial vent located on top of the fireplace to your left.



Figure 1: Inserting secondary floor panel into the right side.

1. With the control compartment to your left, place one of the two secondary floor panels in the right side of the firebox (Figure 1) and route the two wires from the lights underneath the plate over to the left hand side of the firebox (Figure 2).

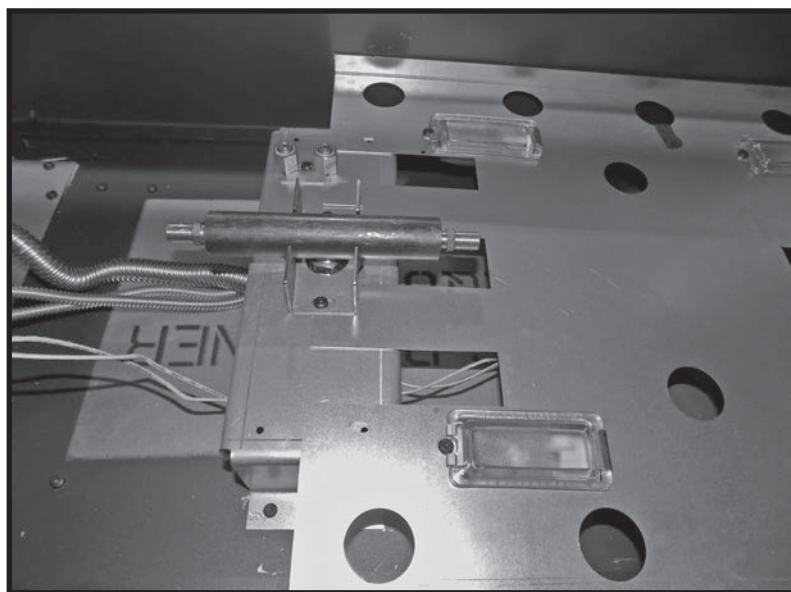


Figure 2: Right hand panel in place with its wires brought out from under it.



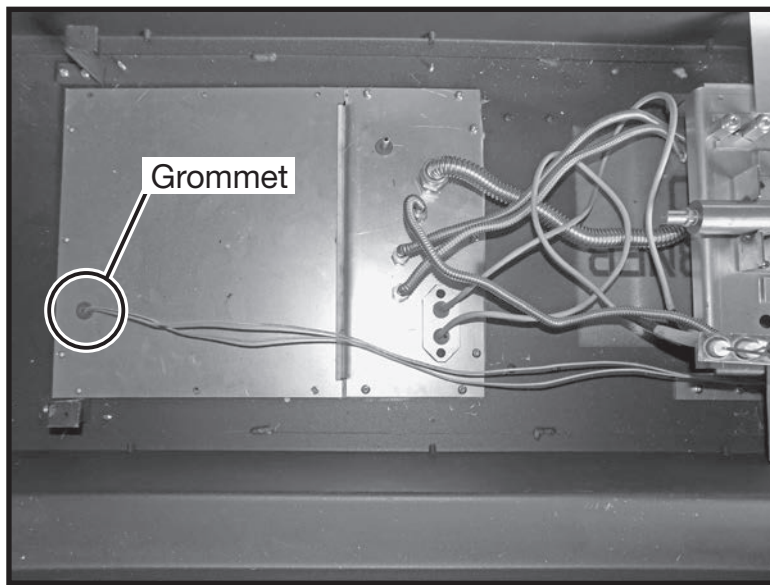


Figure 3: Wires through grommet.

2. Feed the two wires from the right side secondary floor panel down through the left most grommet over the gas control compartment cover (Figure 3).
3. Insert the other secondary floor panel into the left side of the firebox. As the panel is lowered, feed its two lights wires into the same grommet as was done with the wires from the right hand floor panel. Also feed the pilot assembly through the square opening in the panel (Figure 4).

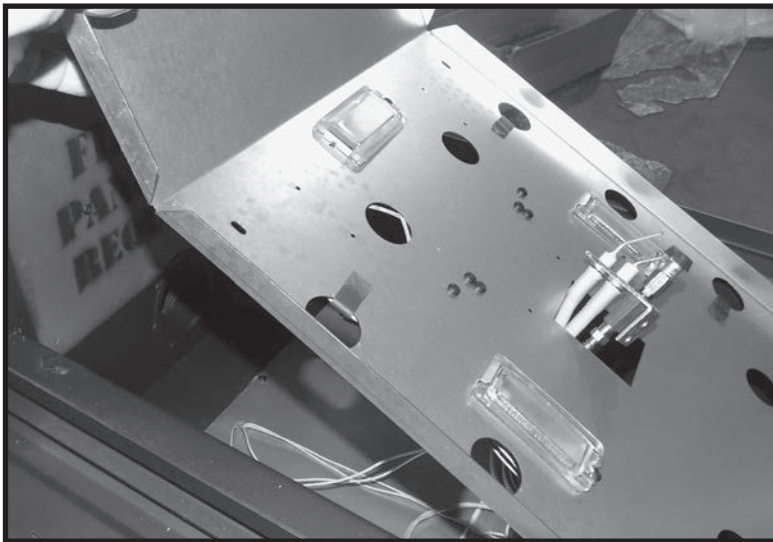


Figure 4: Inserting secondary floor panel into the left side.





Figure 5: Lights wiring coming from grommet.

4. Guide the four light wires from the bottom of the gas control compartment out through the opening as shown in Figure 5.
5. From inside the control compartment, punch out one of two available knockouts located in the electrical connection compartment, install a plastic grommet (not included) to protect the wires and feed the wires into the compartment. (Figure 6).

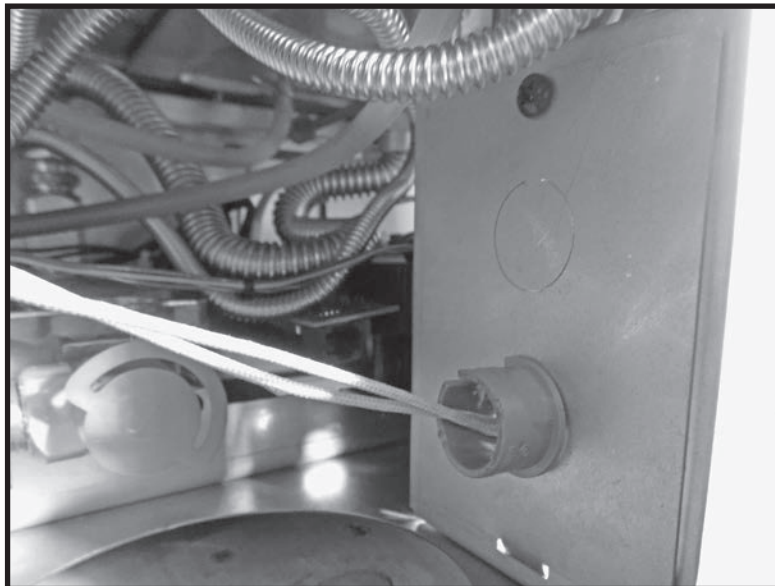


Figure 6: Threading wires through knockout.



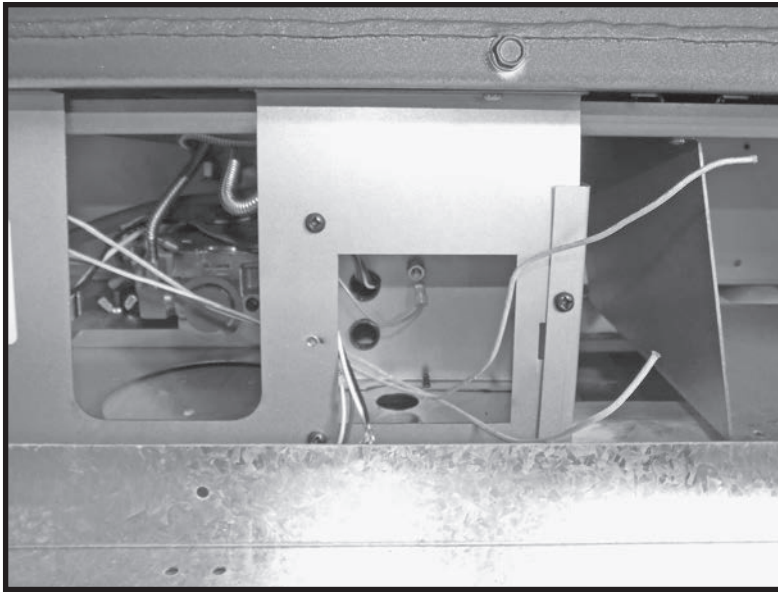


Figure 7: Bringing wires through front plate.

6. Remove the electrical connection compartment cover and feed all four lights wires through the opening. The lights wiring will connect to the wiring that supplies the fire place power (Figure 7).
7. Connect the wires to a switched 120 VAC, 60Hz, 3A power supply, one pair made up of one wire from the left and one wire from the right light set to the “HOT” incoming line. The remaining pair to the “Neutral” incoming line. See “Lights Wiring Diagram” on page 25. Reinstall the electrical connection compartment cover.
8. Return to the firebox and secure the two secondary floor panels with four T20 screws for each of the two panels.
9. From the REAR of the fireplace, position one of the two burners on an angle and attach the pilot assembly to the burner leg using two Robertson screws provided (Figure 8). Note that the pilot will be positioned on an angle.

