#### 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



## TC42 HEARTWOOD BURNER KIT INSTALLATION INSTRUCTIONS



SKU#22150038 For TC42 Series D Fireplaces



Visit www. townandcountryfireplaces.com for the most recent version of this manual 120923-16 SKU# 22150038 100000363-50

## Contents of Package

- Burner assembly (including pilot and manifold)
- Log grate
- TC42 Heartwood logs
- Ember pieces (one bag)
- Coal chunks (one bag)
- Ember wool (two bags)
- Hardware package

If this fireplace is to be used on Propane please convert prior to installtion. See pages 10 - 12.



Figure 1: Heartwood package contents.

#### Burner Installation

- 1. Place the keyhole slots in the burner (Figure 2) over the two screws located in the firebox base (Figure 3).
- 2. Slide the burner back to engage the screws in the small part of the keyhole slot and tighten screws.
- 3. Remove access cover from side of firebox (Figure 4).



Figure 2: Attaching burner to floor of fireplace.

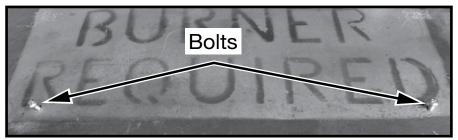
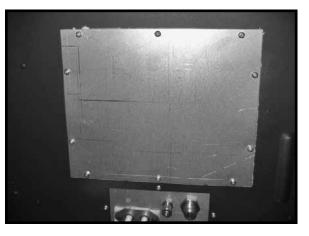


Figure 3: Bolts for burner.

Figure 4: Control center access cover.



## **Burner/ Grate Installation**

4. Attach the manifold gas and pilot supply tubes to the bulk head fitting and tighten (Figure 5).

Ensure that all connections are gas tight.

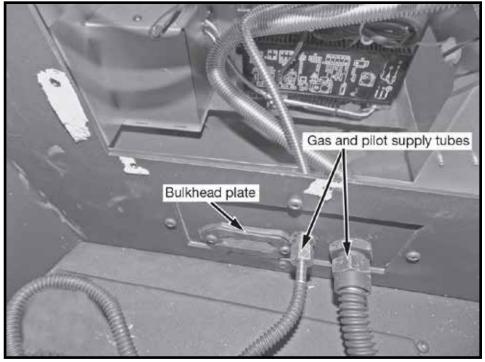


Figure 5: Gas and pilot supply tubes.

5. Feed the ignition and sensor wires through the bulkhead plate (Figure 6) to the interface.

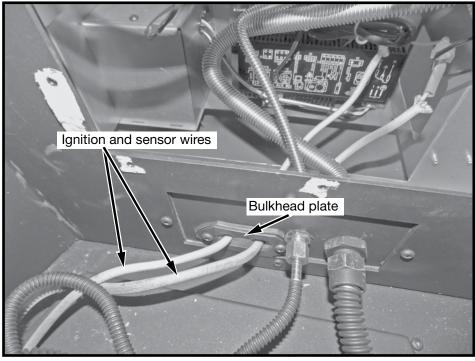
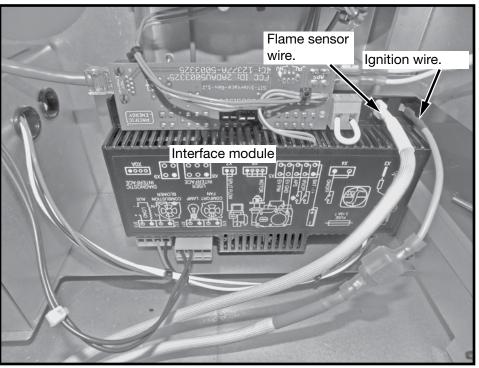


Figure 6: Ignition and sensor wires routing.

6. Attach the ignition and sensor wires to the module (Figure 7).



7. Replace the access cover.

Figure 7: Interface module.

A panel set must now be installed. See Installation and Operating Instructions manual for details.

 Position the slots of the grate securing brackets over the holes in the floor shield and secure with the two screws (Figure 8).



Figure 8: Securing the grate.

#### **Ember Material**

Two bags of ember wool are supplied with the Heartwood burner kit and need to be installed on the burner to ensure optimum performance and flame appearance. A bag of large coal chunks and small ember pieces are also supplied. These must only be used around the burner pan to cover up the gas lines and brackets.

