astria FIREPLACES™

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INSTALLATION INSTRUCTIONS FOR GAS CONVERSION KITS FOR USE WITH ENVY AND ENVY CD DIRECT-VENT GAS FIREPLACES

[FIREPLACE MODELS ENVY(CD)45T(E/Y)N, ENVY(CD)40T(E/Y)N, ENVY(CD)35T(E/Y)N]

⚠ WARNING



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

- Install only when fireplace is OFF and COLD.
- 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.
- Keep children away from an operating fireplace. Closely supervise children in any room where a fireplace is operating to prevent contact with glass.

NOTICE

- **READ ALL STEPS BEFORE STARTING INSTALLATION.**
- **LEAVE THESE INSTRUCTIONS WITH THE APPLIANCE.**
- All warnings, precautions, and instructions in the Installation Instructions and Care and Operation Instructions 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

RISK OF PERSONAL INJURY OR PROPERTY DAMAGE.

- **Never operate fireplace without liner panels installed.**
- **These appliances are NOT approved for operation without liner panels.**
- **Do NOT abuse glass doors by striking or slamming shut.**
- **Never operate fireplace with glass door assembly removed.**
- **Handle glass door assembly with extreme care. Replace damaged glass door assembly with approved replacement assembly only.**
- **Use only media approved for use with these fireplaces (as applicable). Failure to use approved media may result in sooting, delayed ignition, or other improper fireplace operation, and may void the warranty.**

⚠ 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 instruction 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.The qualified service agency performing this installation assumes responsibility for this conversion.

⚠ AVERTISSEMENT

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.

GENERAL INFORMATION

This kit contains all the necessary components and labeling needed to adapt the appliance to the desired type of gas. Kits are available to convert traditional fireplaces from natural gas to propane, and from propane to natural gas. A kit is available for contemporary fireplaces, to convert natural gas to propane.

The information provided must be used in conjunction with the *Care and Operation Instructions*. Please read the instructions completely before performing the procedures detailed in this document.

NOTE: When installing multiple kits, perform all installations at the same time to avoid repeatedly disassembling and reassembling the appliance.

Table 1: Traditional Fireplaces— Natural Gas to Propane Conversion Kits

Models	Catalog Number
ENVY35T(E/Y)N	H8754
ENVY40T(E/Y)N	H8722
ENVY45T(E/Y)N	H8757

Table 2: Traditional Fireplaces— Propane to Natural Gas Conversion Kits (older models)

Models	Catalog Number
NV35IN	H8755
NV40IN	H8756
NV45IN	H8758

Table 3: Contemporary Fireplaces— Natural Gas to Propane Conversion Kits

Models	Catalog Number
ENVYCD35T(E/Y)N	H8759
ENVYCD40T(E/Y)N	H8760
ENVYCD45T(E/Y)N	H8761

REQUIRED TOOLS

- Torx T20 Driver
- 5/32 in. Allen wrench
- Manometer
- 1/2 in. Deep socket or open ended wrench
- 5/16 in. Hex-head nut driver
- 5/8 in. Open ended wrench

KIT CONTENTS

- Orifice, Brass (2)
- SIT Regulator LP or NG Conversion Kit (1)
- Label, Valve Identification (1)
- Injector, Pilot Orifice (1)
- Label, Conversion (1)

DERATION

The appliance is tested and approved for installations at elevations of 0–4500 ft (0–1372 m) above sea level using the standard burner orifice sizes (***Table 4***).

At higher elevations, the amount of BTU fuel value delivered must be reduced by either using gas that has been derated by the gas company or by changing the burner orifice to a smaller size as regulated by the local Authorities Having Jurisdiction and by the (USA) National Fuel Gas Code NFPA 54/ANSI Z223.1—latest edition or, in Canada, the CAN/CSA-B149.1 codes—latest edition.

Table 4: Burner Orifice Sizes, Elevation 0–4500 ft (0–1372 m)