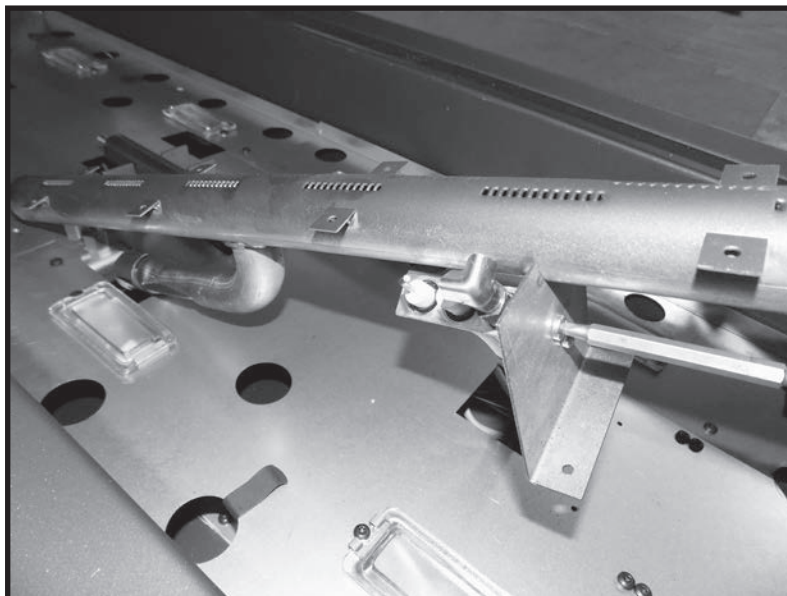


Figure 8: Attaching the pilot assembly to the burner leg.

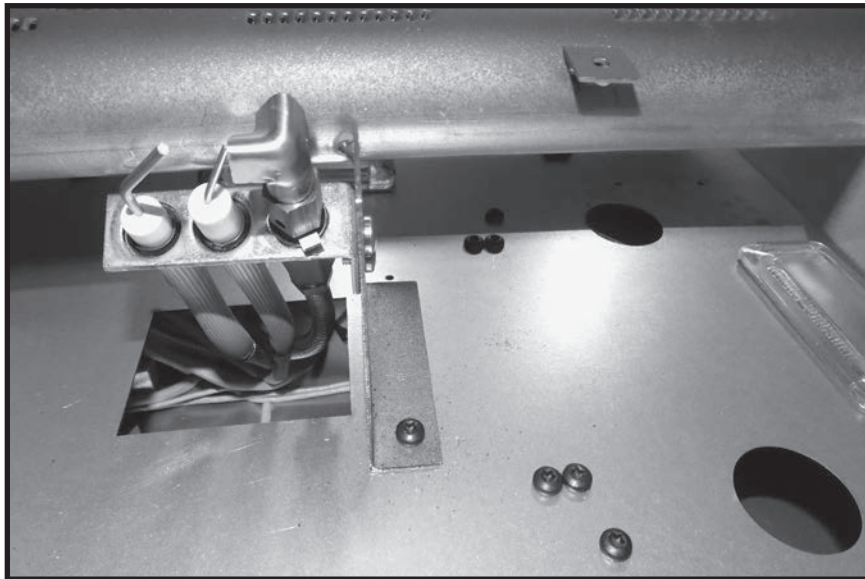


Figure 9: Securing the burner leg to the secondary floor panel.

10. Slip the gas burner venturi over the orifice and screw the burner leg to the secondary floor panel using a T20 screw (Figure 9).
11. Place the second burner in the firebox so that its venturi fits over the second orifice. Secure the leg to the secondary floor panel.

NOTE: Check air shutter for correct fuel setting before proceeding further. Both burner shutters are to be set the same. Fully closed for NATURAL GAS and 3/16" open for LIQUID PROPANE.

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

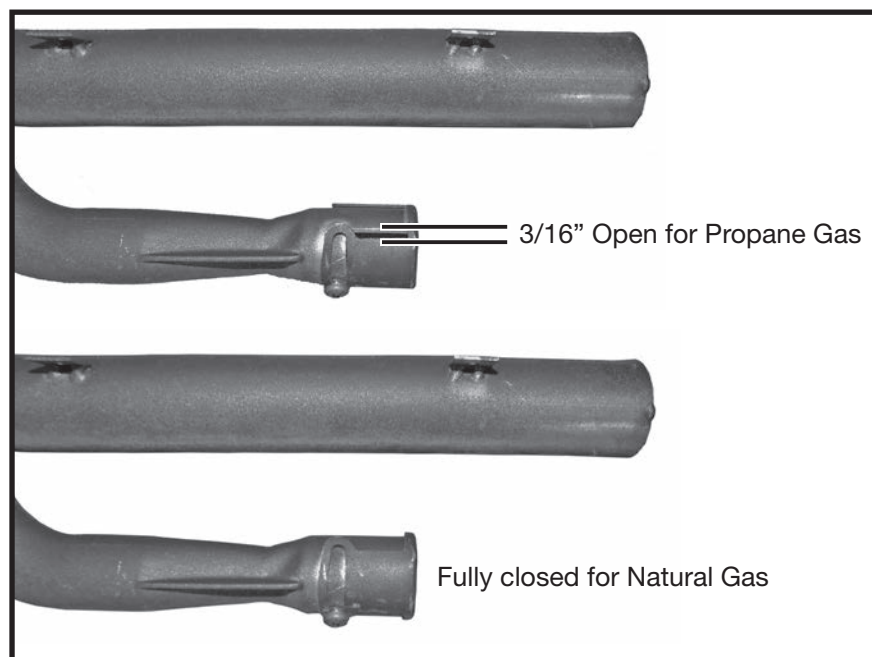


Figure 10: Shutter gap settings.



12. Remove the panel retainer clips from both sides of the upper firebox in preparation for side panel installation (Figure 11). There are two clips on each side of the firebox.

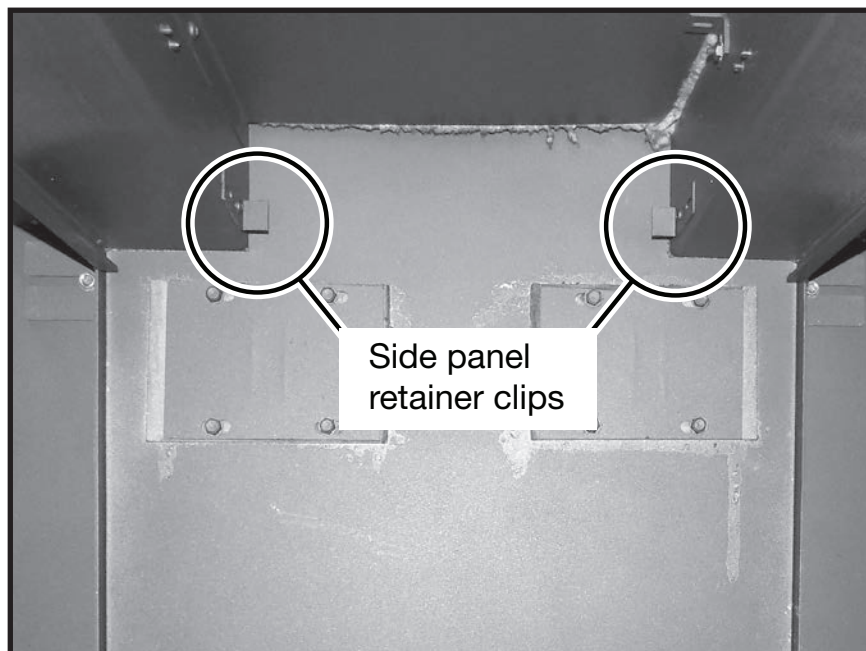


Figure 11: Side panel retainer clips location.



Figure 12: Side panel.



Figure 13: Side panel installation.

13. Insert both side panels (Figure 13).



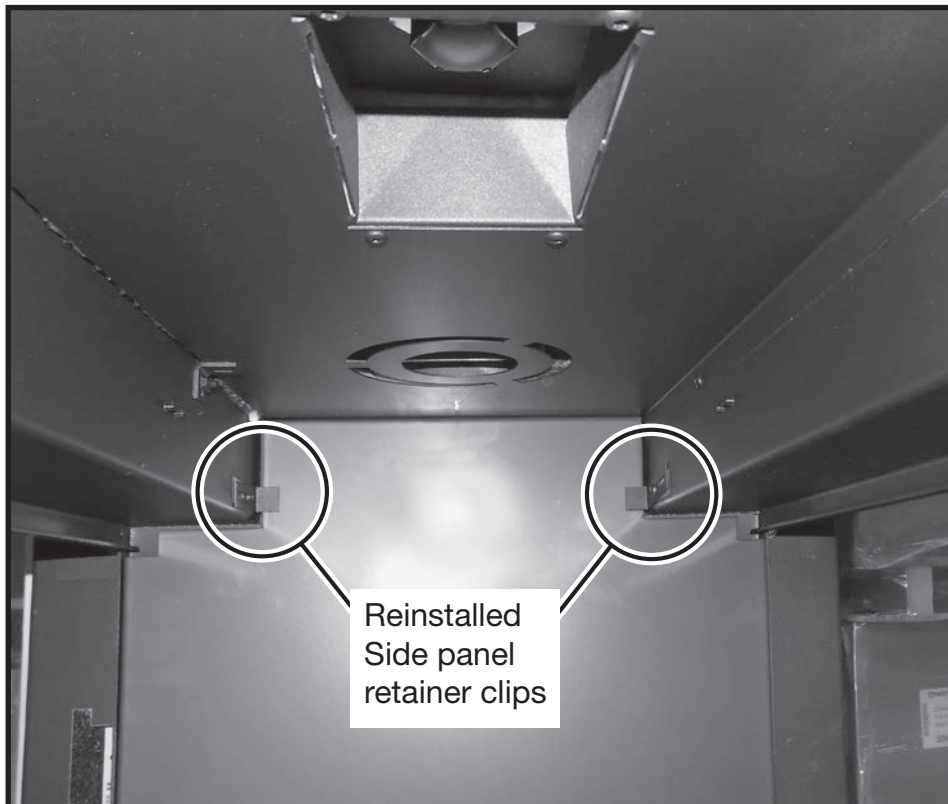


Figure 14: Reinstalled side panel retainer clips.

14. Reinstall the side panel retainer clips (Figure 14) .
15. Place glass media tray over top of the burners so that its legs rest on the secondary floor. The side of the tray with the mesh strip crossing over from one side to the other must be positioned over top of the pilot assembly. Screw down the ends of the tray to the ledge of the side panels - two on each side (Figure 15).

