

GAS CONVERSION KIT FOR FIREPLACES WITH ELECTRONIC IGNITION, PROPANE TO NATURAL GAS & NATURAL GAS TO PROPANE (ECOFLOW VALVE)

[FOR USE IN FIREPLACE MODELS LISTED IN TABLE 1 ON PAGE 2]

KIT COMPONENTS

Main Burner Orifice, Low-Rate Set Screw, Conversion Sticker and Conversion Sticker Form (to be filled out and affixed by installer)

REQUIRED TOOLS AND SUPPLIES

Safety Gloves, Adjustable Wrench, Channel Locks, Small Flat Blade Screwdriver, Large flat blade screwdriver, 4mm Allen Wrench (*for some pilot assemblies - see Figure 7*), 5/16" Nutdriver, Pipe Joint Compound or Teflon Tape

TURN OFF THE GAS SUPPLY TO THE APPLIANCE. DISCONNECT ELECTRICAL POWER SUPPLY.

READ ALL THE STEPS BEFORE STARTING THE CONVERSION. INSTALLER NOTICE: THESE INSTRUCTIONS MUST BE LEFT WITH THE APPLIANCE.

When installing gas components use pipe joint compound or Teflon tape on all pipe fittings before installing (Do not use pipe joint compounds on flare fittings).

NOTE: THE FIREPLACE MUST BE OFF AND COLD BEFORE PERFORMING THE GAS CONVERSION.

ALL WARNINGS, PRECAUTIONS AND INSTRUCTIONS IN THE INSTALLATION AND OPERATION MANUAL PROVIDED WITH THE APPLIANCE APPLY TO THESE INSTRUCTIONS.

GENERAL INFORMATION

Gas conversion kits are available to adapt the fireplace from the use of one type of gas to the use of another. These kits contain all the necessary components needed to complete the task including labeling that must be affixed to ensure safe operation.

IMPORTANT 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.

IMPORTANT LE CANADA SEULEMENT

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

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 performing this installation is responsible for the proper installation of this kit and assumes responsibility for this conversion. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturers instructions supplied with the kit.

AVERTISSEMENT

Cet équipement de conversion sera installé par une agence qualifiée de service conformément aux instructions du fabricant et toutes exigences et codes applicables de l'autorisés avoir la juridiction. Si l'information dans cette instruction n'est pas suivie exactement, un feu, explosion ou production de protoxyde de carbone peut résulter le dommages causer de propriété, perte ou blessure personnelle de vie. L'agence qualifiée de service est esponsable de l'installation propre de cet équipement. L'installation n'est pas propre et complète jusqu'à l'opération de l'appareil converti est chèque suivant les critères établis dans les instructions de propriétaire provisionnées avec l'équipement.

GAS CONVERSION KITS		
Propane Gas (LP) to Natural Gas (NG)		
Cat. No.	Model	Ecoflow Electronic Model Fireplace
F2897	GCK-SKT425531PN	Altair40-B, DRT4040-B, Altair40-C
F2901	GCK-SKT415531PN	Altair45-B, DRT4045-B, Altair45-C
F2905	GCK-SKT385131PN	AltairDLX40-B, DRT4240-B, AltairDLX40-C
F2907	GCK-SKT325031PN	AltairDLX45-B, DRT4245-B, AltairDLX45-C
Natural Gas (NG) to Propane Gas (LP)		
Cat. No.	Model	Ecoflow Electronic Model Fireplaces
F2896	GCK-SKT557051NP	Altair40-B, DRT4040-B, Altair40-C
F2900	GCK-SKT537051NP	Altair45-B, DRT4045-B, Altair45-C
F2904	GCK-SKT556151NP	AltairDLX40-B, DRT4240-B, AltairDLX40-C
F2906	GCK-SKT526151NP	AltairDLX45-B, DRT4245-B, AltairDLX45-C

Table 1

! IMPORTANT

The burner orifice provided in this kit are only for use at elevations of 0 to 2,000 feet (610 M) in the USA and 0 to 4,500 feet (0-1372 M) in Canada. At higher elevations the BTU input must be de-rated by 4% for every 1,000 feet (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 filled out by the installer and adhered to the appliance at the time of the conversion. Contact your local gas supplier for deration requirements for your area.

