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.

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

TC30 BLACK DIAMOND BURNER KIT INSTRUCTIONS

PART#
TC30.NG03D
For TC30 Series D Fireplaces

Visit www.townandcountryfireplaces.net for the most recent version of this manual
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Contents of Package

Figure 1: Black Diamond burner kit parts.

NOTE: A PORCELAIN PANEL SET MUST BE USED WITH THE BLACK DIAMOND BURNER KIT

A MANIFOLD ASSEMBLY
  (including supply tube)
B BURNER TUBE
C BURNER SHIELD
D MEDIA SPACER, Center
E MEDIA SPACER, Front
F MEDIA SPACER, Rear
G HARDWARE PACKAGE
H 5 lbs. GLASS MEDIA
I BURNER TRAY
J PILOT SHIELD
  (including pilot and pilot supply tube)
NOTE: If unit is to be converted to Propane, See “Propane Conversion” on page 13 before proceeding.

1. Plug the 4 vacant holes in the bottom of the firebox with 1/2” screws, as they are not required to attach this style of burner (Figure 2).

2. Remove access cover to the valve control center from the right side of the firebox (Figure 3).

3. Remove three screws from the rear of the firebox. Attach the manifold assembly to the rear of the firebox with the three screws previously removed (Figure 4).
4. Attach the manifold supply tube and the pilot supply tube to the bulk head fittings and tighten (Figure 5). Ensure that the connections are gas tight.

5. Feed the ignition and sensor wires through the bulkhead plate (Figure 6) to the interface module.
6. Attach the ignition and sensor wires to the interface module as shown in Figure 7.

7. Reinstall the valve control center access panel. See Figure 3 on page 4.

A panel set must now be installed before the Black Diamond Burner tray can be installed.
Porcelain Panel Installation

A porcelain panel set must be used in conjunction with the installation of the Black Diamond glass burner kit. Do not use the fireplace without panels.

Contents of Porcelain Panel Set

1. LEFT PANEL ASSY.
2. UPPER REAR PANEL ASSY.
3. LOWER REAR PANEL
4. RIGHT PANEL ASSY.
5. BASE PANEL ASSY.*

*Note: #5. Base panel is NOT used with the Black Diamond or Tranquility Burner Kits. It is used only with Log Set Burner Kits.

Preparing the Firebox for Porcelain panel installation.

- Unpack and inspect the porcelain panels before removing the side panel and pre-existing panels (if installed).
- Caution: The Firebox Panels are very fragile, and should be handled with care.
- The panels need to be installed before burner and burner tray are installed.

The Side Panel Retainer (and pre-existing panels) must be removed before the new porcelain panels can be installed.

1. Remove the Side Panel Retainer located on the underside of the firebox heat shield. The retainer is located between the lip of the firebox and the heat shield (Figure 9) and is held in place by two screws which are screwed into the heat shield (Figure 10).

2. Once the side panel retainer has been removed, any pre-existing panels are easily removed. The panels are fragile. Take care to support them while being removed.

Figure 9: Side panel retainer screw location.

Figure 10: Side panel retainer.
Installing the Porcelain Panels

1. Begin by placing the lower rear panel against the rear wall of the firebox and support with one hand while preparing to install the right hand side panel (Figure 11).

2. Install the right hand side panel (Figure 12) and support while preparing to install the upper rear panel.

3. Position upper rear panel (Figure 13) on top of lower rear panel and slip in behind the right panel. Once upper rear panel is in place, push the right side panel to its final position.

4. Install the left hand side panel (Figure 14) and position it as the right side panel was positioned. The two side panels should stay in place but may need to be supported until the side panel retainer is installed.
5. Re-install the side panel retainer that was removed at the beginning of the procedure (Figure 15) & (Figure 16). The side panels are now fully supported.

**NOTE:** The base panel is NOT used with the Black Diamond Burner Kit or the Tranquility Burner Kit. It is used with Log Kits.
1. Install burner shield by tipping the shield into the firebox. Route pilot up through the opening in the burner shield (Figure 17).

2. Lay the pilot to the side of the burner shield (Figure 18). It will be attached to the burner tray once the burner tray is installed.

3. Attach the burner tray to the burner shield using two screws at the back of the tray (Figure 19).

4. Attach pilot shield to burner tray with two screws (Figure 20).
5. Front and rear media spacers are now installed (Figure 21 & Figure 22).

NOTE: Set the air shutter to fully open for Propane or fully closed for Natural gas.

6. Install burner by tilting burner inlet through tray (Figure 23). Ensure that the orifice has entered the inlet tube.

7. Install the center media spacer and secure to the tray with two 1 1/2” screws. (Figure 24 & Figure 25) Three holes must line up to set each screw.
8. Apply glass media. Apply just enough to cover the burner assembly.

