

Models:

CKVN

CKVP

Conversion Kits for RobertShaw Standing Pilot, RobertShaw
2500 DERC Electronic and White-Rodgers 25M Electronic Valves

GAS-FIRED



WARNING:

This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable code 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



Sharp Edges

- Wear protective gloves and safety glasses during installation.



Note: An arrow (➔) found in the text signifies change in content.

1 CKVN and CKVP Components

CKVN Components	CKVP Components
Robertshaw Valve Regulator Replacement Kit (standing pilot models only). Includes: Natural gas regulator, two screws, gasket, conversion label and instructions.	Robertshaw Valve Regulator Replacement Kit (standing pilot models only). Includes: Propane gas regulator, two screws, gasket, conversion label and instructions.
7 burner orifices. See Table 2.1 for appropriate size.	6 burner orifices. See Table 2.1 for appropriate size.
6 threaded style burner orifices.	6 threaded style burner orifices.
2 male threaded style burner orifices.	2 male threaded style burner orifices.
Natural pilot orifice (.021) - for standing pilot models only.	Propane pilot orifice (.0115) - for standing pilot models only.
Installation instructions.	Installation instructions.
Installer conversion label	Installer conversion label

Table 1.1

Note: The CKVN and the CKVP are for a onetime conversion only. Discard unused parts.

Note: For gas models not listed, refer to the model's installation instructions for proper conversion kit or contact the Heatilator Technical Services Department, Hearth & Home Technologies Inc., 1915 W. Saunders Street, Mt. Pleasant, Iowa 52641, 1-800-927-6841.

2 Orifice Sizes for Conversions

A. Conversion - Orifices

Orifice Size	Model									
.056	GBI25L	GNTC50L								
.059	GNDC30L	GNDC30LE	GNDH30L	GNDH30LE	GNBC30L	GNBC30LE	GNDC33L	GNDC33LE	GNDH33L	GNDH33LE
	GNRC33L	GNRC33LE	GNBC33L	GNBC33LE	GNDC36L	GNDC36LE	GNDH36L	GNDH36LE	GNRC36L	GNRC36LE
	GNRH36L	GNRH36LE	GNBC36L	GNBC36LE						
.063	GCDC36L	GCDC42L	GCBC36L	GCBC42L	GCDC36LE	GCDC42LE	GCBC36LE	GCBC42LE		
.067	GDST60L	GDFL60L	GDCR60L	GDCL60L	GDCH60L	GDST60LE	GDFL60LE	GDCR60LE	GDCL60LE	GDCH60LE
	GDST36L	GDFL36L	GDCR36L	GDCL36L	GDCH36L	GDST36LE	GDFL36LE	GDCR36LE	GDCL36LE	GDCH36LE
	GBST36L	GBFL36L	GBCR36L	GBCL36L	GBIS36L	GBST36LE	GBFL36LE	GBCR36LE	GBCL36LE	GBIS36L3
	GCBC60L	GCBC60LE	GNTC80L							
.070	GCDC60L	GCDC60LE	GCBC80L	GCBC80LE						
.073	GCDC80L	GCDC80LE								
.093	GBI25	GNTC50								
.096	GNBC30	GNBC30E	GNDC30	GNDC30E	GNDH30	GNDH30E	GNBC33	GNBC33E		
.101	GNDC33	GNDC33E	GNDH33	GNDH33E	GNRC33	GNRC33E	GNDC36	GNDC36E	GNDH36	GNDH36E
	GNRC36	GNRC36E	GNRH36	GNRH36E	GNBC36	GNBC36E				
.110	GNDC36	GCDC42	GCBC36	GCBC42	GCDC36E	GCDC42E	GCBC36E	GCBC42E	GCBC60	GCBC60E
	GNTC80									
.113	GCDC60	GCDC60E	GCBC80	GCBC80E						
.115	GDST60	GDFL60	GDCR60	GDCL60	GDCH60	GDST60E	GDFL60E	GDCR60E	GDCL60E	GDCH60E
	GDST36	GDFL36	GDCR36	GDCL36	GDCH36	GDST36E	GDFL36E	GDCR36E	GDCL36E	GDCH36E
	GBST36	GBFL36	GBCR36	GBCL36	GBIS36	GBST36E	GBFL36E	GBCR36E	GBCL36E	GBIS36E
.120	GCDC80	GCDC80E								

Table 2.1

B. Conversion - Threaded-Style Orifices

Orifice Size	Model	
.052	ND3630L	NB3630L
.055	ND3933L	NB3933L
.058	ND4236L	NB4236L
.0635	ND4842L	NB4842L CB4236L
.065	CD4236L	CB4842L
.067	CD4842L	
.083	ND3630	NB3630
.089	ND3933	NB3933
.0935	ND4236	NB4236
.101		CB4236
.104	ND4842	NB4842
	CD4236	CB4842
.109	CD4842	

Table 2.2

Orifice Size	Model
#51	GB4942L
#52	GB4336L
#32	GB4942
#35	GB4336

Table 2.3

3 Preparation

Required Tools

Allen hex head wrench	Open end wrench
Cabinet screwdriver	Pliers
Phillips screwdriver	Stubby Screwdriver
Manometer	Safety Gloves
5/8 in. deep socket wrench	3/8 wrench
1/2 wrench	7/16 wrench
9/16 wrench	
Non-corrosive leak-check solution	