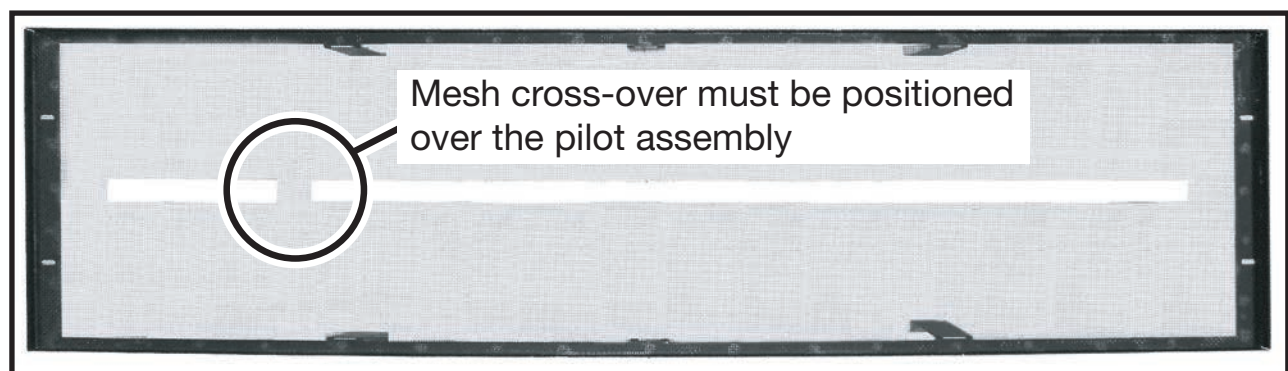


Figure 15: Glass media tray.

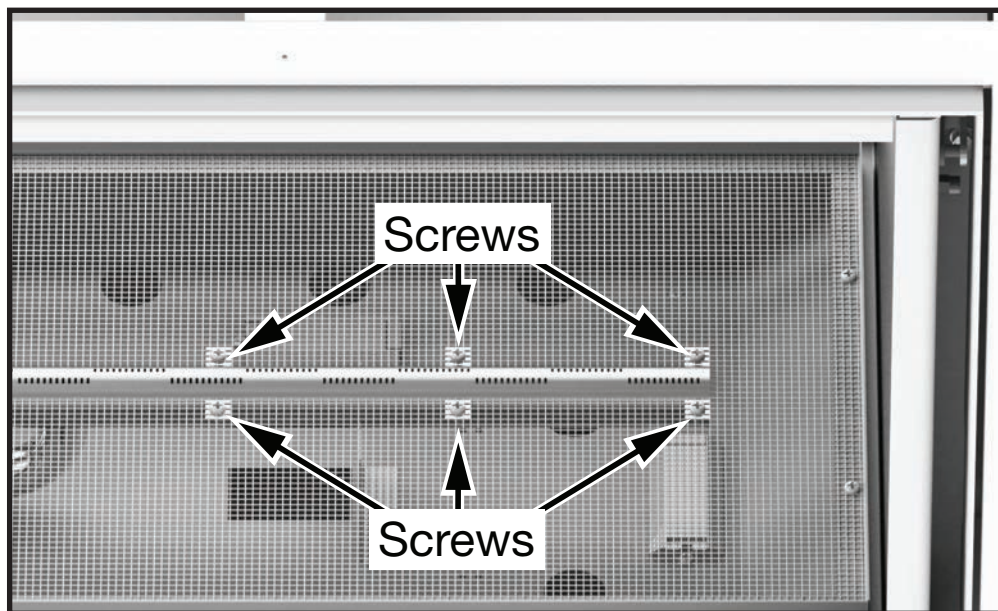


Figure 16: Glass media tray installation.

16. Secure the glass media tray to the burners with screws provided by screwing through the mesh to each small flange on the burners. There are 10 securing points for each burner (Figure 16).
17. Place the two porcelain edge panels (Figure 17) into the fireplace with the narrow edge facing the center of the fireplace (Figure 18 and Figure 19). The edge panels rest in place and are not screwed down.



Figure 17: Porcelain edge panels.

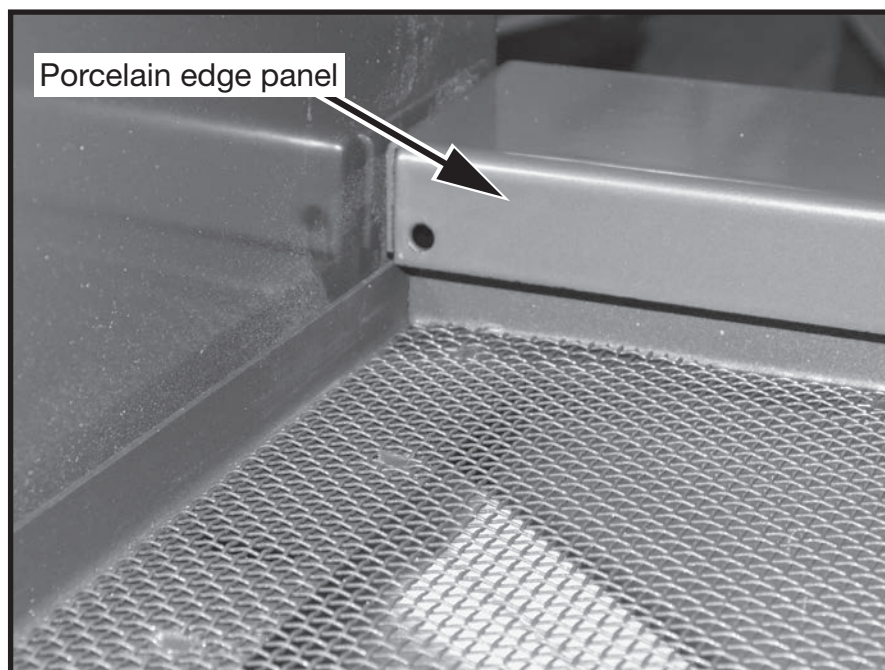


Figure 18: Porcelain edge panels.



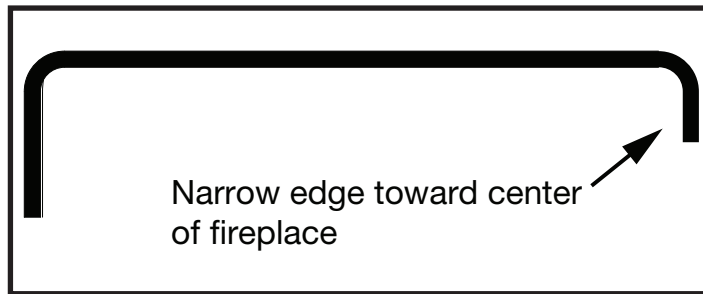


Figure 19: Porcelain edge panel profile.



Figure 20: Raised dome to accommodate pilot flame.

18. Spread the three bags of glass media evenly over the entire mesh tray, leaving only the small raised dome protruding above the pilot flame clear of glass (Figure 20).
19. Install the glass doors to finish the Diamond Burner Kit installation.

Propane Conversion

If this unit is to be used on propane convert as follows using the components supplied with the propane gas conversion kit. Propane conversion kit part number is TCWS.54DSTLPKIT.

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

CAUTION

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

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.

Orifice conversion procedure

1. If installed, remove the glass media from the burner tray and remove the edge panels.
2. If installed, remove the burner tray by removing the screws attaching the tray to the burners and side panels (Figure 16 on page 11) as well as the two screws on each end of the tray which are screwed into the side panels.
3. Remove burners from the orifices. Remove pilot assembly if necessary.

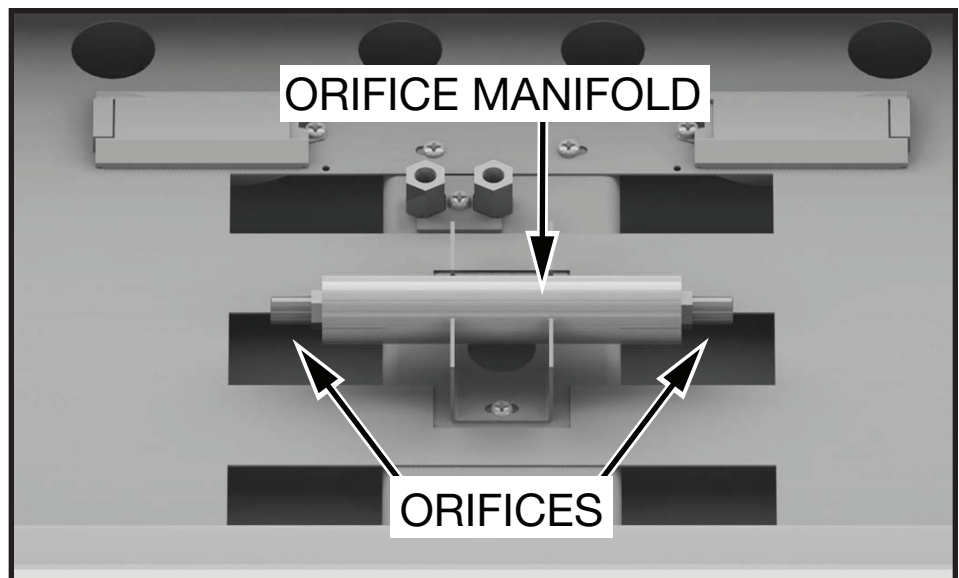


Figure 21: Orifices location.

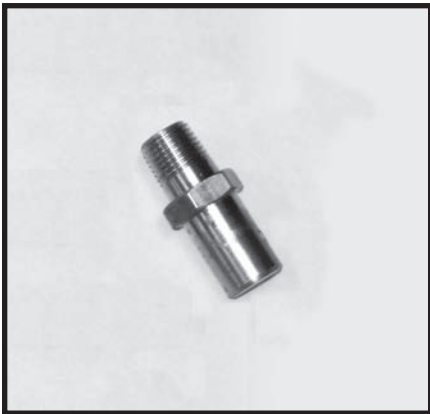


Figure 22: Orifice.