Model	Natural Gas drill size	Propane drill size
ENVY35T(E/Y)N NV35IN	Front #49 (0.073 in.)* Back #43 (0.089 in.)*	Front #57 (0.043 in.)* Back #54 (0.055 in.)*
ENVYCD35T(E/Y)N	Front #42 (0.0935 in.)* Back #55 (0.052 in.)*	Front #55 (0.052 in.)* Back #60 (0.040 in.)*
ENVY40T(E/Y)N NV40IN	Front #41 (0.096 in.)* Back #43 (0.089 in.)*	Front #55 (0.052 in.)* Back #55 (0.052 in.)*
ENVYCD40T(E/Y)N	Front #35 (0.11 in.)* Back #52 (0.0635 in.)*	Front #53 (0.0595 in.)* Back #65 (0.035 in.)*
ENVY45T(E/Y)N NV45IN	Front #40 (0.098 in.)* Back #40 (0.098 in.)*	Front #54 (0.055 in.)* Back #54 (0.055 in.)*
ENVYCD45T(E/Y)N	Front #32 (0.116 in.)* Back #49 (0.073 in.)*	Front #51 (0.067 in.)* Back #62 (0.038 in.)*

* Standard size installed at factory
• Catalog number

BEFORE INSTALLING THE KIT

1. Turn OFF the gas supply to the appliance and disconnect the power supply at the circuit breaker.
2. Remove the kit contents from the packaging carefully to prevent breakage.
3. Remove the top louver.
4. Remove the left and right side finish trim gap fillers.
5. Remove the surround trim assembly by detaching it at the top of the fireplace and lifting it 1 in. to disengage the side tabs, then pulling it away from the fireplace exposing the front glass door.
6. Locate the four (4) spring-loaded latches; two above and two below the enclosure. Release the lower latches, by pulling each handle out and down to unhook it from the glass door. Lightly press against the door, to hold it in position, while releasing the two upper latches. Carefully grip the glass door at both the top and bottom, and remove from the fireplace. Retain the door in a secure location for later reinstallation.
7. Carefully remove the logs / contemporary media, if installed.

KIT INSTALLATION INSTRUCTIONS

⚠ CAUTION

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

⚠ ATTENTION

Avant d'effecteur la conversion, coupez d'abord l'alimentation en gaz, ensuite, coupez l'alimentation électronique.

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/CGA-B149.1 installation code.

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

1. Ensure all steps of **Before Installing the Kit** have been completed, and that the appliance is cold.

   For fireplaces with contemporary burners:
   Remove the four (4) 5/16 in. hex-head screws securing the front and rear floor panels. Remove the floor panels and the firebox liner panels, if installed. Then, remove the ten (10) screws securing the burner, and remove the burner by gently lifting the right side of the burner and sliding it to the right, off the venturis. Set aside the burner assembly in a secure location for later reinstallation.

   For fireplaces with traditional burners:
   Remove the andirons and volcanic stone, if installed. Remove the six (6) screws securing the burner, and remove the burner by gently lifting the right side of the burner and sliding it to the right, off the venturis. Set aside the burner assembly in a secure location for later reinstallation.

2. Push the top firebox liner panel up and hold it against the ceiling of the firebox. Remove the left and right side firebox liner panels. Then, remove the top firebox liner panel. Place all panels in a secure location to prevent damage before reinstallation.

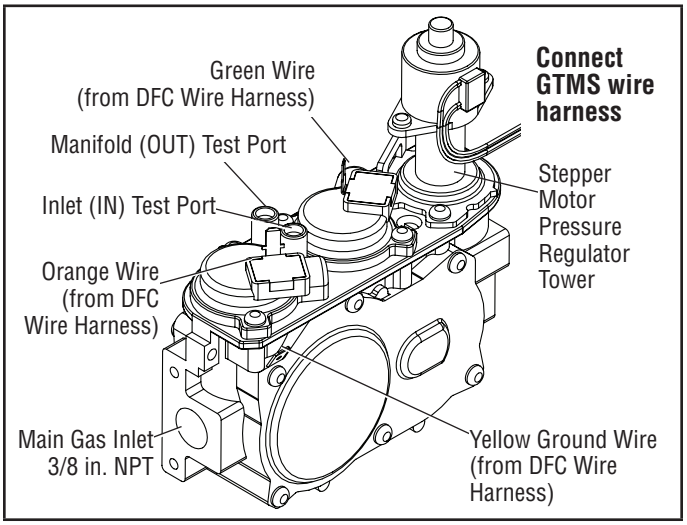
3. Using a 5/16 in. hex-head nut driver, remove the four (4) screws securing the left burner support bracket and remove the bracket. Retain the screws and bracket for later reinstallation.

4. Using a 5/16 in. hex-head nut driver, remove the nine (9) screws securing the control compartment door on the left side of the firebox, and remove the control compartment door. Place the screws and control compartment door in a secure location for later reinstallation.

   NOTE: For **Step 5** through **Step 8**, refer to the instructions provided with the SIT valve for more information.