Installing Gas Conversion Kits

! CAUTION

The gas supply shall be shut OFF prior to disconnecting the electrical power, before proceeding with the conversion.

! ATTENTION

Avant d'effectuer la conversion, coupez d'abord l'alimentation en gaz, ensuite, coupez l'alimentation électrique.

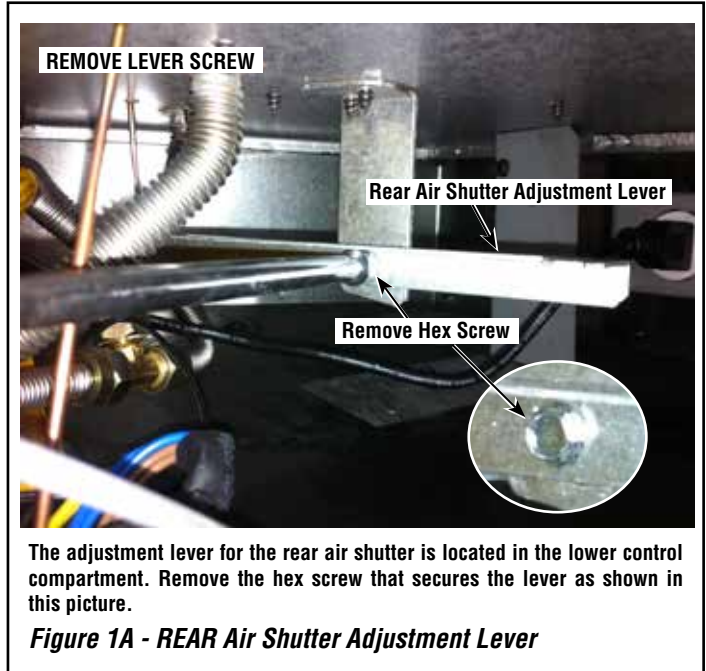
1. **TURN OFF THE GAS SUPPLY TO THE FIREPLACE.** Disconnect power supply at the circuit breaker. Ensure fireplace is cold.
2. Remove the barrier, facade, and glass door per instruction in the Installation and Operation Manual.
3. Open the lower control compartment door.
4. Remove the logs per instruction in the Installation and Operation Manual. If necessary, remove the log grate. **Exercise care so as not to break the logs.**
5. Perform the following conversion instructions:

GAS CONVERSION INSTRUCTIONS

IMPORTANT NOTE: When installing gas components use pipe joint compound or Teflon tape on all pipe fittings before installing (ensure propane resistant compounds are used, do not use pipe joint compounds on flare fittings).

Step 1. Remove the front and rear burner assemblies, per instructions A through C below.

A. Remove the screw from the Air Shutter Lever, that controls the rear burner air shutter, per instructions in **Figure 1A**.



B. Disconnect the Air Shutter Arm from the Air Shutter Lever, per instructions in **Figure 1B**. Remove Air Shutter Lever.



C. Remove the screws that secure the burner assemblies. Lift out burner assemblies. Note: Some models require the pilot bracket to be removed from the rear burner prior to removal (**Figure 1 C**).

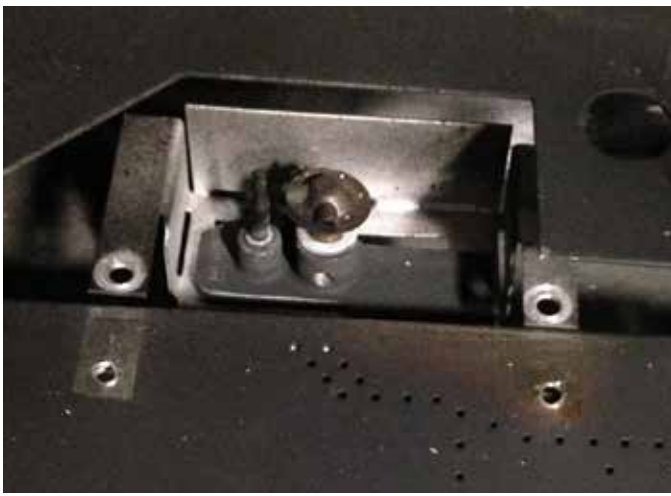


Figure 1C

Step 2. Replace front and rear Burner Orifices (see **Figure 2**). replace the front and rear burner orifices with the orifices supplied in this kit.

