



Technical Data Sheet

Tucson 8702 & Stowe 8322 DX Conversion from LP to NG

Kit #97-56105

Stepper Motor Valve Regulator Assembly



Publish Date: August 12, 2009

97-56105 – KIT COMPONENTS:

7200-241 - #41 Burner Orifice
7211-163 - 0.62mm Pilot Orifice
Motorized NG Regulator
NG Sticker (White)
Instructions

TOOLS REQUIRED:

Phillips Screwdriver
Pliers or Vise Grips
Flat-head Screwdriver
½" (13mm) Socket or wrench
5-32" (4mm) Hex Wrench

-  **CAUTION:** Turn off the gas supply to the stove before making this conversion. Disconnect any electrical source to your stove before making this conversion.
-  **IMPORTANT:** This kit and these instructions apply to the Tucson 8702 & Stowe 8322 DX models only. DO NOT attempt this conversion on any other Tucson or Stowe model.



WARNING

THIS CONVERSION KIT MUST BE INSTALLED BY A QUALIFIED GAS 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 WORK ASSUMES RESPONSIBILITY FOR THE PROPER CONVERSION OF THIS APPLIANCE WITH THIS KIT.



ATTENTION

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 EXACTMENT, UN FEU, EXPLOSION OU PRODUCTION DE PROTOXYDE DE CARBONE PEUT RÉSULTER LE DOMMAGES CAUSER DE PROPRIÉTÉ, PERTE OU BLESSURE PERSONELLE 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 OPÉRATION DE L'APPAREIL CONVERTI EST CHÉQUE SUIVANT LES CRITÈRES ÉTABLIS DANS LES INSTRUCTIONS DE PROPRIÉTAIRE PROVISIONNÉES AVEC L'ÉQUIPEMENT.

PROCEDURE:

1. Lift the top off the stove. Lift off the front assembly (Tucson only). Remove the front glass assembly. To remove the glass assembly pull the spring mounted handle forward and up to free the glass frame. Carefully set it aside. Remove the logs and set them aside. Remove the one screw that mounts the ember burner to the front center of the firebox. Carefully remove the ember burner.
2. From behind the stove loosen (but do not remove) the screw that locks the air shutter in place. Locate and remove the (4) 8-32 screws that mount the orifice plate to the firebox body. See Figure 1 below.