- Pull apart the ember wool into ember size pieces (approximately 1" squares) and gently place them into the burner pan. Do not compress, leave them loose for best performance.
- 2. Fill the burner pan level with the top of the pan at rear, and gradually sloping forward down to the firebox floor at the front, covering both burner tubes (Figure 9).
- 3. Place remaining ember material, coal chunks and small ember material outside of the burner pan as desired to cover-up gas lines and brackets. (Figure 10). Do not put coal chunks or small ember pieces inside burner pan as this will cause sooting and the burner to malfunction.



Figure 9: Placement of ember wool on the burner pan.

Note: Ember material placement and amount will affect flame appearance.

More ember material results in lower flame height.

Add or remove as needed until desired flame affect.

Reduce the amount used on Propane models, as too much will create soot

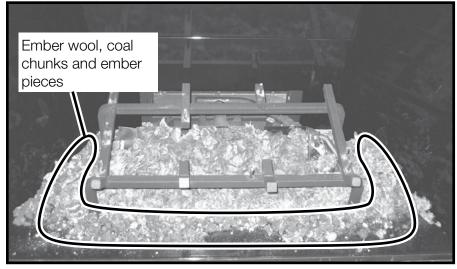


Figure 10: Full distribution of ember, coal chunks and ember pieces.ai

#### Log Set Assembly

## Gas plumbing and vent connections should be completed before proceeding.

The logs are fragile, and should be handled with care. Unpack and inspect log set. There should be a total of seven logs.

Position the logs as indicated by the following pictures. The seven main logs have holes and / or pins. Engage each pin in the corresponding holes. The remaining two logs do not have holes or pins. They rest in position. Locate as per the diagrams (Figures 11-19)

Note: Improper placement of logs will cause sooting on internal parts and glass. The logs may need to be repositioned slightly to avoid excessive flame impingement.

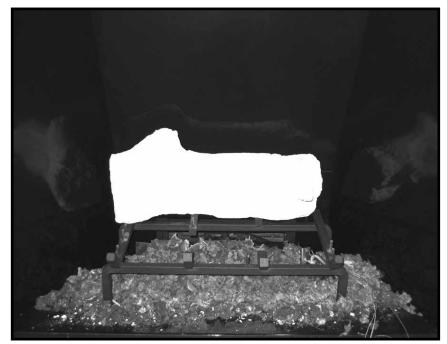


Figure 11: Log 1 placement.



Figure 12: Log 2 placement.



Figure 13: Log 3 placement.

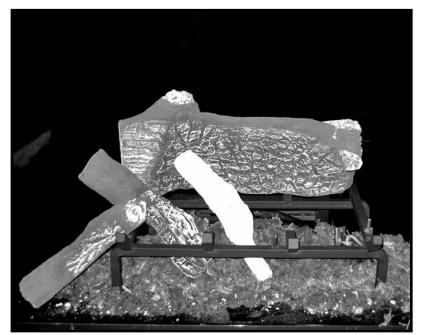


Figure 14: Log 4 placement.

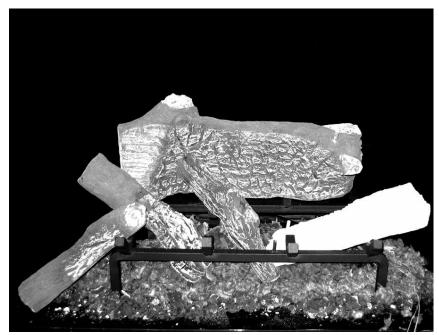


Figure 15: Log 5 placement.



Figure 16: Log 6 placement.



Figure 17: Log 7 placement.

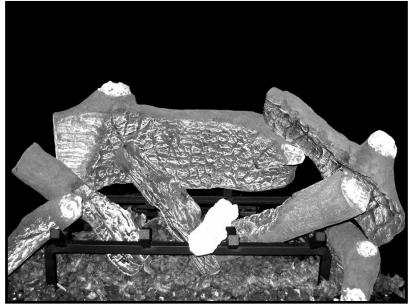


Figure 18: Log 8 placement.

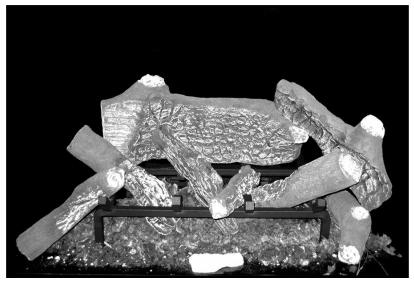


Figure 19: Log 9 placement.