IMPORTANT NOTE: The front and rear burner orifices are different sizes. Refer to **Table 6 on Page 7** for verification of proper front and rear burner orifice sizes, supplied in kit.

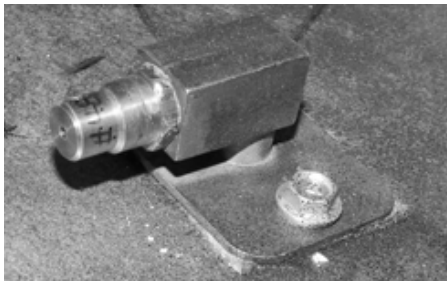


Figure 2 - Burner Orifice

Step 3. Remove the low-rate set screw from the valve and replace with the orifice supplied in kit. See **Figure 3**.

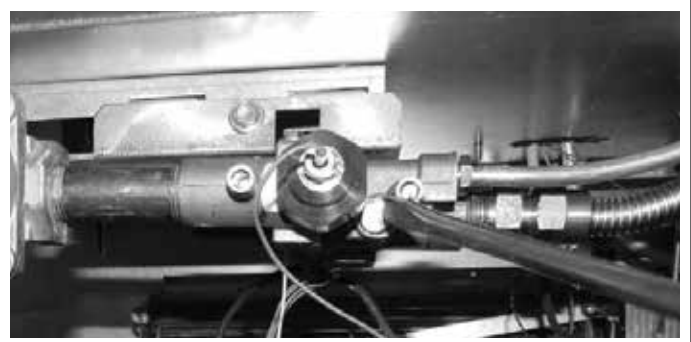


Figure 3

Step 4. Remove the regulator set plug. See **Figure 4A or 4B**.



Figure 4A



Figure 4B

Step 5A. Change the Stem Position on the Plug. See *Figures 5A and 5B*.

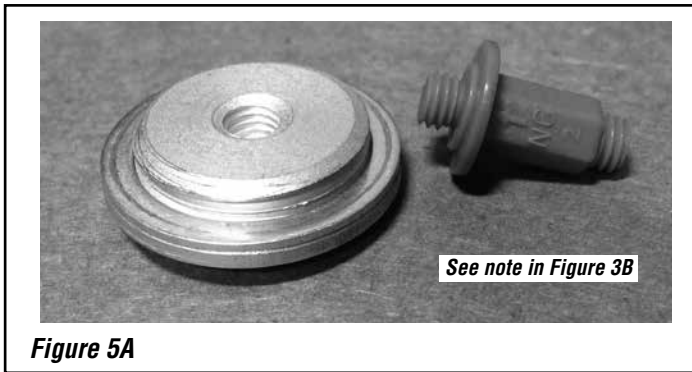


Figure 5A

Step 5B. *Figure 5B* shows the stem plug positioning for Natural Gas.

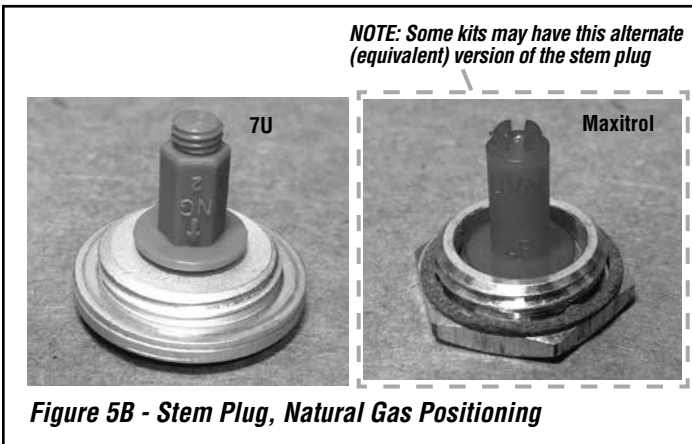


Figure 5B - Stem Plug, Natural Gas Positioning

Step 5C. *Figure 5C* shows the stem plug positioning for Propane Gas (LP).