4. Using a 1/2" wrench, undo the natural gas burner orifices and replace with the propane gas orifices included in the conversion kit. Apply a small amount of pipe joint compound to the threads of the propane burner orifice to ensure a good seal, before screwing it into the manifold.

5. Loosen the primary air shutter screw on each burner, open the shutter to give a gap of 3/16" and re-tighten (Figure 23).

6. With a 7/16" wrench loosen the pilot head on the pilot assembly (Figure 24).

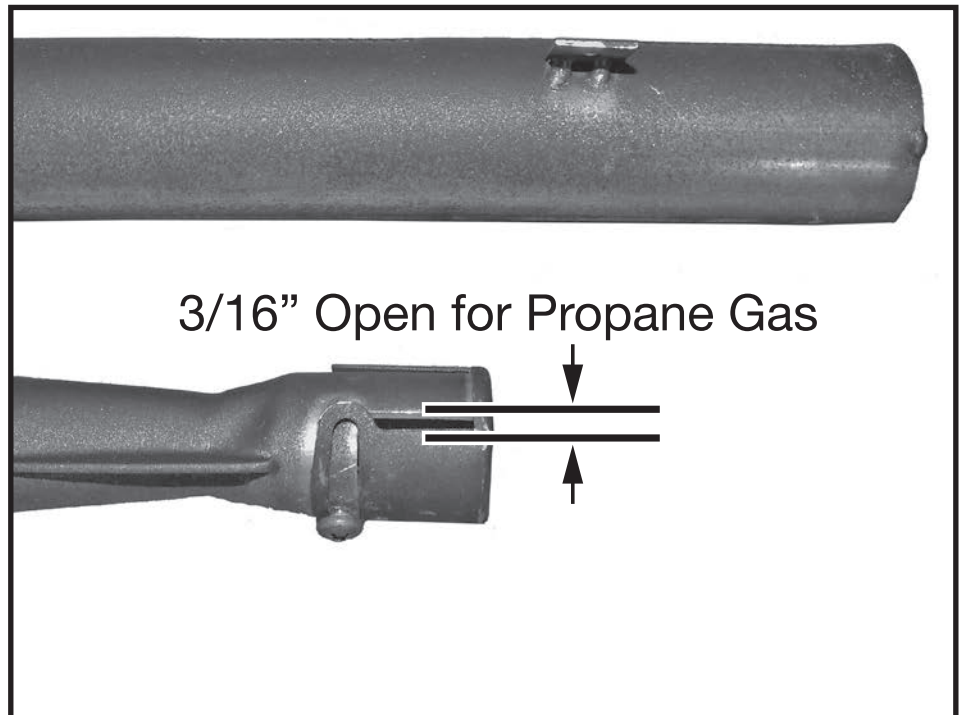


Figure 23: Shutter gap for propane.

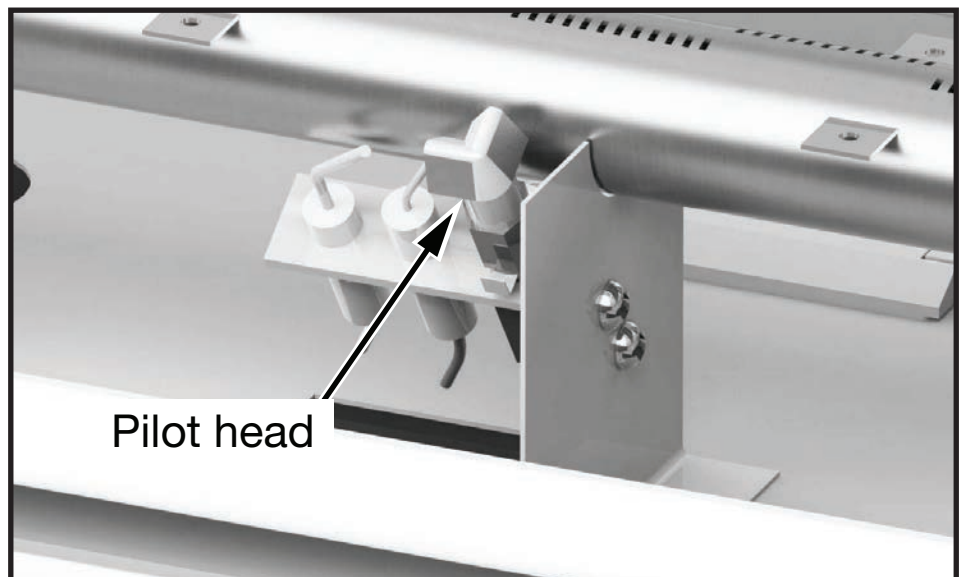


Figure 24: Pilot head.



7. Slide the pilot adjustment band over (Figure 26) and ensure that the hole in the orifice band is showing.
8. Remove access panel to gain access to the gas valve for propane conversion.
9. Complete the gas valve conversion from natural gas to propane gas according to the instructions included in the SIT propane gas conversion kit.
10. Once conversion is complete, fill out and affix the gas conversion label (Figure 27) to the gas valve inside of control box where it will not be affected by the heat of the firebox.

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 cause overheating and premature failure of the control system.

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

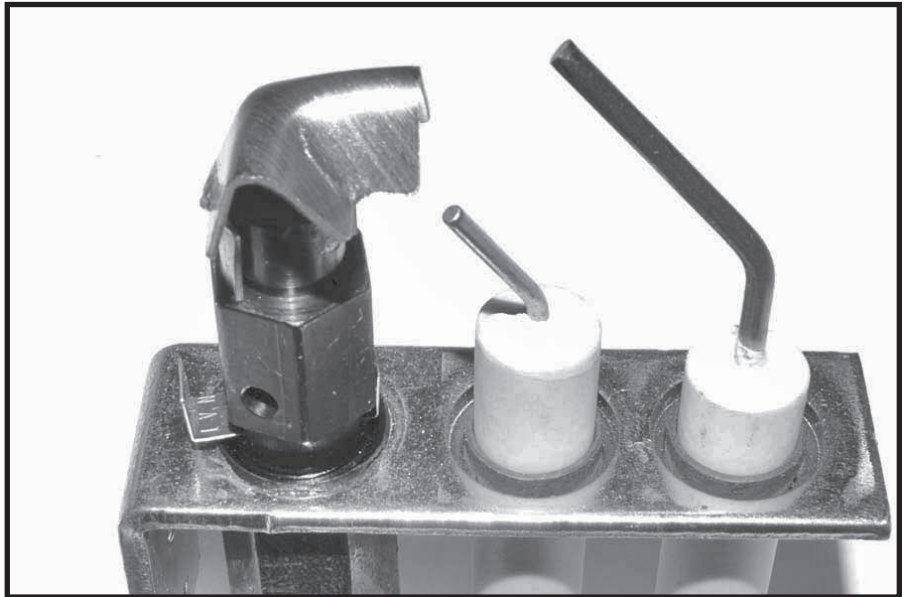


Figure 25: Pilot band in natural gas position.

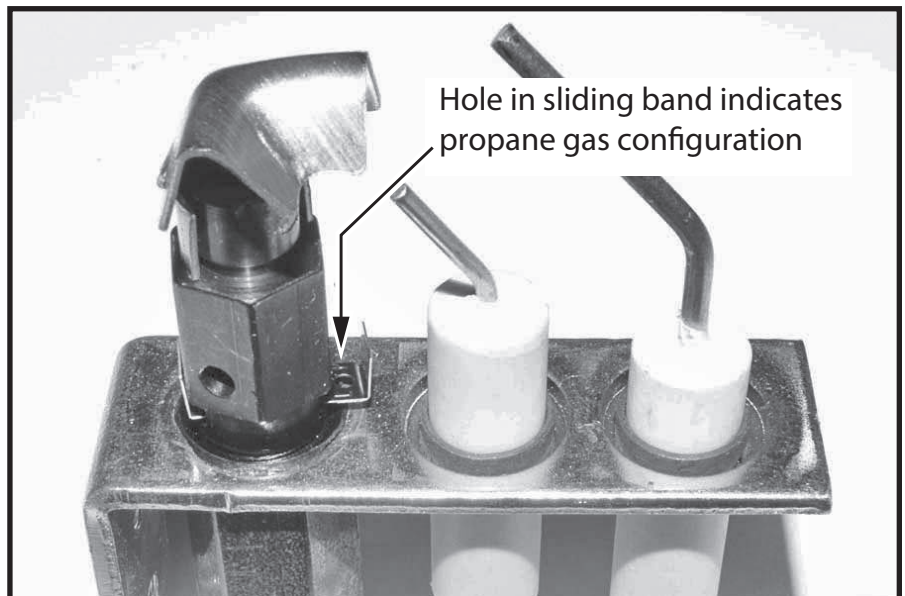


Figure 26: Pilot band in propane gas position.

Kit # TCWS54ST_D.LP for use with model: TCWS54ST Pour utiliser avec du modèle: TCWS54ST Series D	
Date: _____	PACIFIC ENERGY This appliance was converted to PROPANE GAS with this kit on this date by the organization which accepts the responsibility that this conversion has been properly made. / Cet appareil est converti au gaz LP par l'emploi de la trousse de conversion par une organisation qui accepte la responsabilité pour une installation en bon état.
By / Par: _____	
LP GAS/ DU GAZ LP	
12.5 in/wc / 12.5 po/c.e. (3.11 kPa) 13.9 in/wc / 13.9 po/c.e. (3.45 kPa) 10.0 in/wc / 10.0 po/c.e. (2.49 kPa)	
1.78 mm	
Max.: 62,000Btu (18.1kw) Min.: 49,000Btu (14.3kw)	
071014 6-TCWS54ST_D 5052.52089D	

Figure 27: Propane conversion label.