### Propane Conversion

Note: The propane conversion kit is not included with the burner kit. The conversion kit is an option which must be ordered separately.

## If the unit is to be used with propane gas, convert the fireplace from natural gas as follows using the components supplied with this burner kit.

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

#### 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.

#### CAUTION

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

- 1. Ensure the burner, pilot and gas supply are turned off, and the appliance has cooled.
- 2. Remove the two screws securing the manifold assembly to the burner (Figure 20).
- 3. Remove the manifold assembly from the burner (Figure 21).

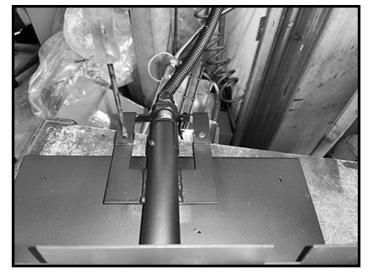


Figure 20: Unscrewing manifold from the burner.

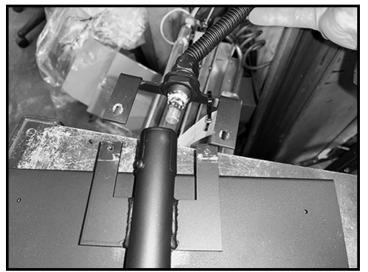


Figure 21: Orifice exposed.

- 4. With a  $\frac{1}{2}$ " wrench remove the natural gas orifice (Figure 22).
- 5. Install the propane orifice (marked "LE") (Figure 23).
- 6. Fully open the primary air shutter.





Figure 22: Removing orifice.

Figure 23: Orifice.

- 7. Reinstall the manifold assembly.
- 8. With a 7/16" wrench loosen the pilot head on the pilot assembly by a half-turn (Figure 24)
- 9. Slide the pilot adjustment band over and ensure that the hole in the orifice band is showing. Figure 25 shows the pilot band in natural gas position. Figure 26 shows the pilot band in propane position.



Figure 24: Loosening the pilot head.

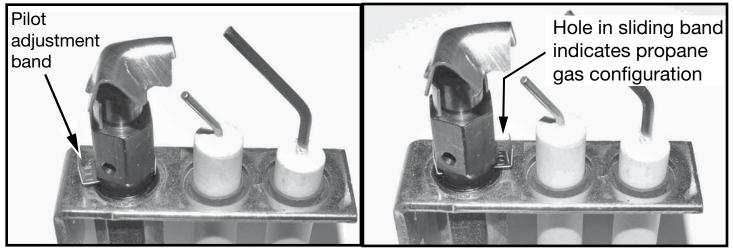


Figure 25: Pilot band in natural gas position.

Figure 26: Pilot band in propane gas position.

- 10. Open the air shutter by following the steps in the "Burner Flame Adjustment" on page 13.
- 11. Complete the gas valve conversion from natural gas to propane gas according to the instructions included in the SIT propane gas conversion kit.
- 12. Fill in the conversion label Figure 34 . Peel off the protective backing and apply the conversion label directly over the gas specifications on the rating label. Rating label can be found on a metal plate stored on the left hand side of the fireplace, behind the decorative trim.

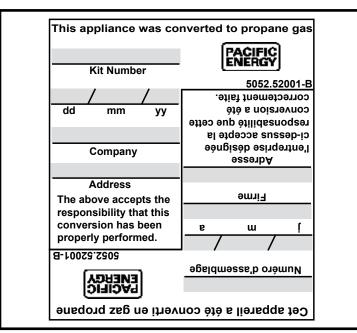


Figure 27: Propane conversion label.

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

### Burner Flame Adjustment

The air shutter on the burner tube controls the primary combustion air to the gas burner and is preset at the factory for natural gas fuel. Some adjustment may be necessary to obtain desired flame and to eliminate carbon deposits. Evaluate flame appearance after the fireplace has reached operating temperature.

Open primary air shutter if the logs, glass, and firebox have carbon accumulation and / or the flames are long, dark and stringy. The shutter may also be opened to enhance the Ember Material glow and lessen the flame height. See Figure 28 for an example of a proper looking flame. The flame should be just orange and "lazy". It should NEVER be set to create sooting on internal parts and glass.

