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GAS CONVERSION KIT
MONTEBELLO™ SEE-THROUGH / SIT PROFLAME

INSTALLATION INSTRUCTIONS FOR GAS CONVERSION KITS FOR USE WITH MONTEBELLO™ SEE-THROUGH DIRECT VENT GAS FIREPLACES WITH SIT PROFLAME SYSTEMS

[FIREPLACE MODELS DRT63STTEN/EP/YN AND MONTEBELLOSTTEN/EP/YN]



⚠ WARNING

HOT GLASS WILL CAUSE BURNS. DO NOT TOUCH GLASS UNTIL COOLED. NEVER ALLOW CHILDREN TO TOUCH GLASS.

- **Fireplaces surfaces get EXTREMELY HOT!**
- **Install only when fireplace is OFF and COLD.**
- **The glass on the front of the fireplace reaches EXTREMELY HIGH temperatures and can cause severe burns if touched. Even after the gas is turned off, fireplace surfaces remain extremely hot.**
- **Keep children away from an operating fireplace. Closely supervise children in any room where a fireplace is operating to prevent contact with glass.**

⚠ CAUTION

RISK OF PERSONAL INJURY OR PROPERTY DAMAGE.

- **Never operate fireplace with glass door assemblies removed.**
- **Securely tighten door latch screws when reinstalling glass door assemblies to prevent doors from falling out.**
- **Handle glass door assemblies with extreme care. Replace damaged glass door assemblies with approved replacement assemblies only.**
  The door assemblies contain ceramic glass. Handle with care to prevent damage. If the door frame or glass becomes damaged, replace the entire glass door assembly with a manufacturer-approved replacement assembly only. Do not attempt to substitute any materials used on door assemblies or replace cracked or broken glass with any other materials.

KIT CONTENTS

(2) ea. Brass Burner Orifices
(1) ea. Pilot Orifice
(1) ea. SIT Regulator Conversion Kit
(1) ea. Gas Conversion Information Label

REQUIRED TOOLS

- 5/32" Allen Wrench
- Torx Bit (T20 with 1/4" shank and center hole) ***or*** Flat Blade Screwdriver
- 1/2" Open-End Wrench

Gas Conversion Kits		
Description	**Model No.**	**Cat. No.**
Nat. Gas to Propane	**GCK-NP-LSM40ST**	**H7951**
Propane to Nat. Gas	**GCK-PN-LSM40ST**	**H7952**

GENERAL INFORMATION

Gas conversion kits adapt the appliance from the use of one type of gas to another. This kit contains all components required to complete the conversion, as well as a self-adhesive label with gas conversion information to apply to the appliance rating plate.

Note:

- Before installing gas components, apply pipe joint compound or Teflon tape to all pipe fittings. Always use propane-resistant joint compounds. Never use pipe joint compounds on flare fittings.
- The burner orifices provided in this kit are only for use at elevations of 0–4,500 ft (0–1372 m) in the U.S.A. and Canada. At higher elevations, the BTU input must be derated by 4% for every 1,000 ft (305 m) to maintain the proper ratio of gas to air.

  If the installer must convert the unit to adjust for varying altitudes, a deration information sticker must be completed by the installer and attached to the appliance at time of conversion. Contact your local gas supplier for deration requirements for your area.

In Canada:

- The conversion shall be carried out in accordance with the requirements of the provincial authorities having jurisdiction and in accordance with the requirements of the CAN/CSA-B149.1 Installation code.

Au Canada:

- La conversion devra être effectuée conformément aux recommandations des autorités provinciales ayant juridiction et conformément aux exigences du code d'installation CAN/CSA-B149.1.

⚠ WARNING

RISK OF PERSONAL INJURY, DEATH, OR PROPERTY DAMAGE.

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 instruction is not followed exactly, a fire or 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.The qualified service agency performing this installation assumes responsibility for this conversion.