Accessing the gas valve for conversion

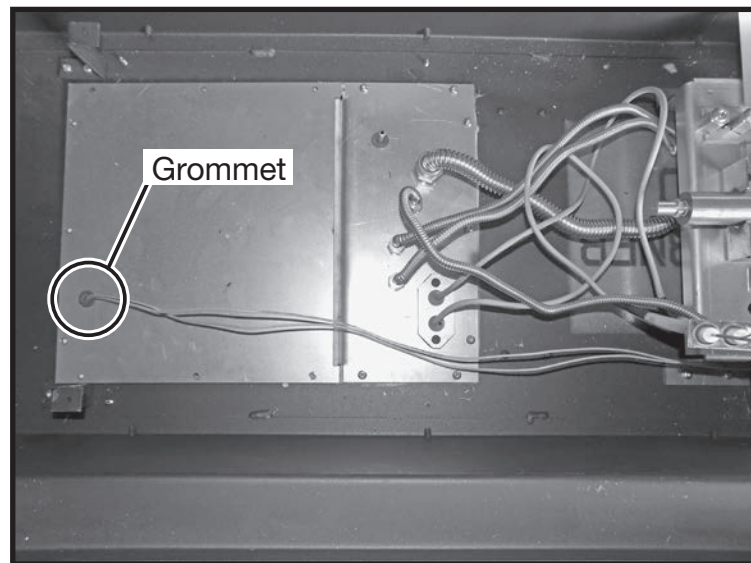


Figure 28: Wires through grommet.

1. If installed, remove the burner media (rocks, glass, etc.) from the burner tray. Remove the edge panels, burner tray, left hand burner, left hand side panel, release pilot assembly from center leg and remove left hand secondary floor panel.
2. Remove large cover panel. If this fireplace has lighting built in to the secondary floor, it will be necessary to disconnect the lighting wires from the electrical connection compartment in front of the control box in order to withdraw the lighting wires through the grommet (Figure 28). Make sure that the power is turned off at the breaker box.

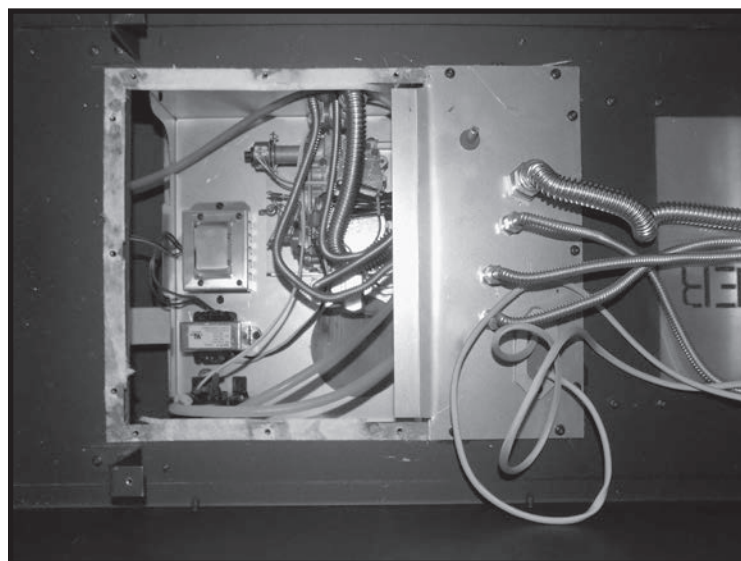


Figure 29: Large cover removed.

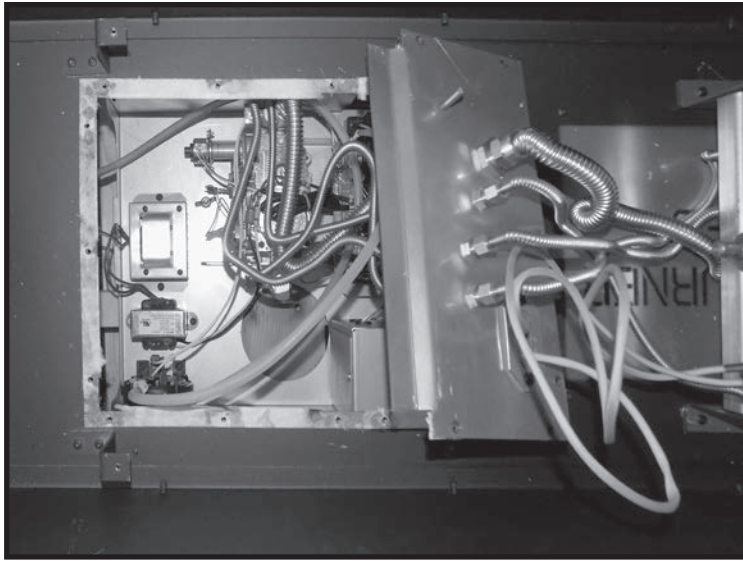


Figure 30: Small plate lifted to provide access to connector.

3. Remove screws for the small cover panel and lift the panel and flexible gas lines enough to be able to get your hand underneath it (Figure 30).
4. Locate the stepper (Figure 31) and follow its wires back to its electrical connection and disconnect (Figure 32).
5. Return to the stepper and locate the two screws attaching the stepper to the valve.
6. Complete the gas valve conversion from natural gas to propane gas according to the instructions

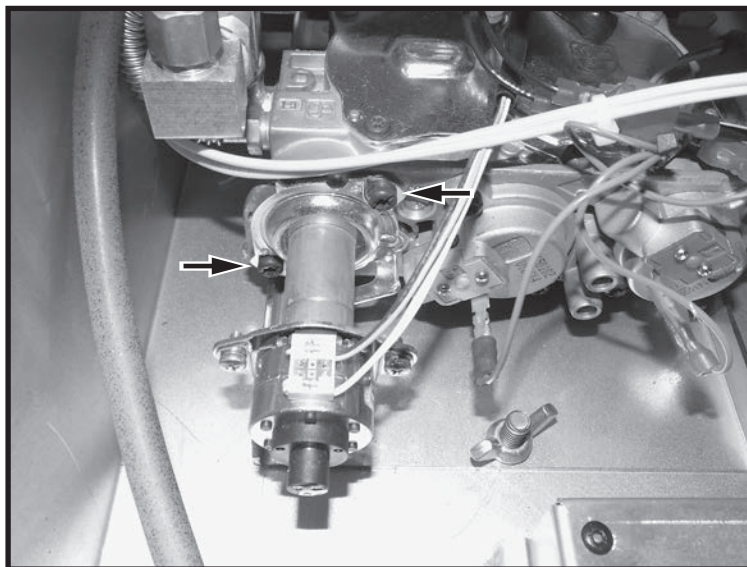


Figure 31: Stepper screws access.



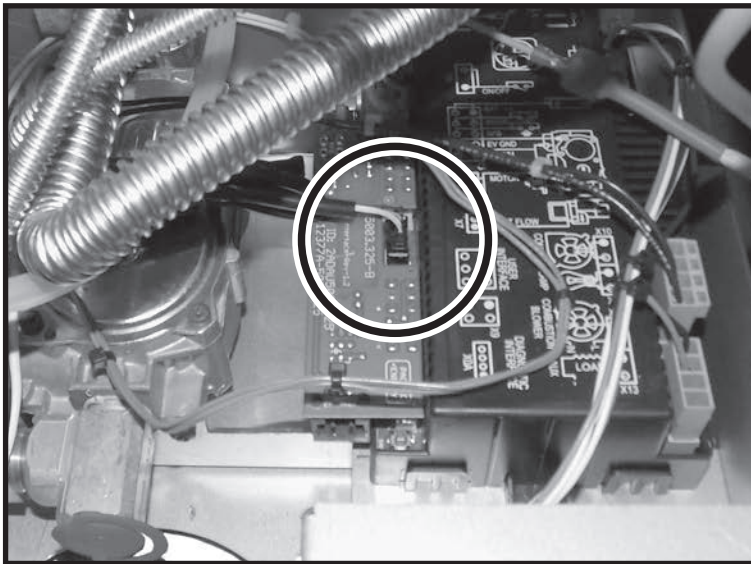


Figure 32: Stepper connector location.

included in the SIT propane gas conversion kit.

7. Once conversion is complete, fill out and affix the gas conversion label (Figure 33) to the inside of the gas valve inside of control box where it will not be affected by the heat of the firebox.


	Kit # TCWS54ST_D.LP for use with model: Pour utilise avec du modèle:	TCWS54ST Series D
Date: 		<div style="border: 2px solid black; padding: 5px; display: inline-block;"> PACIFIC ENERGY </div>
By / Par: 		
<div style="border: 1px solid black; padding: 2px;"> LP GAS/ DU GAZ LP </div>		
<div style="border: 1px solid black; padding: 2px;"> 12.5 in/wc / 12.5 po/c.e. (3.11 kPa) 13.9 in/wc / 13.9 po/c.e. (3.45 kPa) 10.0 in/wc / 10.0 po/c.e. (2.49 kPa) </div>		This appliance was converted to PROPANE GAS with this kit on this date by the organization which accepts the responsibility that this conversion has been properly made. / Cet appareil etair converteraugazLP parl'emploi de la trousse de conversion par une organization qui accepte la responsabilité pour une installation en bon état.
<div style="border: 1px solid black; padding: 2px; text-align: center;"> 1.78 mm </div>		
<div style="border: 1px solid black; padding: 2px;"> Max.: 62,000Btu (18.1kw) Min.: 49,000Btu (14.3kw) </div>		
071014 6-TCWS54ST_D 5052.52089D		

Figure 33: Propane Conversion Label.



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.

1. Remove the plug from the pressure test port using a 3/16" hex key (Figure 34).
2. Thread the extension test fitting into the open port (Figure 35).
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.