5. Using a Torx T20 driver, remove and discard the two pressure regulator mounting screws, the stepper motor pressure regulator tower, the spring, and the diaphragm assembly. Properly dispose of all removed components.

Figure 1: SIT Electronic Valve



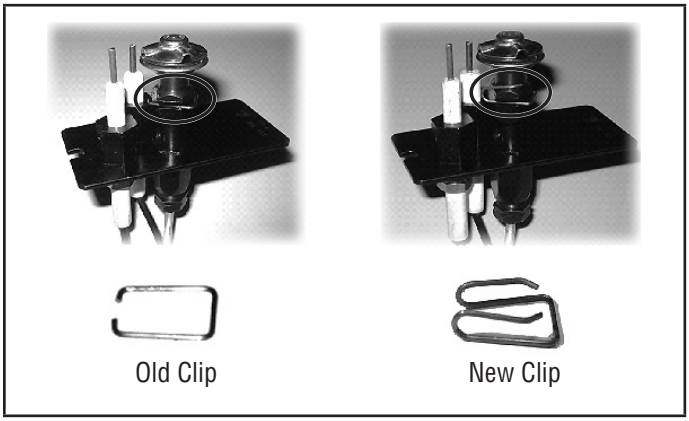
6. Confirm the rubber gasket is firmly attached and properly positioned on the back of the replacement stepper motor pressure regulator. Install the new stepper motor pressure regulator assembly using the supplied screws. Securely tighten the screws (25 lb-in).

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

8. Make stepper motor pressure regulator and valve electrical connections.

9. For pilots using the new clip design, remove the clip securing the pilot hood assembly. For pilots using the old clip design, do not remove the clip (***Figure 2***).

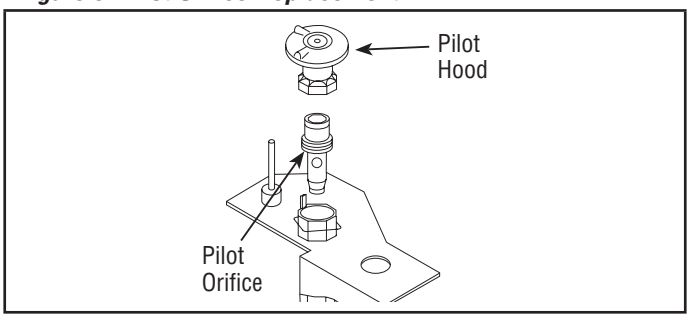
Figure 2: Pilot Hood Assembly Clip



10. For pilots using the old clip design, pull up sharply on the pilot hood to remove it. Remove the pilot hood assembly to access the hex head pilot orifice (***Figure 3***).

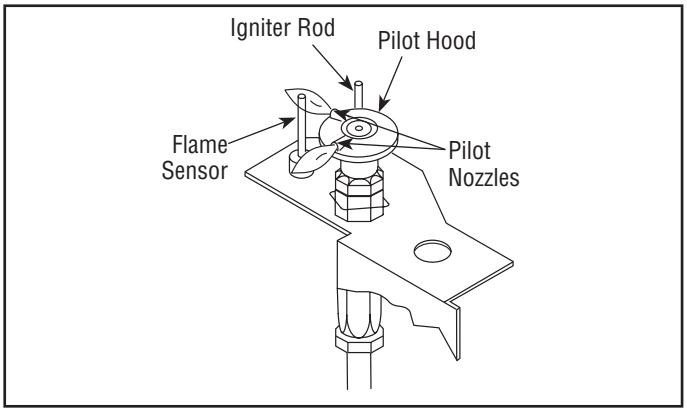
NOTE: Be careful not to damage the igniter assembly.

Figure 3: Pilot Orifice Replacement



11. Using a 5/32 in. Allen wrench, remove and replace the orifice with the one provided in the kit. Reinstall the pilot hood assembly (***Figure 4***) and clip, if applicable.

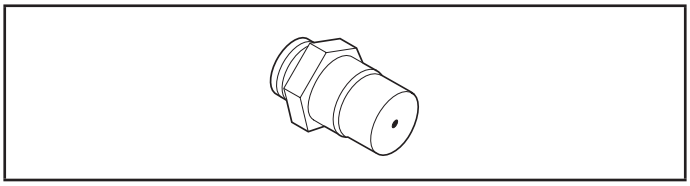
Figure 4: Completed Pilot Assembly



12. Using a 1/2 in. deep socket or open ended wrench, remove the burner orifices.

NOTE: Use a 5/8 in. open ended wrench to secure each orifice holder while removing the burner orifices.