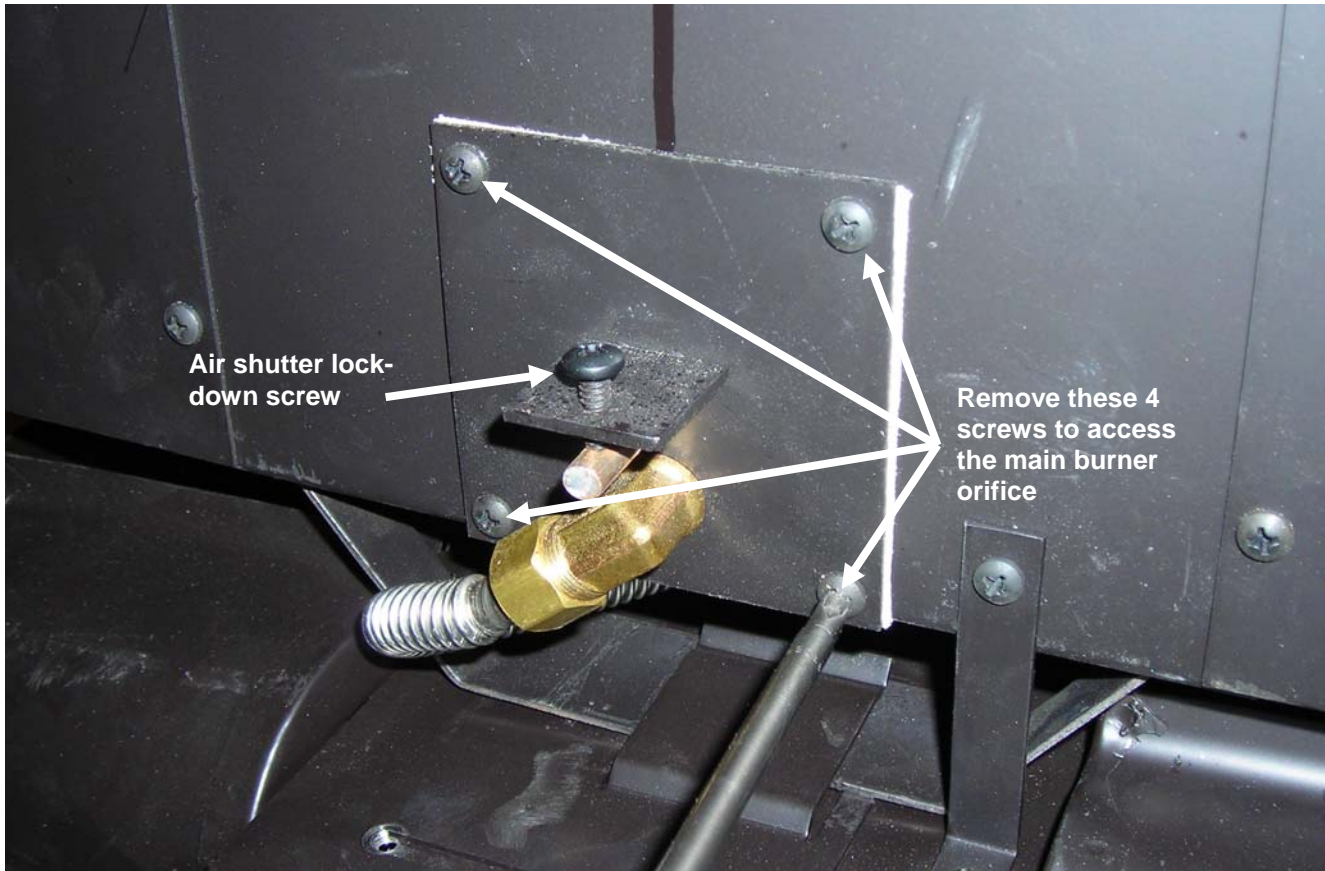


Figure 1

3. Find the main burner orifice which is located inside the orifice plate. Using a 1/2" (13mm), socket or wrench remove the LP orifice. Use pliers or vise grips to hold the brass elbow while loosening the orifice. Locate the #41 NG orifice and install where the LP orifice was. Replace the orifice mounting plate using the 4 screws removed earlier. Ensure the gasket is in place when reinstalling the plate. **NOTE:** Stoves installed above 2,000 feet (610m) may require a derated orifice (see specifications on page 5).

4. Locate the pilot assembly inside the stove. See Figure 2. Remove the easy-off top of the pilot burner hood by grasping it and pulling it up, and off the pilot assembly. Removal of the pilot shield (if present) may be necessary for access.