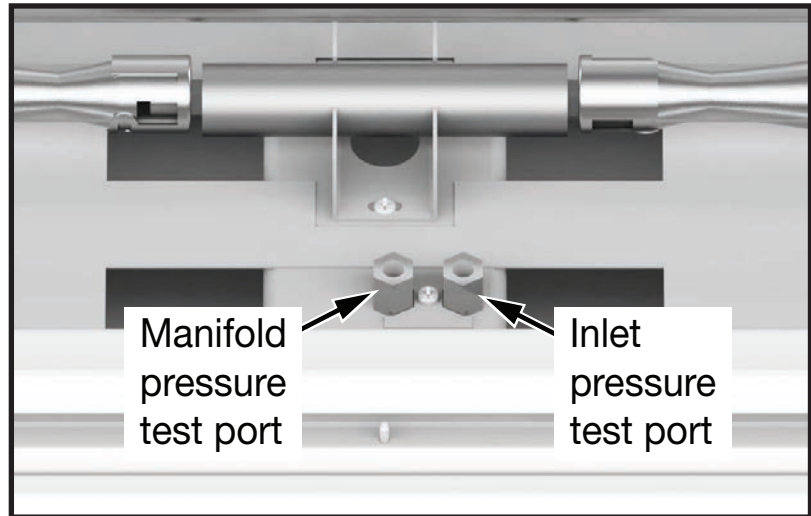


Figure 34: Pressure test ports.

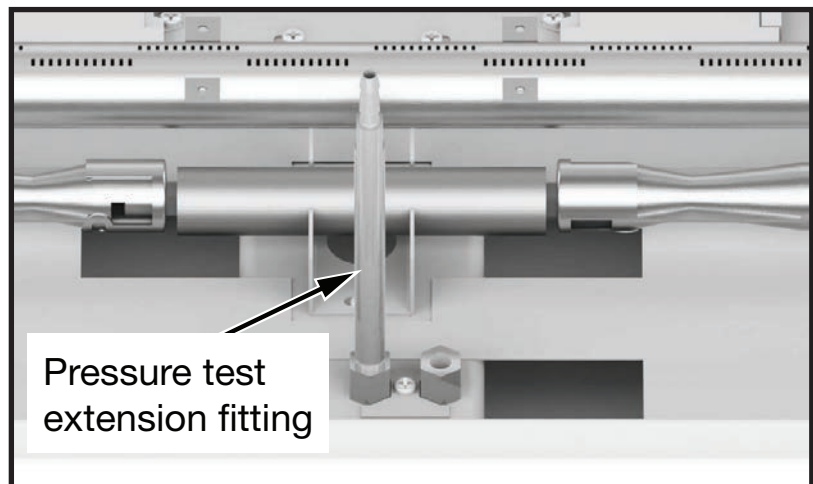


Figure 35: Pressure test extension.

Correct gas pressure requirement:

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



Burner Flame Adjustment

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 liquid propane, See “Propane Conversion” on page 13. 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 Figure 36 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.

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. Allow the fireplace to run for 30 minutes before evaluating flame appearance.



Figure 36: Diamond burner desirable flame pattern.



Optional Long Beach Log Set Installation

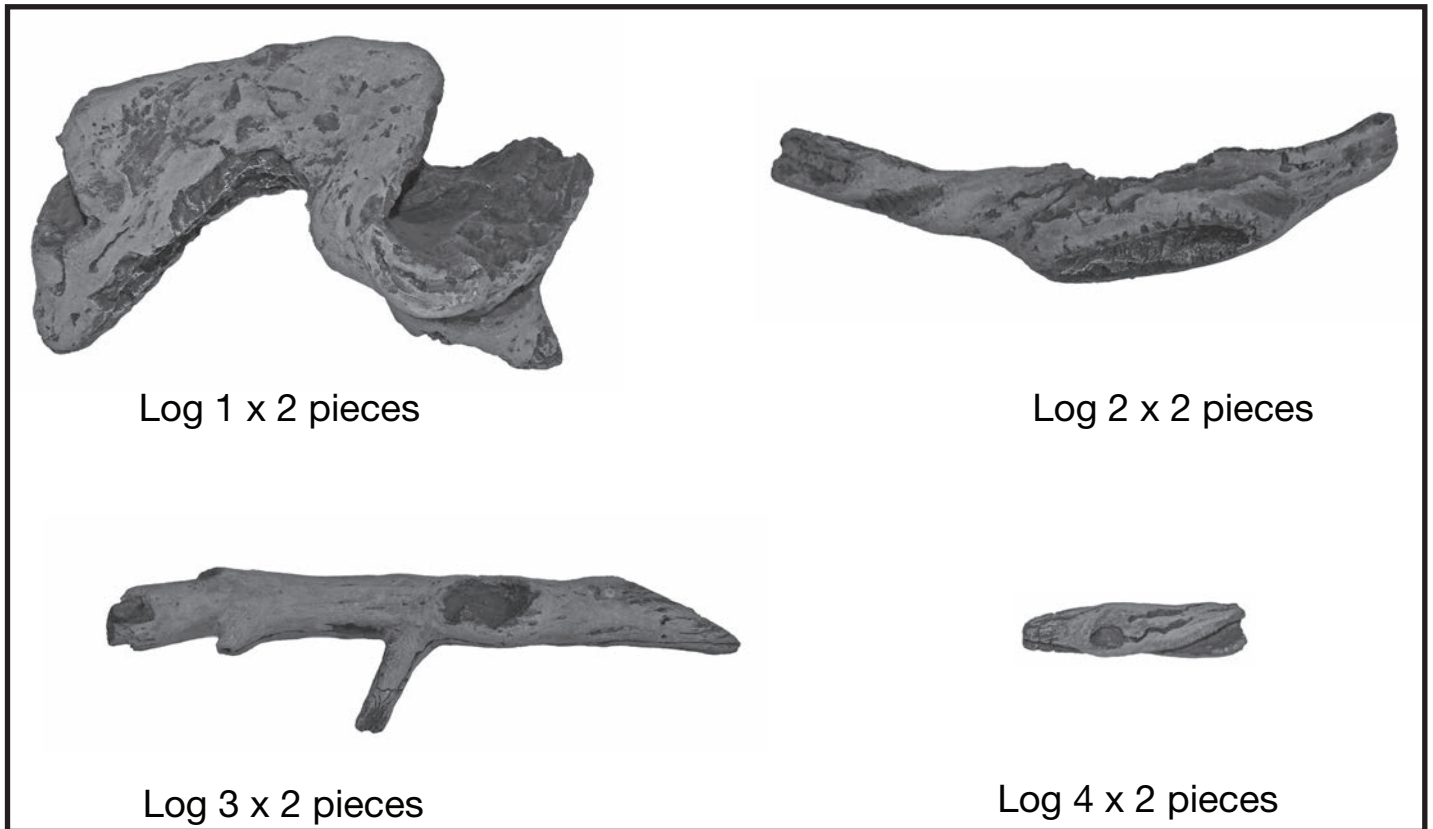


Figure 37: Contents of Long Beach log set.

Log Placement

The Long Beach Log Set consists of four pair of logs for a total of eight logs. Four of the logs will cover one half of the circumference of the glass tray while the other four will duplicate the pattern of the of the first four. Images shown exclude the Diamond glass placement for clarity.

1. Place log 1 so that its' outer edge is almost at the furthest edge of the tray (Figure 38).

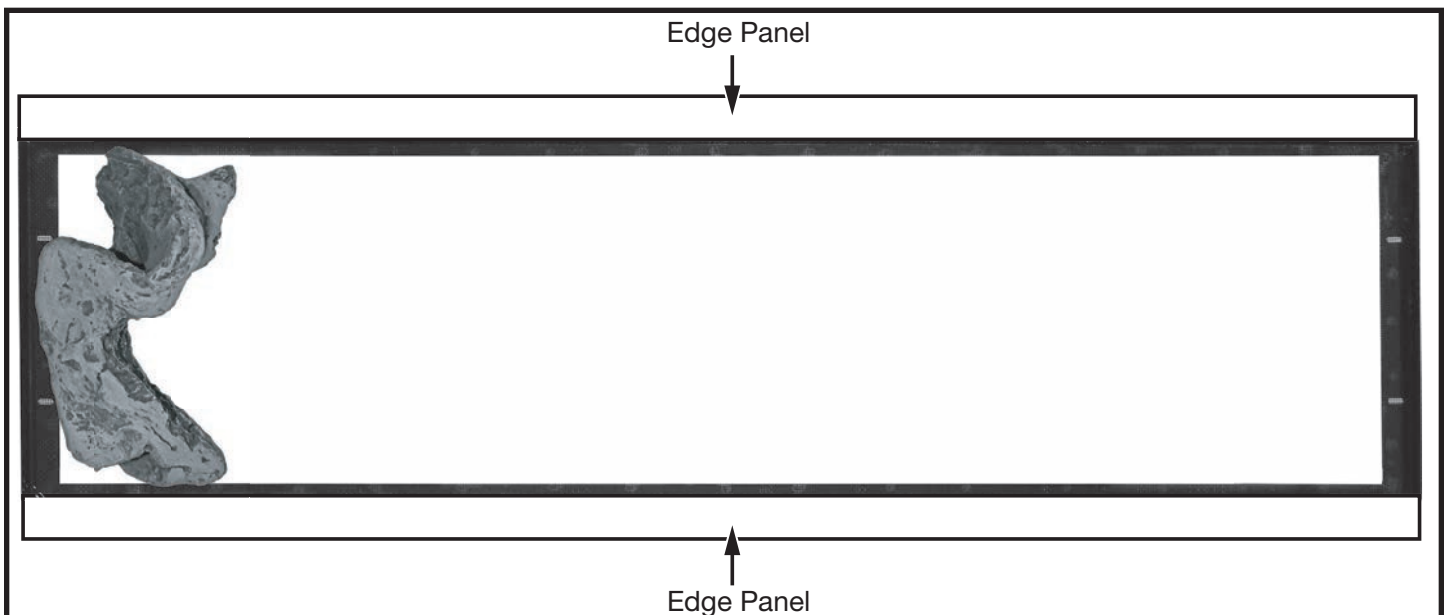


Figure 38: Log 1 Placement.