Figure 5: Orifice



13. Verify the proper burner orifice sizes needed (***Table 4***).

14. Using a small amount of pipe thread joint compound and a 1/2 in. deep socket / open ended wrench, install the new burner orifices.

NOTE: Ensure propane resistant compounds are used in propane applications. Do not use pipe joint compounds on flare fittings. Do not get any pipe joint compound in the burner orifices.

15. Using the nine (9) screws retained in **Step 4**, reinstall the control compartment door.

16. Using the four (4) screws retained in **Step 3**, reinstall the left burner support bracket.

17. Reinstall the firebox liner panels and contemporary floors, if applicable.

18. Replace the burner assembly, and ensure the venturi tubes slide onto the main burner orifices.

19. Reassemble the remaining components.

TESTING

1. Reconnect the power supply at the circuit breaker.
2. Return gas to the system and relight the appliance.
3. With the main burner ON, test the new pressure regulator assembly and all gas line joints for leaks using a gas leak test solution.

   NOTE: The lighting instructions can be found on the lighting label in the control compartment or in the *Care and Operation Instructions* provided with the fireplace.
4. Inspect the pilot system for proper flame appearance. The pilot flame should engulf the flame sensor (***Figure 4***).
5. Inspect the burner for proper flame appearance (***Figure 6***).

Figure 6: Burner Flame Appearance



6. Using a manometer, test the inlet and manifold gas pressures by cycling the appliance with the remote control. Refer to ***Table 5*** and ***Table 6*** for optimal gas supply pressures.

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

Table 5: Inlet Gas Supply Pressure

Fuel	Minimum	Maximum
Natural Gas	4.5 in. WC (1.12 kPa)	10.5 in. WC (2.61 kPa)
Propane	11.0 in. WC (2.74 kPa)	13.0 in. WC (3.23 kPa)

Table 6: Manifold Gas Supply Pressure

Fuel	Low	High
Natural Gas	1.6 in. WC (0.40 kPa)	3.5 in. WC (0.87 kPa)
Propane	6.3 in. WC (1.57 kPa)	10.0 in. WC (2.49 kPa)

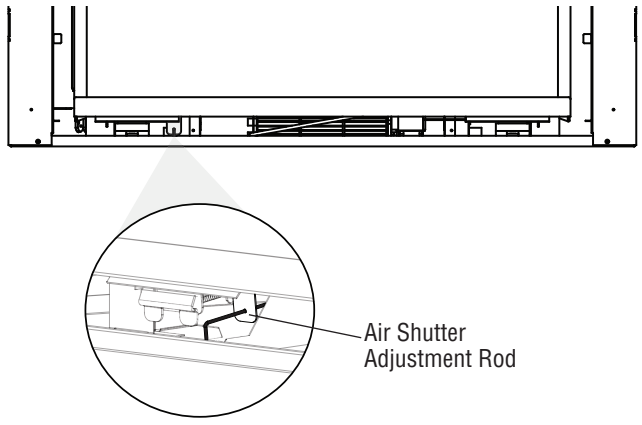
7. Adjust the air shutter (***Figure 7***) as necessary.

   NOTE: Refer to the Care and Operation Instructions provided with the appliance for more information.

Table 7: 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

Figure 7: Air Shutter Adjustment Rod



AFTER INSTALLING THE KIT

1. Reinstall the logs and / contemporary media, if applicable.
2. Reinstall the glass door. Refer to the appliance *Installation Instructions*.
3. Reassemble the remaining components by reversing the procedures outlined in the preceding steps.
4. Attach the conversion label provided in the conversion kit to the rating plate on the appliance.
5. The BTU input for these appliances is shown in ***Table 8***.

Table 8: Input Rate, Gas Valves

Models	Input Rate (BTU/HR)	
	Natural Gas	Propane Gas
ENVY35T(E/Y)N NV35IN	35,500 high 15,500 low	35,000 high 18,000 low
ENVYCD35T(E/Y)N	31,000 high 16,000 low	28,000 high 15,000 low
ENVY40T(E/Y)N NV40IN	41,500 high 15,500 low	37,000 high 14,500 low
ENVYCD40T(E/Y)N	40,000 high 21,000 low	32,000 high 18,500 low
ENVY45T(E/Y)N NV45IN	47,000 high 18,000 low	45,000 high 18,000 low
ENVYCD45T(E/Y)N	47,000 high 24,000 low	40,000 high 22,000 low

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