⚠ AVERTISSEMENT

RISQUE DE BLESSURE, MORT OU DOMMAGE À LA PROPRIÉTÉ

Cette trousse de conversion doit être installée par un technicien agréé, selon les instructions du fabricant et selon toutes les exigences et tous les codes pertinents de l'autorité compétente. Assurez-vous de bien suivre les instructions dans cette notice pour réduire au minimum le risque d'incendie, d'explosion ou la production de monoxyde de carbone pouvant causer des dommages matériels, des blessures ou la mort. Le tecnicien agréé est responsable de l'installation de cette trousse. L'installation n'est pas adéquate ni complète tant que le bon fonctionnement de l'appareil converti n'a pas été vérifié selon les instructions du fabricant fournies avec la trousse. Le fournisseur de service qualifié ayant réalisé l'installation assume les responsabilités liées à la conversion.

NOTICE

- Read all steps before starting installation.
- These instructions must be left with the appliance.
- All warnings, precautions, and instructions in the *Installation Instructions* and *Care and Operation Manual (IICO)* provided with the appliance also apply to these instructions.
- If you encounter any problems, need clarification of these instructions, or are not qualified to properly install this kit, contact your local distributor or dealer.

⚠ CAUTION / ATTENTION

Before proceeding with this conversion, the gas supply must be shut off prior to disconnecting the electrical power.

Avant de procéder à cette conversion, l'approvisionnement en gaz doit être coupée avant de débrancher l'alimentation électrique.

⚠ WARNING / AVERTISSEMENT



BURN HAZARD. Install only when fireplace is OFF and COLD.

RISQUE DE BRÛLURE. Installer seulement lorsque le foyer est ÉTEINT et FROID.

INSTALLATION INSTRUCTIONS

Step 1. Shut OFF the gas supply to the appliance <u>FIRST</u>; then disconnect the power supply at the circuit breaker.

Ensure appliance is COLD before starting installation.

Step 2. Remove the front glass door/frame (**on the valve access side**).

Step 3. Carefully remove the logs and grate assembly. See the fireplace *Installation Instructions* and *Care and Operation Manual* for detailed log removal and placement information.

Note: Logs are FRAGILE! Handle with care to prevent breakage.

Step 4. See ***Figure 1.*** Follow these steps to remove the burner assembly with attached air shutter assembly:

a. Remove the 5/16" screws securing the burner to the firebox.

b. Release the air shutter adjustment linkage by slightly raising the air shutter extension to clear the adjustment rod.

c. Slide the burner back and up, to allow the air shutter to clear the pilot bracket.

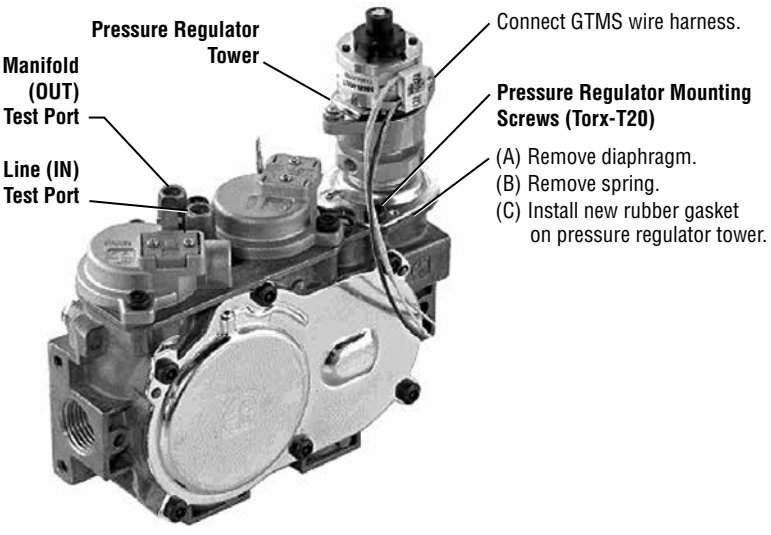


Figure 2: SIT Proflame Valve

Step 5. Refer to ***Figure 2*** and the instructions provided with the SIT Regulator Conversion Kit. Using a Torx T20 (with 1/4" shank and center hole) or slotted screwdriver**,** remove and discard the two pressure regulator mounting screws, the pressure regulator tower, the diaphragm assembly (if applicable) ("A" in ***Figure 2***) and the spring ("B" in ***Figure 2***). **Discard all removed components**.