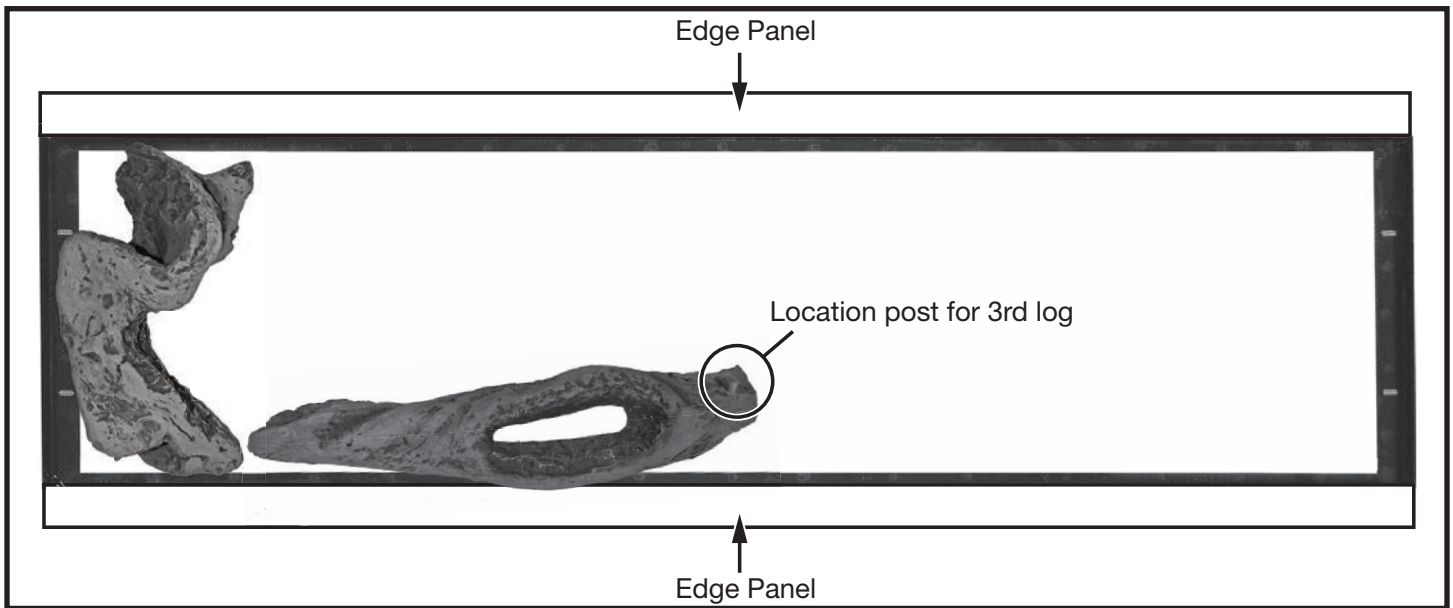


Figure 39: Log 2 placement.

2. Place the 2nd log so that the middle of it overhangs the tray itself and rests on the edge panel as shown in Figure 39. Note that there is a location post for the 3rd log at one end of the 2nd log. This location post should have a vertical alignment.

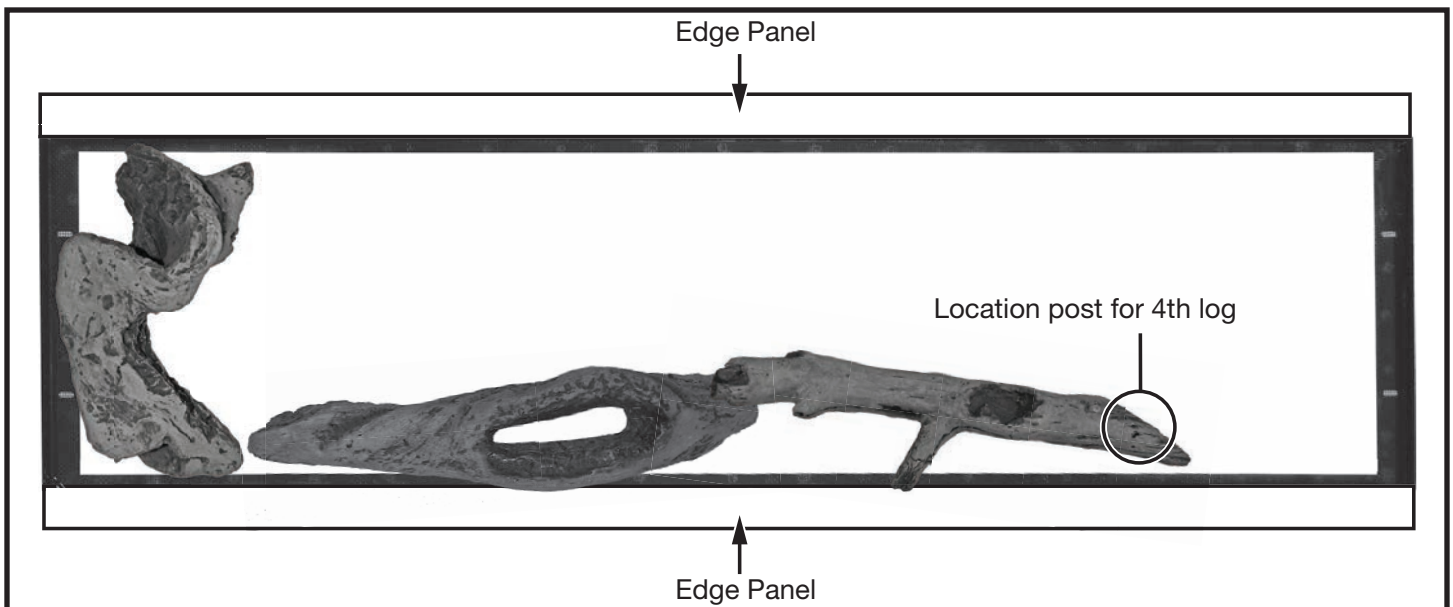


Figure 40: Log 3 placement.

3. The 3rd log has a socket on the bottom of one end which will fit onto the location post of the 2nd log. Once the socket and location post have been mated, move the opposite end of the 3rd log toward the edge panel so that its' middle branch is resting on the edge panel (Figure 40).



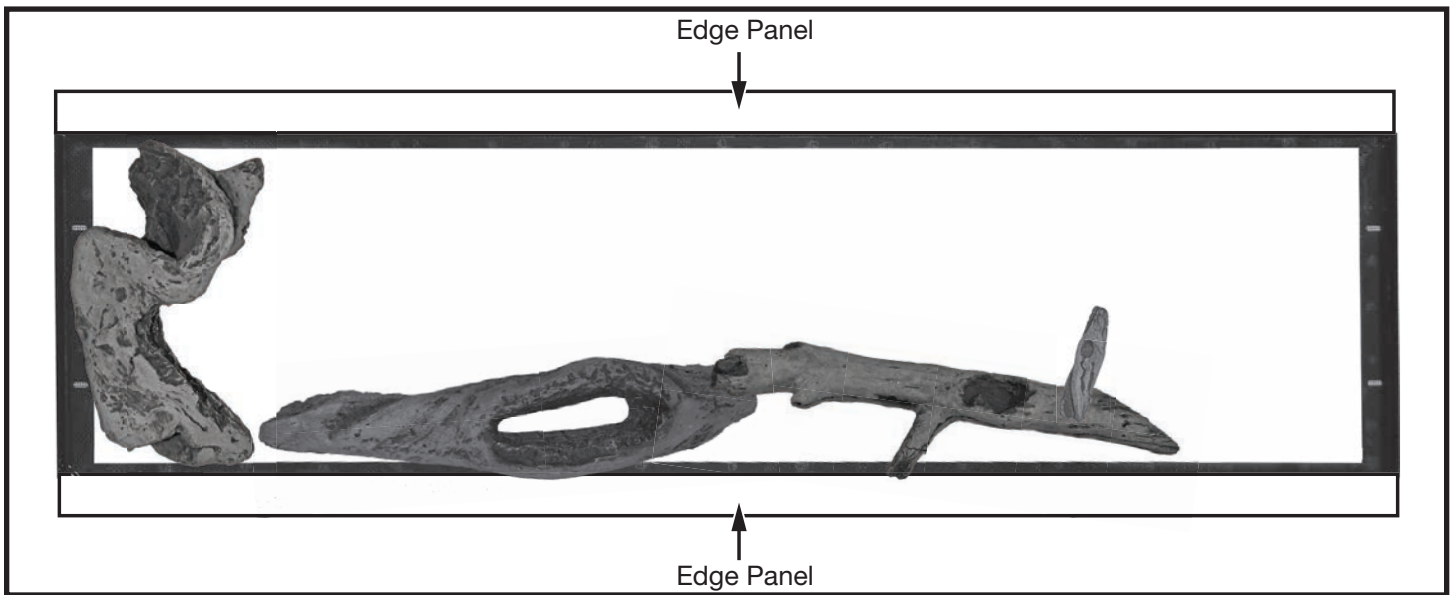


Figure 41: Log 4 placement.

4. The 4th log also has a socket which will fit over top of the location post of the 3rd log. Fit the 4th log over the location post and let the opposite end rest on the glass at about a 1 o'clock position (Figure 41).
5. Repeat the previous steps to complete the log set installation (Figure 42).