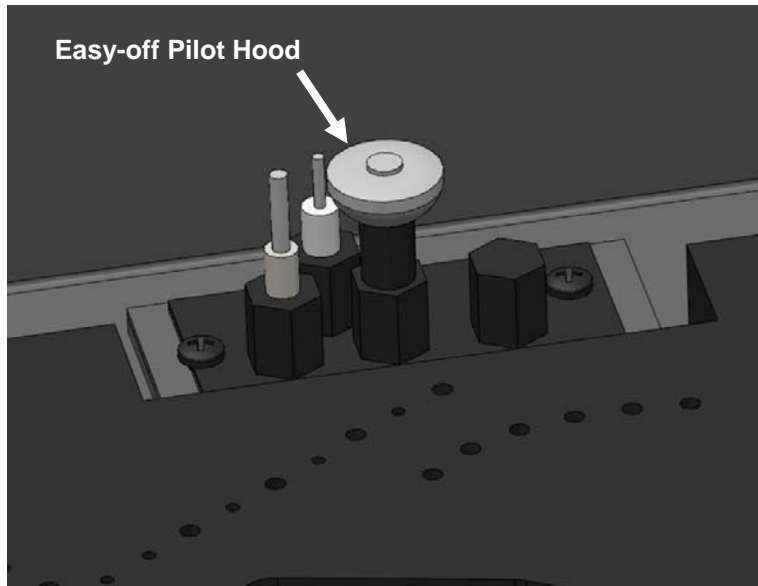


Figure 2

5. Using a 5/32" (4mm) hex wrench, unscrew and remove the LP pilot orifice. Insert the 0.62mm NG orifice provided with this kit and tighten it with the hex wrench.
6. Snap the pilot burner hood back into place on the pilot stem, making sure the cutout of the hood aligns with tang on the orifice housing.
7. Slide the shutter rod through the hole in the back of the stove. Reinstall the ember burner and screw to lock it in place. Reinstall the logs according to the instructions in the owner's manual. Adjust the air shutter by sliding the rod on the outside back of the stove. Pushing the rod into the firebox opens the shutter, pulling it out closes the air shutter. When the shutter is in the desired position tighten the locking bolt finger tight. **Do not over-tighten this screw as it may cause the shutter to lift inside the stove.** After the conversion is complete, make adjustments to the flame from outside the stove. **Important:** Ensure that orange flames are not present, as this is a sign of incomplete combustion and will produce soot.
8. Replace and secure the front glass assembly and casting. Set the top back in place.

VALVE CONVERSION: See illustrations on following pages.

1. This DX model stove is equipped with a motorized valve regulator which permits flame height control via a hand held remote.
2. Remove the control panel by removing the two Phillips head screws on the face of the panel. See Figure 3. Locate the valve inside the control door under the front of the stove.