**NOTE:** Too much glass media over the burner will cause sooting with the use of propane gas.
Propane 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.

CAUTION

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

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

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 shall be shut off before proceeding with the conversion.

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

---

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

1. Ensure the burner, pilot and gas supply are turned off, and the appliance has cooled.

2. Using a 1/2” wrench, undo the natural gas burner orifice, (marked #32). (Figure 29)

3. Apply a small amount of pipe joint compound to the threads of the 1.9mm replacement propane burner orifice to ensure a good seal, before screwing it into the fitting.

4. Open primary air shutter on burner fully.

5. With a 7/16” wrench loosen the pilot head on the pilot assembly (Figure 30).
6. Slide the pilot adjustment band over and ensure that the hole in the orifice band is showing. Figure 31 indicates NG position. Figure 32 indicates LP position.

7. Fill in the date and the name of the person who performed the conversion in the white area on 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.

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

8. Remove access panel, 10 screws, and set aside (Figure 33).

9. Attach the access panel to the side of the firebox with the previously removed screws.

Note: Gasket must be installed with access panel.
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. The plug is located between the right side lintel and firebox side (Figure 36).

2. Thread the extension test fitting into the open test port (Figure 37).

3. Attach a pressure gauge onto the fitting.

4. When testing is complete remove the extension test fitting and replace the plug. Thread sealant will be required to ensure a gas tight connection.

![Figure 35: Gas test ports.](image)

Correct gas pressure requirement:

<table>
<thead>
<tr>
<th></th>
<th>Propane</th>
<th>Natural Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. Pressure</td>
<td>5.0&quot; WC</td>
<td>12.5&quot; WC</td>
</tr>
<tr>
<td>(For purpose of input adjustment)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Pressure</td>
<td>13.9&quot; WC</td>
<td>13.9&quot; WC</td>
</tr>
<tr>
<td>Manifold Pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>3.5&quot; WC</td>
<td>10&quot; WC</td>
</tr>
<tr>
<td>Minimum</td>
<td>1.6&quot; WC</td>
<td>6.4&quot; WC</td>
</tr>
</tbody>
</table>

![Figure 36: Removing manifold pressure plug.](image)

![Figure 37: Adjusting manifold pressure.](image)
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. See Figure 38 for proper flame pattern.

Open primary air shutter if the glass media, 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.

The flame should be just orange and “lazy”.

It should NEVER be set to create sooting on internal parts and window glass.

Figure 38: Desirable flame pattern.
Replacement Parts

(WHEN ORDERING, INCLUDE PART NUMBER WITH DESCRIPTION)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>PART NO.</th>
</tr>
</thead>
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<tr>
<td>#1</td>
<td>TC30 BLACK DIAMOND BURNER KIT</td>
<td>TC30.NGO3D</td>
</tr>
<tr>
<td>#2</td>
<td>BURNER TUBE</td>
<td>TC36. 5011835WELD</td>
</tr>
<tr>
<td>#3</td>
<td>PILOT ASSEMBLY, CONVERTIBLE</td>
<td>TCRP.5005025</td>
</tr>
<tr>
<td>#4</td>
<td>PILOT SUPPLY TUBE</td>
<td>5019.225</td>
</tr>
<tr>
<td>#5</td>
<td>ORIFICE, NG (#32)</td>
<td>5021.332.A</td>
</tr>
<tr>
<td>#6</td>
<td>MANIFOLD SUPPLY TUBE</td>
<td>5019.223</td>
</tr>
<tr>
<td>#7</td>
<td>GLASS MEDIA</td>
<td>5012.01</td>
</tr>
<tr>
<td>#8</td>
<td>PROPANE CONVERSION KIT (NOT SHOWN)</td>
<td>TC30.DLPKIT</td>
</tr>
</tbody>
</table>

KIT CONTENTS:

1. TC30 BLACK DIAMOND BURNER KIT
   1a. MEDIA SPACER, REAR
   1b. MEDIA SPACER, CENTER
   1c. MEDIA SPACER, FRONT
   1d. BURNER TRAY
   1e. BURNER SHIELD
   1f. PILOT SHIELD
   1g. MANIFOLD ASSEMBLY
   1h. MANIFOLD BRACKET
   1i. SHIELD LEG
   1j. BURNER TUBE
   1k. PILOT ASSEMBLY, CONVERTIBLE
   1l. PILOT SUPPLY TUBE
   1m. ORIFICE
   1n. GLASS MEDIA
   1o. PROPANE CONVERSION KIT (Not shown)

2. BURNER TUBE
3. PILOT ASSEMBLY, CONVERTIBLE
4. PILOT SUPPLY TUBE
5. ORIFICE, NG (#32)
6. MANIFOLD SUPPLY TUBE
7. GLASS MEDIA