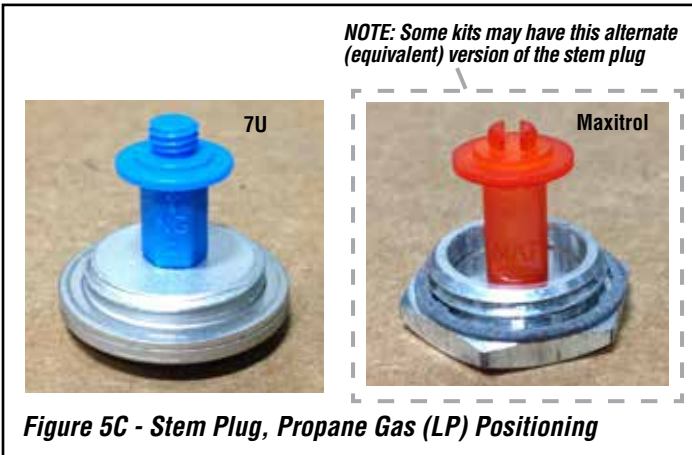


Figure 5C - Stem Plug, Propane Gas (LP) Positioning

Step 6. Pull the pilot hood straight up to remove and expose the pilot orifice.

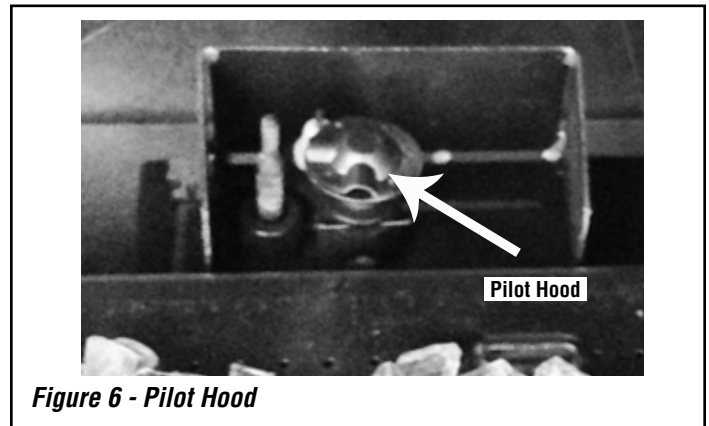


Figure 6 - Pilot Hood

Step 7. To adjust the pilot to Natural gas: turn the pilot orifice counter-clockwise. To adjust the pilot to Propane gas: turn the pilot orifice clockwise. See *Figure 7*.

Pilot Assemblies may vary. Type 'A' pilot will require a flat standard screwdriver and Type 'B' pilot will require a 4mm allen wrench.

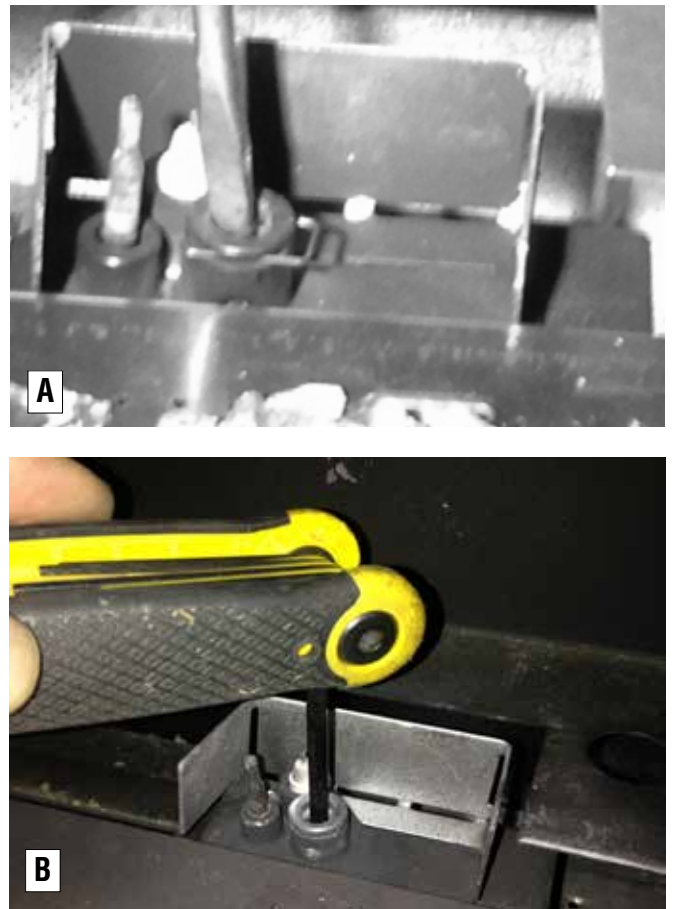


Figure 7 - Turn Pilot Orifice

Step 8. Reinstall pilot hood. See *Figure 6*.

