INSTALLER:

Leave this manual with the appliance. CONSUMER:

Retain this manual for future reference.

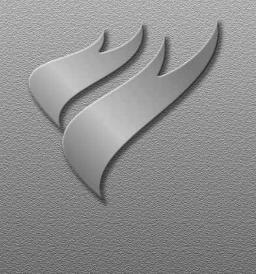
These instructions are supplementary to the Installation and Operating Instructions supplied with the fireplace and should be kept together. Refer to the Installation and Operating Instructions for proper gas supply, safety requirements and operating instructions.



TCWS38 BLACK DIAMOND BURNER KIT INSTALLATION INSTRUCTIONS

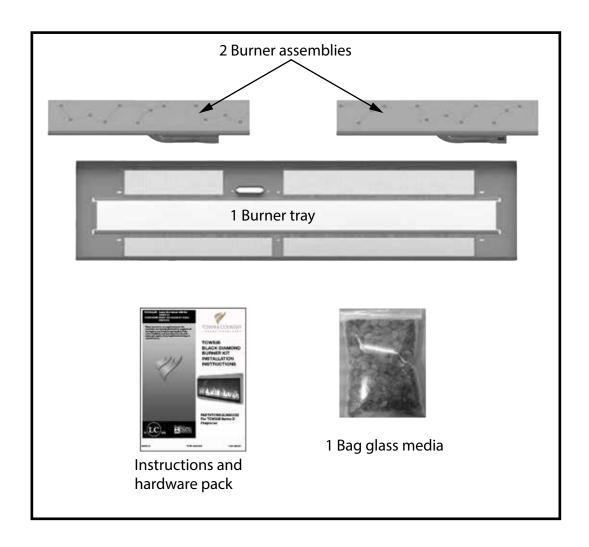


SKU# 22150032 For TCWS38 Series D Fireplaces





Contents of Package -



Black Diamond Burner Installation

If converting to propane see conversion instructions on page 5 before proceeding.

Install panels according to the TCWS.38D Installation and Operating manual prior to burner installation.



Figure 1: Burner installation.

Figure 2: Burner tray installation.

- 1. Install the right burner by tipping into location trough and slipping the venturi tube over the orifice. Repeat with left burner (Figure 1). See Burner shutter settings note at the bottom of this page to check that the burner shutters are set properly for natural gas or propane gas.
- 2. Tilt burner tray length-wise and insert into the firebox (Figure 2).
- 3. Attach pilot to burner tray. 2 screws (Figure 3).
- 4. Secure the burner tray to the manifold brackets with 6 screws (Figure 4).

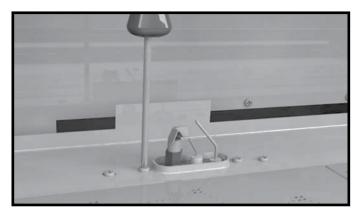


Figure 3: Attaching pilot.

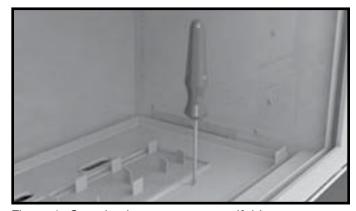


Figure 4: Securing burner tray to manifold.

Burner Shutter Settings Note:

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. 1/8" open for LP. See Figure 11 for adjustment.

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





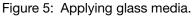




Figure 6: Installing front porcelain trim.

5. Place glass media into the burner tray and brush smooth so that a very light layer covers the burners (Figure 5)

NOTE: Too much glass media will cause sooting and improper flame pattern.

6. Place the front porcelain trim so that it rests on the front shelf of the firebox and is snug against the firebox frame.

Note: The panel set pictured above comes with a front and a rear porcelain panel (Figure 6). However, the Black Diamond Burner Kit does not require that the rear porcelain panel be used. It should be discarded instead.

Ensure that the wide edge of the trim is against the firebox frame (Figure 7).

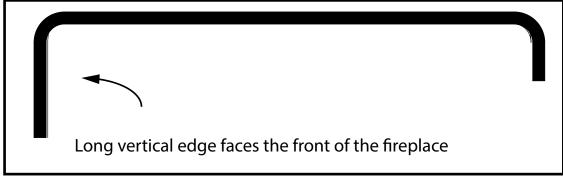


Figure 7: Front porcelain trim profile.

Propane Conversion

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

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

CAUTION: The gas supply and electrical power 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.



Figure 8: Removing burner tray.



Figure 9: Main burner orifices (maked "LF"



Figure 10: Installing the orifice.

- 1. If installed remove the glass media from the burners.
- 2. If installed remove the burner tray from the manifold brackets and pilot (Figure 8).
- 3. Remove burners
- 4. Using a 1/2" wrench, undo the natural gas burner orifice, (marked "NF"). Apply a small amount of pipe joint compound to the threads of the propane burner orifice (marked "LF") to ensure a good seal, before screwing it into the fitting (Figure 10).



Figure 11: Adjusting air shutter for propane gas.