Figure 3

3. Locate and remove the 2 screws that mount the motorized regulator to the valve.

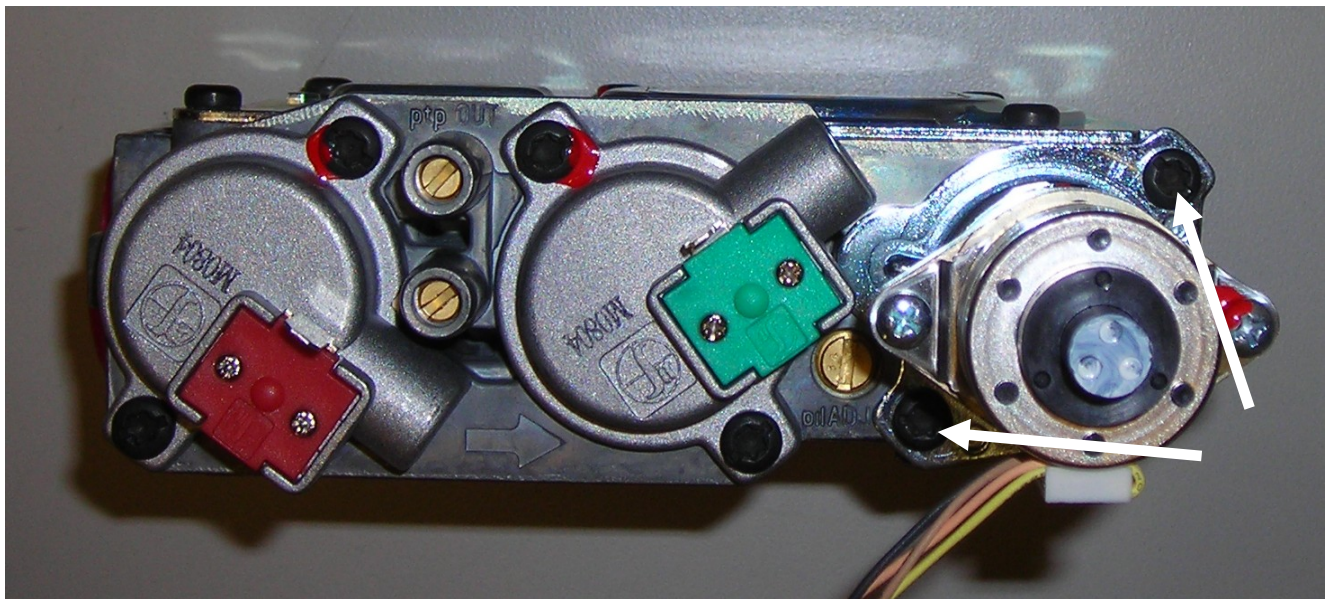


Figure 4

- You will need to disconnect the motor lead. Follow the wires from the stepper motor back until the first connection. Disconnect the wires at this junction. See Figure 5.

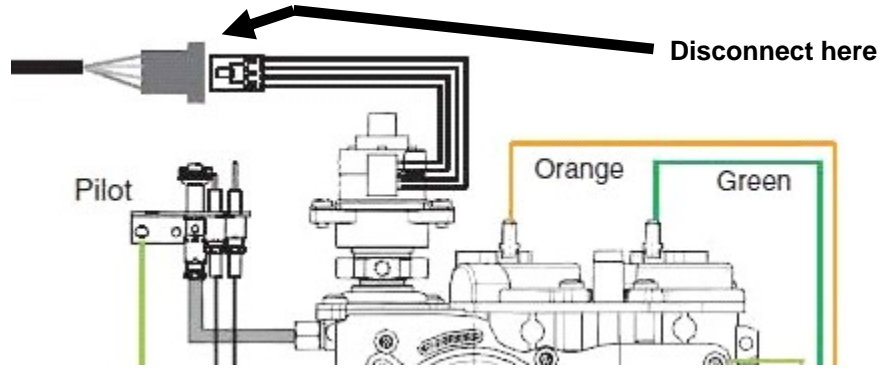


Figure 5

- Pull the Motorized LP regulator off the stove. Ensure you remove the rubber gasket from the valve body before installing the Motorized NG regulator.
- Place the Motorized NG regulator in position and replace the 2 screws to lock it in place. Reconnect the stepper motor wire lead.
- Place the white NG sticker on the lighting instructions.

🔥 LEAK TEST ALL FITTINGS WITH A GAS SNIFFER BEFORE AND AFTER LIGHTING THE STOVE.

- Once the leak tests are complete, replace the modesty panel and record this change by filling out the fuel conversion label on the stove

The input rate of the heater is verified by checking the manifold pressure. If the manifold pressure is correct, then the input rate is correct.

Specification	NG	LP
INPUT RATING (Btu/hr) 0-2000 ft	25,000	25,000
INPUT RATING (Btu/hr) 2000-4500 ft	24,200	24,800
ORIFICE SIZE (DMS) 0-2000 ft	41	53
ORIFICE SIZE (DMS) 2000-4500 ft	42	54
MANIFOLD PRESSURE - LO SETTING (in. W.c./kpa)	1.6/0.4	6.4/1.59
MANIFOLD PRESSURE - HI SETTING (in. W.c./kpa)	3.5/0.87	10.0/2.48
INLET PRESSURE - MINIMUM (in.w.c./kpa)	5.0/1.24	12.0/2.99
INLET PRESSURE – MAXIMUM (in. w.c./kpa)	7.0/1.74	13/3.22
MINIMUM INPUT RATING LO SETTING (btu/hr)	18,000	21,600
MAXIMUM OUTPUT (btu/hr) 0-2000 ft	17,350	19,100

Note: Refer to the owner's manual for the:

- Details on adjustment for the proper pilot and main burner flame appearance.
- Instructions for checking out the normal operating sequence of the ignition system.
- Location on the valve to check manifold pressure.

🔥 DO NOT REUSE PARTS REMOVED FROM THE STOVE!