Step 9. Retrieve the burner and hold the venturi tube above the orifice. Place the shutter adjusting rod in the slot of the shutter arm (*Figure 8*). Set the burner assembly into its position and secure the trapezoidal plate with the two screws previously removed.

Step 10. Reinstall the baffle with the two baffle securing screws.

Step 11. Reinstall the log set. See log set installation and door assembly installation in the installation and operation manual.

NOTE: Rear air shutter rod is attached to lever under the firebox.

Step 12. Reinstall the glass door.

Step 13. Turn on gas supply and test for gas leaks, using a gas leak test solution—also known as bubble leak solution.

NOTE: Using a soapy water solution is an effective leak test solution but it is not recommended, because the soap residue that is left on the pipes/fittings can result in corrosion over time.

- A. Light the fireplace (refer to the lighting instructions label in the control compartment).
- B. Brush all joints and connections with the gas leak test solution to check for leaks. If bubbles are formed, or gas odor is detected, turn off the appliance. Either tighten or refasten the leaking connection, and then retest as described above.
- C. When the gas lines are tested and leak free, rinse off the leak testing solution.

! WARNING

Never use an open flame to check for leaks.

Step 14. Adjust the burner air shutter per instructions in the Installation and Operation manuals and *Table 2 and Figures 6 and 7*.

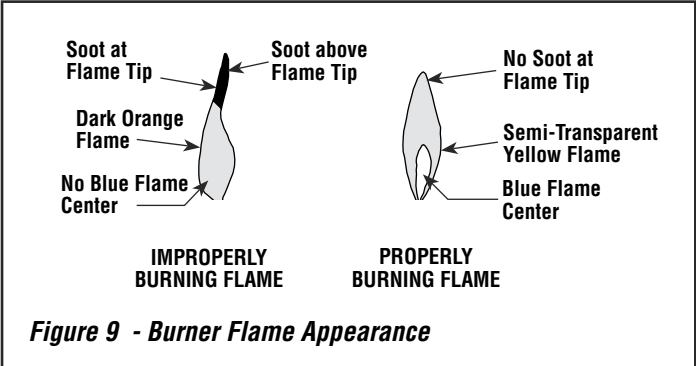
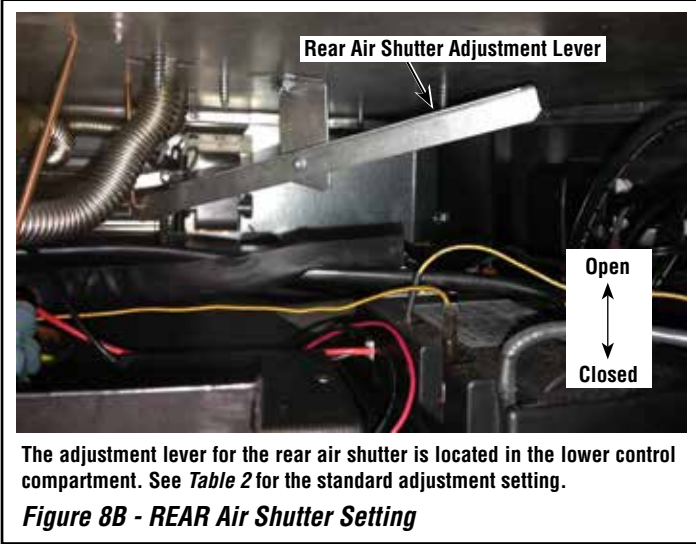
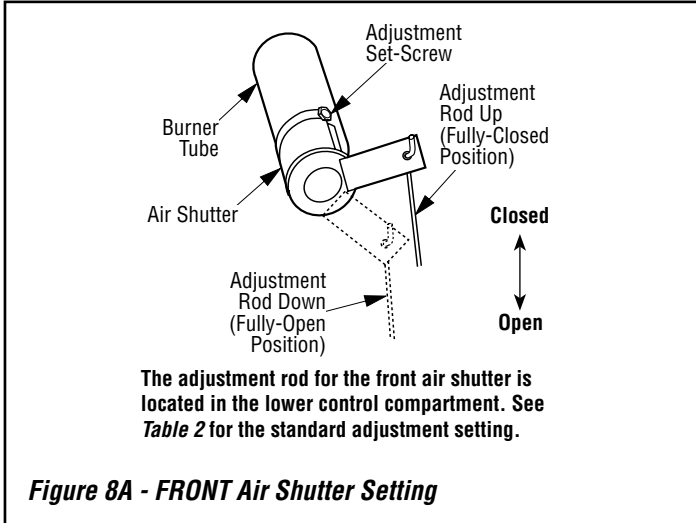
CAUTION: The air shutter should never be set so as to make the tips of the flames sooty or create sooting on the viewing glass, logs, or media. If soot begins to form after burning, the air shutter should be opened gradually until the sooting condition stops. Gas quality and gas pressure may vary, which can affect the burning characteristics of the appliance.