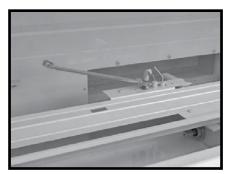


Figure 12: Loosening the pilot head.

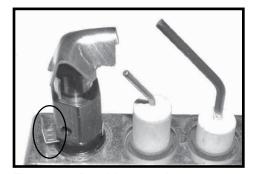


Figure 13: Band in natural gas position.

- 5. Loosen the primary air shutter screw, open shutter to give a gap of 1/8" (0.125") and re-tighten. Repeat on other burner (Figure 11). Shutters are fully closed for natural gas and are 1/8" open for propane gas.
- 6. With a 7/16" wrench loosen, but don't remove the pilot head on the pilot assembly (Figure 12).
- 7. Slide the pilot adjustment band over and ensure that the hole in the orifice band is showing (Figure 14). Retighten pilot head. Figure 13 shows NG position. Figure 14 shows LP position (Hole visible in band).
- 8. Fill in the date and the name of the person who performed the conversion in the white area on the conversion label (Figure 15). Peel off the protective backing and apply the conversion label directly over the gas specifications on the rating label.
- 9. Re-attach the access panel to the side of the firebox with the screws previously removed (Figure 16).
- 10. If the burner was removed in previous steps replace in reverse order or return to installation process -"Black Diamond Burner Installation" on page 3.

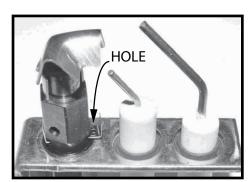


Figure 14: Band in propane gas position.

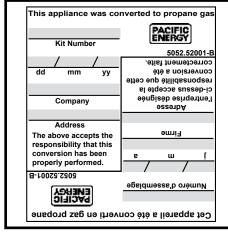


Figure 15: Propane conversion label.

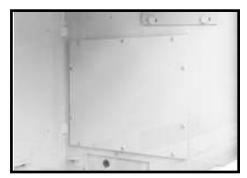


Figure 16: Valve access cover.

WARNING: The access panel including gasket 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 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.

- 1. Remove the plug from the manifold test port. The plug is located between the right side lintel and firebox side (Figure 17), (Bottom port).
- 2. Thread the extension test fitting into the open port (Figure 18).
- 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 17: Removing the plug.



Figure 18: Inserting the extension.

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

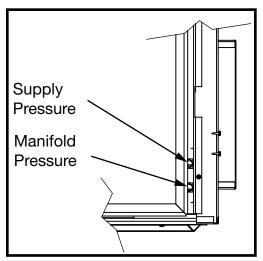


Figure 19: Adjustment manifolds.

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 (1/8" open for propane gas). 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 20 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 20: Example of a desirable flame pattern.

NOTE:

Proper air shutter setting is required.

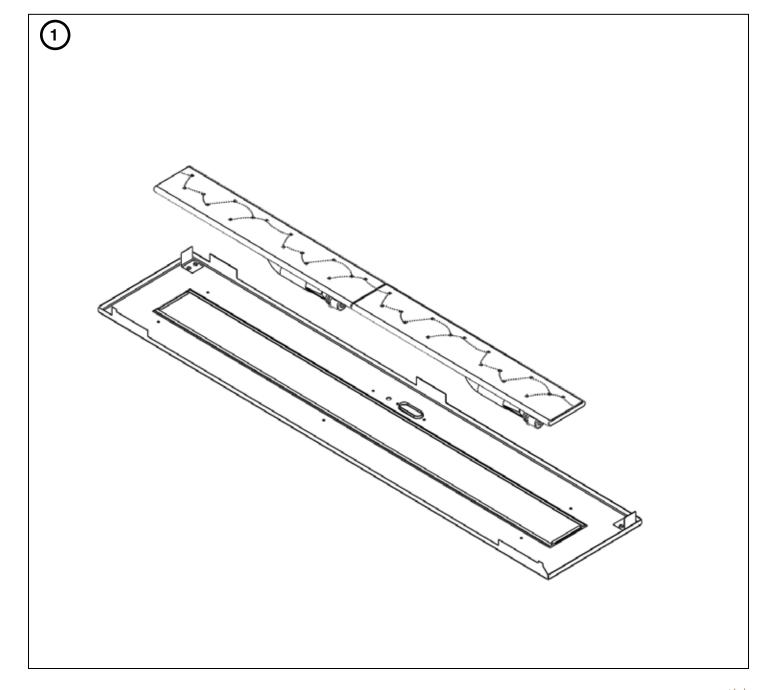
The flame should be just orange and "lazy". It should NEVER be set to create sooting on internal parts and window glass. Allow the fireplace to run for 30 minutes before evaluating flame appearance.

–Parts Diagram−

(WHEN ORDERING, INCLUDE PART NUMBER WITH DESCRIPTION)

ITE	M DESCRIPTION	PART NO.
#1 #2		22150032 TCRP.501201
* #3	PROPANE CONVERSION KIT.	22180006

* NOT SHOWN







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For technical support, please contact your retailer.

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