Ensure the rubber gasket installed on the back of the replacement pressure regulator ("C" in ***Figure 2***) is properly positioned.

Step 6. Install the new stepper motor pressure regulator assembly using the supplied screws as shown in ***Figure 2***. Tighten screws securely (reference torque = 25 lb-in).

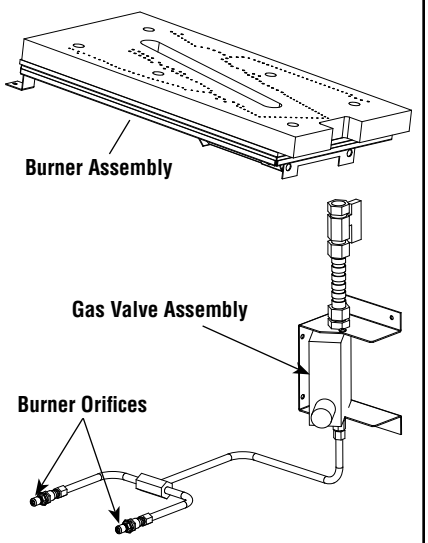


Figure 1

Step 7. Install the enclosed identification label to the valve body where it can be easily seen.

Step 8. Make stepper motor and valve electrical connections.

Step 9. Follow these steps to replace the pilot orifice *(see **Figure 3**)*:

a. Remove the pilot hood assembly to access the hexed pilot orifice.

b. Using a 5/32" allen wrench, remove and replace the orifice with the one provided with the kit.

NOTE: Use extreme care to avoid damaging the igniter assembly.

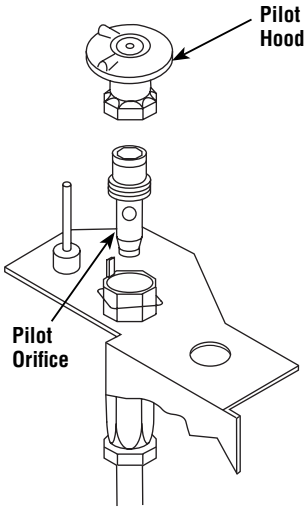


Figure 3

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

Step 10. Refer to ***Figures 1 and 4***.

Remove the two (2) burner orifices from the manifold and replace them with the provided orifices.

Verify that the orifices are the correct size. See ***Table 1*** for orifice sizes and ***Figure 4*** for an illustration of the orifices.

Use pipe joint compound or Teflon tape when installing the orifices.

Burner Orifice Sizes Elevation 0–4500 ft (0–1372 m)		
Fireplace Model	**NATURAL GAS** drill size (inches)	**PROPANE** drill size (inches)
TEN/P Models	#32 (0.116") ① Cat. No. H8002	#52 (0.0635") ① Cat. No. H8003
TYN Models (Power Vent)	#32 (0.116") ① Cat. No. H8002	#52 (0.0635") ② Cat. No. H8003
Table 1	① Standard size installed at factory. ② Available as field conversion only.	

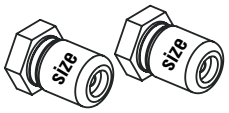


Figure 4

Step 11. Follow these steps to replace the burner and reassemble the remaining components:

a) Set the burner assembly into its position, taking care to ensure the air shutter clears the pilot bracket.

b) Slide the air shutter venturis over the orifices (see ***Figures 1 and 5***).

c) Replace the air shutter adjustment linkage by slightly lower the air shutter extension, taking care to ensure it clears the adjustment rod.

Make sure the adjustment lever engages the square hole on the air shutter.

d. Replace the screws securing the burner to the firebox.

Use pipe joint compound or Teflon tape on all pipe fittings before installing (ensure propane resistant compounds are used in propane applications, do not use pipe joint compounds on flare fittings).

Step 12. Attach the provided Conversion Information Label to the rating plate on the appliance.