For Propane, start with the air shutter fully open and adjust to decrease air if needed.

Caution: Burner area may be hot! Turn off the fireplace and allow the unit to cool before proceeding.



Figure 28: Desirable flame appearance

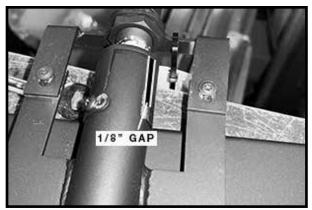


Figure 30: Air shutter in natural gas position. To Adjust:

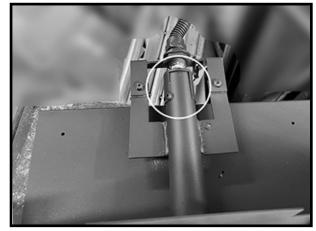


Figure 29: Air shutter location.

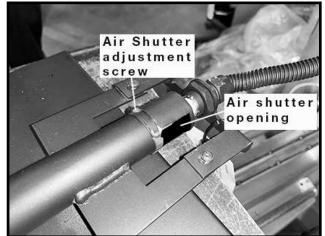
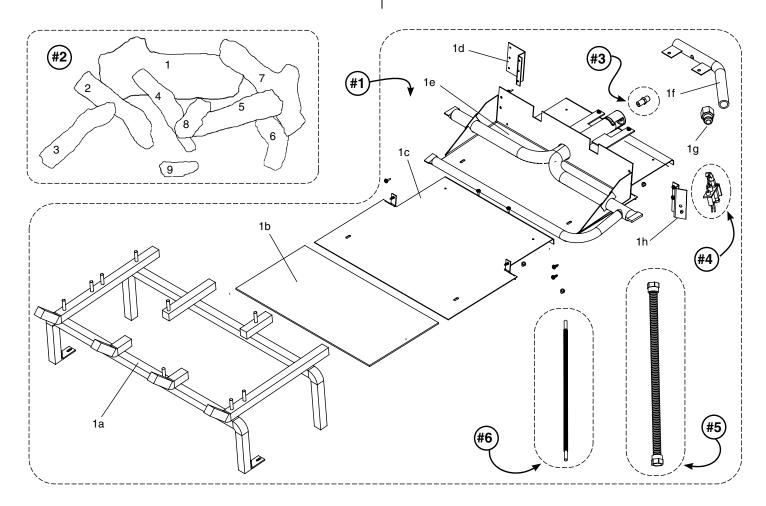


Figure 31: Shutter set for propane.

- 1. Open and remove window frame and set aside. See "Window Frame Removal" section found in the Installation and Operating Instructions manual.
- 2. Remove the log set and set aside.
- 3. Locate and loosen the air shutter adjustment screw (Figure 31).
- 4. Rotate the shutter to increase or decrease the air intake depending on type of gas being used.
- 5. Tighten adjustment screw and reassemble in log set.

# (WHEN ORDERING, INCLUDE PART NUMBER WITH DESCRIPTION)

ITEM	DESCRIPTION	PART NO.	ITEM	DESCRIPTION	PART NO.
#1 BURNER ASSEMBLY			#5 MAIN SUPPLY TUBE (FLEX)5019.223-00		
#2 9 PC	S LOG SET	80001228	#6 PILC	OT TUBE (FLEX)	5019.225-00
#3 ORI	FICE, NATURAL GAS (#20)	5022.78-00	#7 PRC	PANE CONVERSION KIT	22180008 <sup>*</sup>
	OT ASSEMBLY				



#### KIT CONTENTS:

#1 BURNER ASSEMBLY	#2
1aGRATE	
1bBURNER INSULATION	
1cBURNER TRAY SUPPORT SHIELD	#3
1dPILOT SHIELD	
1eTC42.NG01 BURNER WELD	#4
1fMANIFOLD	
1g1/2 PIPE TO 1/2 TUBE CONNECTION	#5
1hPILOT BRACKET	
	#6

. 9 PCS LOG SET EMBER MATERIAL (Not shown) ...... ORIFICE, NATURAL GAS (#20) ...... PILOT ASSEMBLY, CONVERTIBLE ...... MAIN SUPPLY TUBE (FLEX) ...... PILOT TUBE (FLEX)

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