BURNER AIR SHUTTER ADJUSTMENT INSTRUCTIONS

1. Adjust the air shutters per instructions in *Figures 8A and 8B* and *Table 2*.
2. Light the fireplace. Follow the lighting procedure on the lighting label in the control compartment.
3. Allow the burner to operate for at least fifteen (15) minutes while observing the flame continuously to ensure that the proper flame appearance is achieved (*Figure 9*). If the following conditions are present, adjust accordingly.
 - If flame appears weak or sooty, adjust the air shutter, incrementally, to a more open position until the proper flame appearance is achieved.
 - If flame remains blue, adjust the air shutter, incrementally, to a more closed position until the proper flame appearance is achieved.
4. When satisfied that the burner flame appearance is normal, reinstall the lower control compartment door, then proceed to finish the installation.

Burner Air Shutter Settings		
Models	Natural Gas	
	Front Air Shutter	Rear Air Shutter
All	1/16" (1.6 mm)	1/8" (3.2 mm)

Table 2

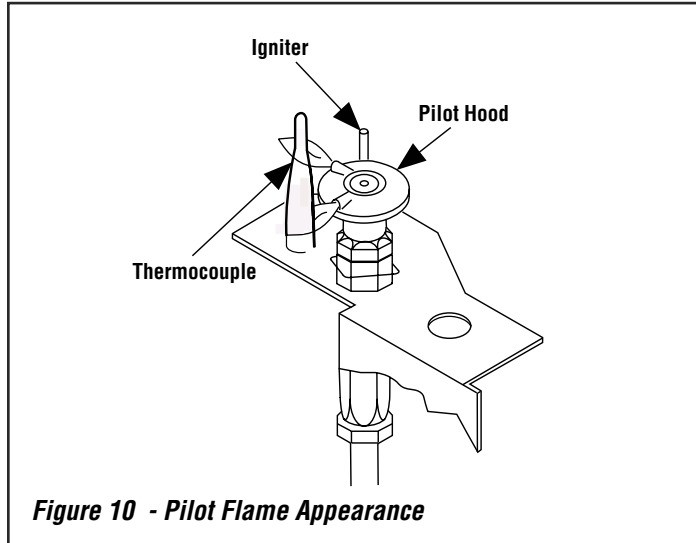


Step 15. Relight the main burner. The lighting instructions can be found on the lighting label in the control compartment. Verify proper burner ignition and operation (*Figure 9*).