Step 13. Carefully replace the grate assembly and logs. See the fireplace *Installation Instructions* and *Care and Operation Manual* for detailed log placement information.

Note: Logs are FRAGILE! Handle with care to prevent breakage.

Step 14. Apply gas to the system, and relight the appliance. With the main burner "ON," test the new pressure regulator assembly and all gas line joints for leaks using a gas leak test solution.

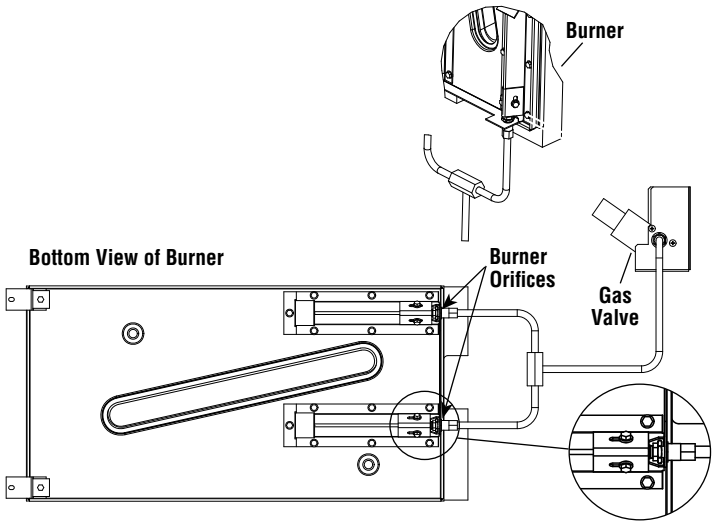


Figure 5

Step 15. Relight the main burner and verify proper burner ignition and operation.

Inspect the pilot system for proper flame. The pilot flame should engulf the flame sensor, as shown in ***Figure 6***.

- For **complete lighting instructions**, see the lighting label in the appliance control compartment or in the *Installation Instructions* and *Care and Operation Manual* provided with the appliance.

Step 16. Using a manometer, test the inlet and manifold gas pressures.

- For **test port locations**, see ***Figure 2***.
- For **gas supply pressure requirements**, see ***Tables 2 and 3***.

NOTICE: **ALWAYS TEST PRESSURES WITH THE VALVE REGULATOR CONTROL AT THE HIGHEST SETTING.**

Continue with ***Step 17*** (on the ***next page***) for instructions on **burner/shutter adjustment** and **proper flame appearance**.

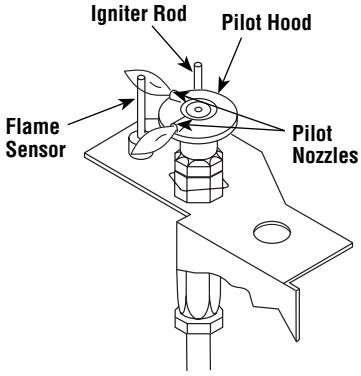


Figure 6: Pilot Flame Appearance

Gas Supply Pressure Requirements

Tables 2 and 3 list the appliances inlet and manifold gas supply pressure requirements.

Inlet Gas Supply Pressure (All Models)		
Fuel #	**Minimum**	**Maximum**
TEN, TYN MODELS	5.0" WC (1.24 kPa)	10.5" WC (2.61 kPa)
TEP MODELS	11.0" WC (2.74 kPa)	13.0" WC (3.23 kPa)
Table 2		

Manifold Gas Supply Pressure (All Models)		
Fuel #	**Low**	**High**
TEN, TYN MODELS	(Lo) 1.6" WC (0.4 kPa)	(Hi) 3.5" WC (0.87 kPa)
TEP MODELS	(Lo) 6.3" WC (1.57 kPa)	(Hi) 10.0" WC (2.49 kPa)
Table 3		

BTU Inputs

BTU inputs for these appliances are listed in ***Table 1***.