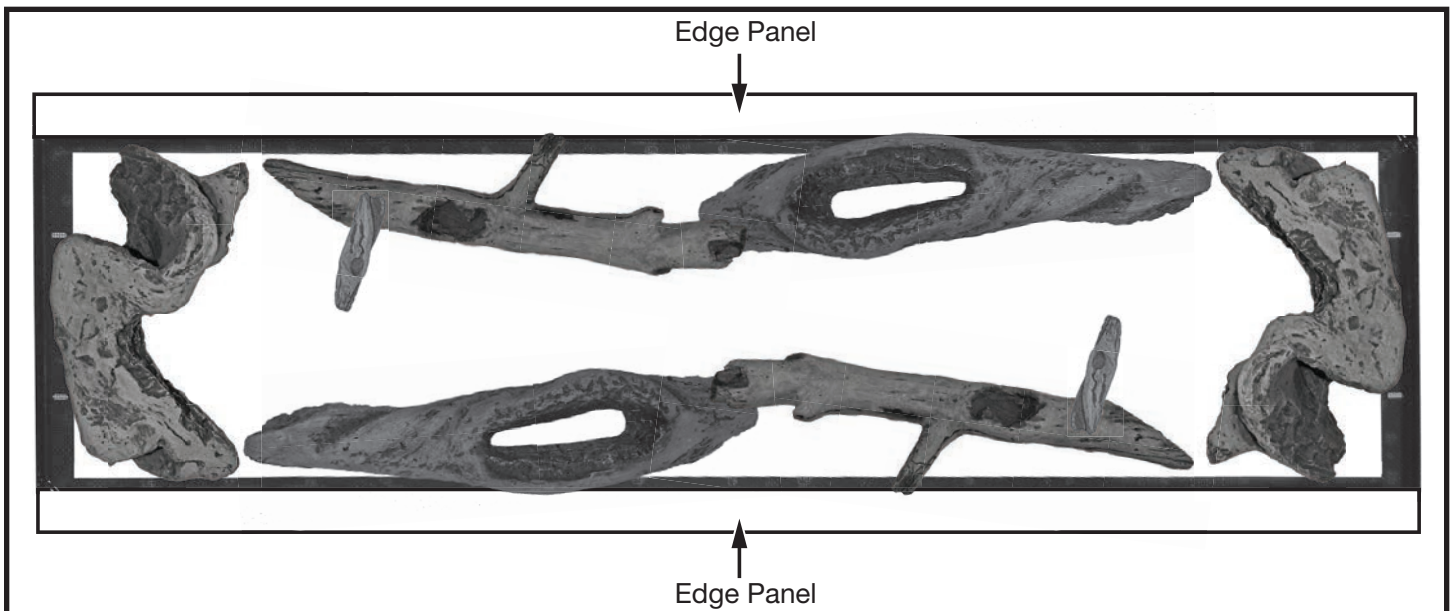


Figure 42: Completed log placement.





Figure 43: Example of desirable flame pattern.

Lights Wiring Diagram

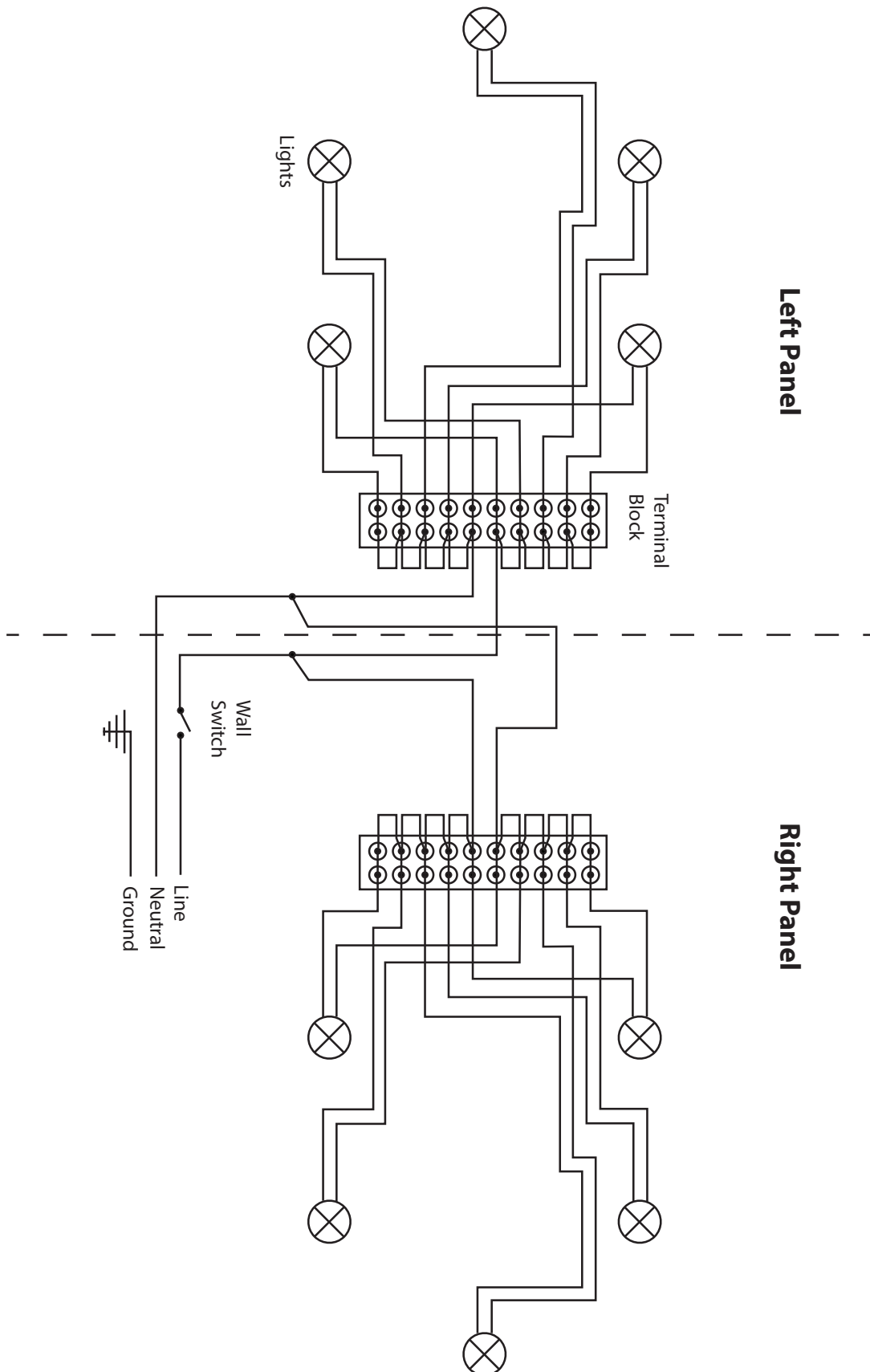


Figure 44: TCWS54ST lights wiring diagram.

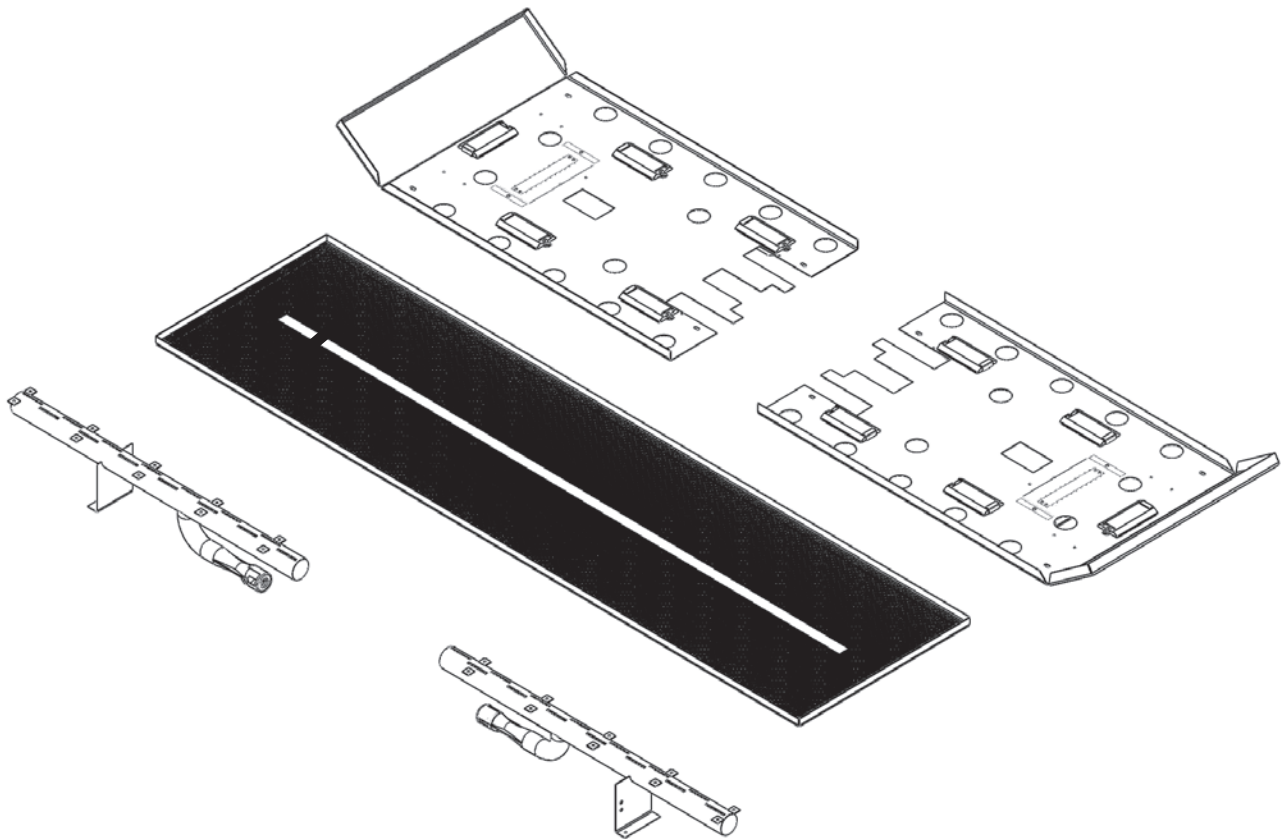


Replacement Parts

(WHEN ORDERING, INCLUDE PART NUMBER WITH DESCRIPTION)

ITEM	DESCRIPTION	PART NO.
1	DIAMOND BURNER KIT	TCWS.54NGST03D
* 2	GLASS MEDIA (1-5lb bag. 2 required)	TCRP.501207
* 3	LONG BEACH LOG SET (For use with Diamond Burner Kit only	TCWS54 LOGDW
* NOT SHOWN		

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