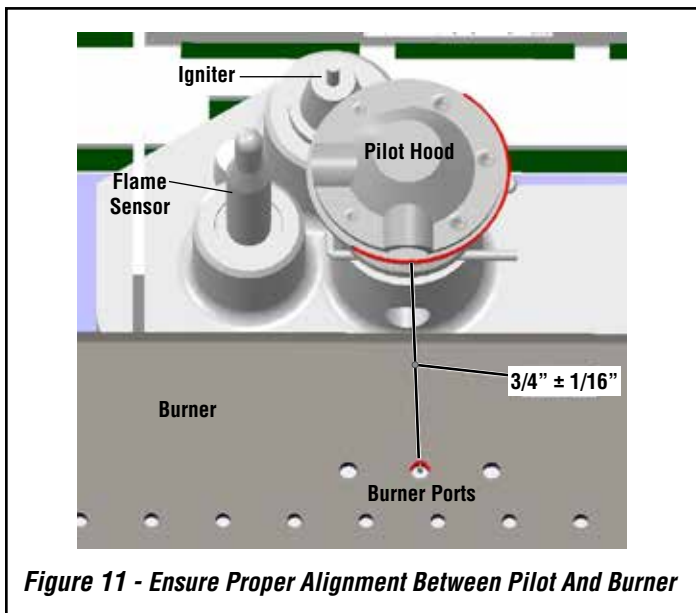
Inspect the pilot system for proper flame. The pilot flame should engulf the flame sensor (*Figure 11*).

Using a manometer, test the inlet and manifold gas pressures (*Tables 3–4, Page 6*). The inlet pressure is tested at elbow fitting removable plug and the outlet pressure is tested at gas valve outlet test port (see *Figures 14 and 15 on Page 6*).

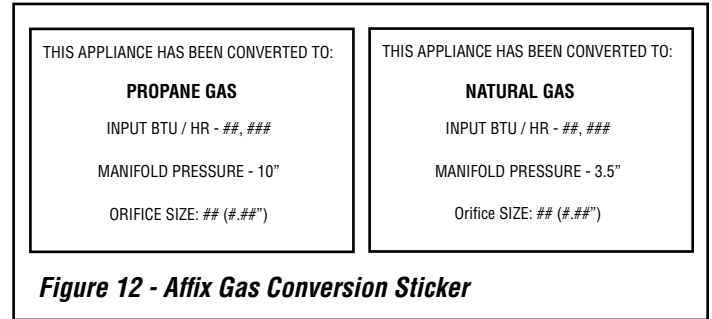
Always test pressures with the valve regulator control at the highest setting.



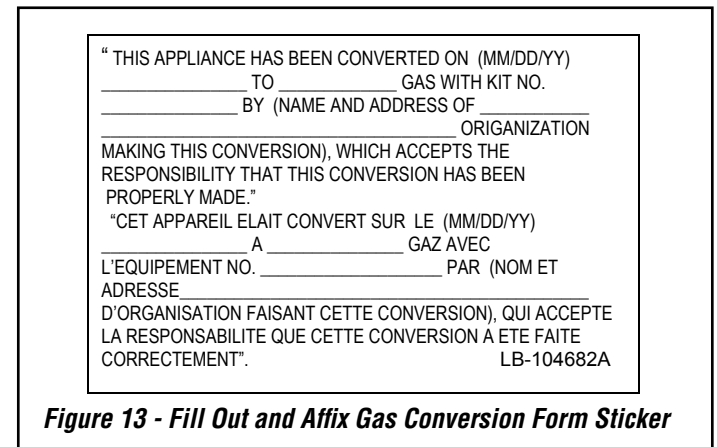
Step 16. Ensure the proper relationship of the pilot to the main burner as shown in *Figure 9*.



Step 17. Affix the supplied gas conversion sticker next to the rating plate label stating this unit has been converted to natural gas. See *Figure 12*.



Step 18. Fill out, then affix the supplied gas conversion form sticker next to the rating plate. See *Figure 13*.



Step 19. Reinstall the facade, and barrier.

NOTE: A BARRIER DESIGNED TO REDUCE THE RISK OF BURNS FROM HOT VIEWING GLASS SHALL BE USED DURING OPERATION OF THIS FIREPLACE FOR THE PROTECTION OF CHILDREN AND OTHER AT-RISK INDIVIDUALS.