Inputs	
Model No.	**Input (BTU/Hr)**
NATURAL GAS	
TEN, TYN Models	40,000 to 60,000
PROPANE	
TEP Models	43,500 to 56,000
Table 4	

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

Step 17. Read "**Flame Appearance and Sooting**" and "**Air Shutter Adjustment Guidelines**" (***at right***) before proceeding.

> For complete details, see the *Installation Instructions* and *Care and Operation Manual (IICO)* provided with the fireplace.

*To adjust the air shutter for proper flame appearance (as illustrated in **Figure 7**), follow these steps:*

a) Before adjusting the air shutter, allow the burner to operate for at least 30 minutes while continuously observing the flame.

⚠ WARNING

HOT GLASS WILL CAUSE BURNS.
DO NOT TOUCH GLASS UNTIL COOLED.

- **Fireplace surfaces get EXTREMELY HOT!**
- **The glass on the front of the fireplace reaches EXTREMELY HIGH temperatures and can cause severe burns if touched. Even after the gas is turned off, fireplace surfaces remain extremely hot.**

⚠ CAUTION

RISK OF PERSONAL INJURY OR PROPERTY DAMAGE.

- **Air shutter adjustment should only be performed by a qualified professional service technician.**
- **Soot will be produced if the air shutter is closed too much. Any damage due to carboning resulting from improperly setting the air shutter is not covered under the warranty.**

b) Adjust the air shutter using the lever on the lower right side of the firebox (see ***Figure 7***).

- **For more OPEN air shutter, slide lever to the RIGHT.**
- **For more CLOSED air shutter, slide lever to the LEFT.**

A minimum shutter setting is designed into the venturi by four 1/16"-inch tabs.



[DETAIL A]
Burner Flame Appearance
Valve Access Side



[DETAIL B]
Burner Flame Appearance
Opposite Valve Access Side

Figure 7

- If the flame appears weak or sooty (as described ***at right***), adjust the air shutter until proper flame appearance is achieved.
- If flame stays lowered blue, ***incrementally*** adjust the air shutter to a more CLOSED position until proper flame appearance is achieved.

Flame Appearance and Sooting

Proper flame appearance is a flame that is blue at the base and becomes yellowish-orange in the body of the flame. When the appliance is first lit, the entire flame may be blue and will gradually turn yellowish-orange during the first 30 minutes of operation. After 30 minutes of operation, if the flame is blue, or if the flame is orange with evidence of sooting (black tip), the air shutter opening may need to be adjusted.

If the air shutter opening is closed too far, sooting may develop. Sooting is indicated by black puffs developing at the tips of very long orange flames. Sooting results in black deposits forming on the logs, appliance inside surfaces and on exterior surfaces adjacent to the vent termination.

Sooting is caused by incomplete combustion in the flames and lack of combustion air entering the air shutter opening. To achieve a warm yellowish-orange flame with an orange body that does not soot, the shutter opening must be adjusted between these two extremes.

Air Shutter Adjustment Guidelines

- If there is smoke or soot present, first check the log set positioning to ensure that the flames are not impinging on any of the logs. If the log set is properly positioned and a sooting condition still exists, then the air shutter opening should be increased.
- The more offsets in the vent system, the larger the air shutter opening will need to be.
- An appliance operated with the air shutter opened too far, may have flames that appear blue and transparent. These weak, blue and transparent flames are termed anemic.
- Propane models may exhibit flames which candle or appear stringy. If this is present and persists, adjust the air shutter to a more OPEN position, then operate the appliance for a few more minutes to ensure that the flame normalizes and the flames do not appear sooty.

The following chart is provided to aid you in achieving the correct air shutter adjustment for your installation:

Air Shutter Adjustment Guidelines		
Amount of Primary Air	**Flame Color**	**Air Shutter Adjustment**
If air shutter is closed too far →	**Flame will be orange →**	**Air shutter gap should be increased**
If air shutter is open too far →	**Flame will be blue →**	**Air shutter gap should be decreased**

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

Innovative Hearth Products reserves the right to make changes at any time, without notice, in design, materials, specifications, and prices, and also to discontinue colors, styles, and products.
Consult your local distributor for fireplace code information.

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