REFERENCE INFORMATION

Inlet Gas Supply Pressure		
Fuel #	Minimum	Maximum
Natural Gas	5" WC (1.25 kPa)	10.5" WC (2.61 kPa)
Propane Gas	11.0" WC (2.74 kPa)	13.0" WC (3.23 kPa)

Table 3

Manifold Gas Supply Pressure	
Fuel #	Pressure
Natural Gas	3.5" WC (0.87 kPa)
Propane Gas	10.0" WC (2.49 kPa)

Table 4

BTU Input				
Models	Natural Gas		Propane Gas	
	High Rate	Low Rate	High Rate	Low-rate
Altair40-B/C, DRT4040-B	28,000	20,000	25,000	18,000
Altair45-B/C, DRT4045-B	31,000	21,000	31,000	20,000
AltairDLX40-B/C, DRT4240-B	36,000	24,000	31,000	21,000
AltairDLX45-B/C, DRT4245-B	42,000	25,000	41,000	22,000

Table 5

BURNER ORIFICE KITS (0 - 4500 ft - 0 - 1372 m)				
Model	Natural Gas - REAR Orifice *	Natural Gas - FRONT Orifice*	Propane - REAR Orifice*	Propane - FRONT Orifice*
Altair40-B/C, DRT4040-B	Cat. No. H3721 (#42, 0.0935")	Cat. No. 19L52 (#55, 0.052")	Cat. No. 19L52 (#55, 0.052")	Cat. No. F2928 (#70, 0.028")
Altair45-B/C, DRT4045-B	Cat. No. F2927 (#41, 0.096")	Cat. No. 19L52 (#55, 0.052")	Cat. No. 39L10M (#53, 0.0595")	Cat. No. F2928 (#70, 0.028")
AltairDLX40-B/C, DRT4240-B	Cat. No. 99K76 (#38, 0.1015")	Cat. No. H8303 (#51, 0.067")	Cat. No. 19L52 (#55, 0.052")	Cat. No. 35M91 (#61, 0.039")
AltairDLX45-B/C, DRT4245-B	Cat. No. 37L82 (#32, 0.116")	Cat. No. H4873 (#50, 0.070")	Cat. No. 37G00 (#52, 0.0635")	Cat. No. 35M91 (#61, 0.039")

Table 6 - Burner Orifice Sizes, Elevation 0-4500 ft (0-1372 m) * Standard size installed at factory

Gas Pressure Test Points

The outlet **manifold** test gauge connection is provided on the valve stem of the electronic gas valve (see **Figure 14**). The **inlet** line gas pressure test points are shown in **Figures 15 and 16**. Some appliances are built with a 1/8" NPT plug (**Figure 15**) while others have a captive pressure tap located on the regulator body (**Figure 16**). The control valves have a 3/8" (10 mm) NPT thread inlet and outlet side of the valve.

Figure 14 - Gas Valve

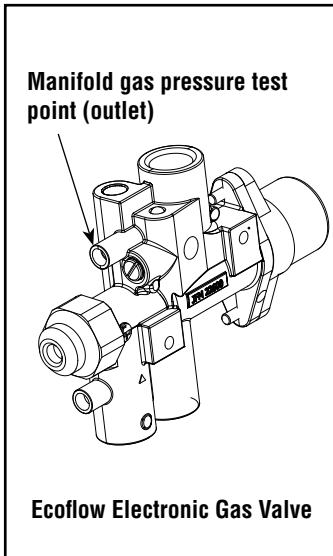


Figure 15 - Appliances With 1/8" NPT plug (inlet test point)

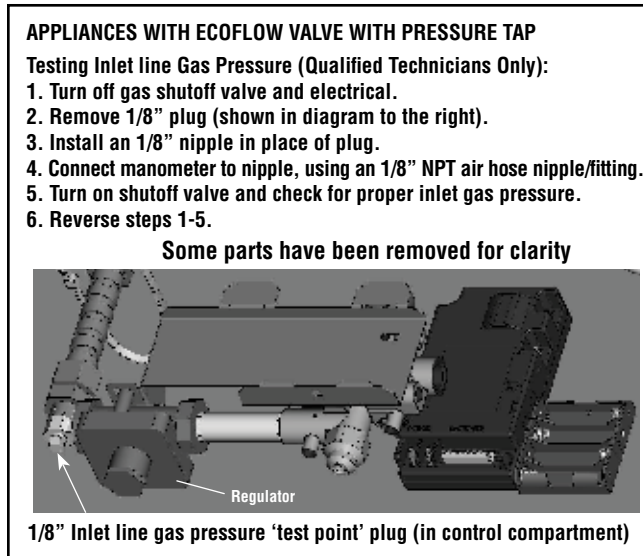


Figure 16 - Regulator with Pressure Tap



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