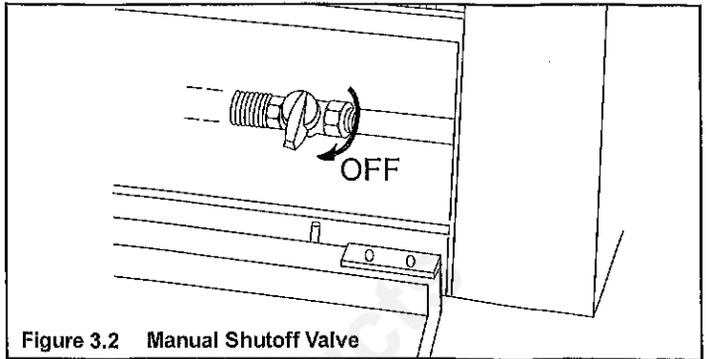


Figure 3.2 Manual Shutoff Valve

A. Access the Control Area

Remove the control access panel so you can observe the control area of your gas appliance. See Figure 3.1.

B. Turn off the Gas and Electrical Power

- To turn off the gas, locate the manual shutoff valve in the control area in the bottom of the appliance. Turn the manual shutoff valve so it is perpendicular to the gas line (Figure 3.2).
- If electricity has been brought to the appliance (for an electronic ignition model, or for a fan or remote control for either type of ignition), shut off all power by turning off the appropriate circuit breaker or removing the fuse in the electrical panel.

C. Remove the Valve Assembly - Novus ND & NB Series

- Locate and remove the two wing nuts and the two wing screws holding the valve plate assembly to the firebox bottom.
- Grasp the valve plate assembly and slide to the left, then down to disengage the valve plate assembly and clear the wing studs in the rear.
- Rotate the valve plate assembly horizontally so the pilot assembly comes out first from the valve compartment. See Figure 3.3. Care should be used to not damage the pilot when removing the valve plate assembly.
- Go to section 4 Converting the Appliance.

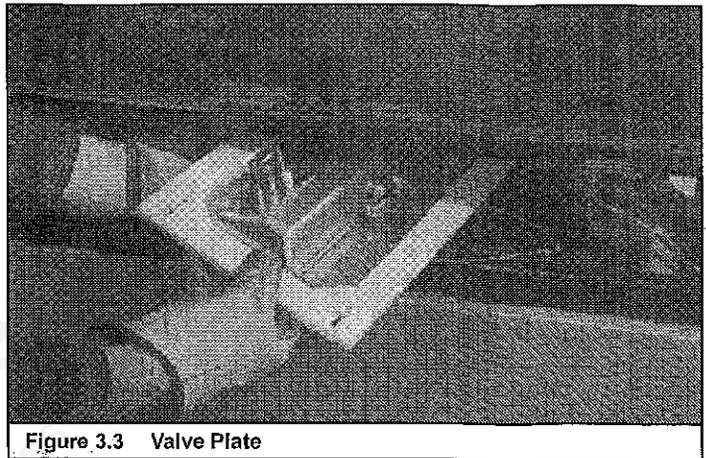


Figure 3.3 Valve Plate

D. Remove the Valve Assembly - GB Series

- Remove logs and grate assembly as per the owner's manual.
- Remove the valve assembly.
 - Shut off the electricity and gas supply to the appliance.
 - Grasp the tabs (one on each end) of the lava rock tray, lift up and then pull the lava rock tray toward you for removal. See Figure 3.4.

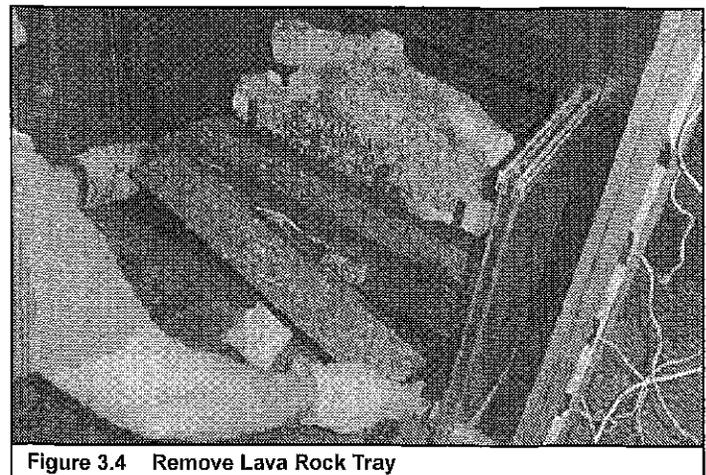


Figure 3.4 Remove Lava Rock Tray

Note: Inspect the valve plate gasket at this time and replace if worn or damaged. Contact your distributor/dealer customer services department for replacement parts.

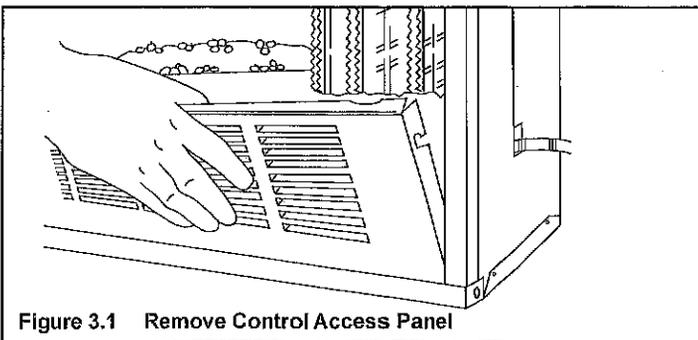


Figure 3.1 Remove Control Access Panel

- Remove the log set as shown in the appliance installation instructions.
- Remove the four screws holding the valve assembly in place. See Figure 3.5.

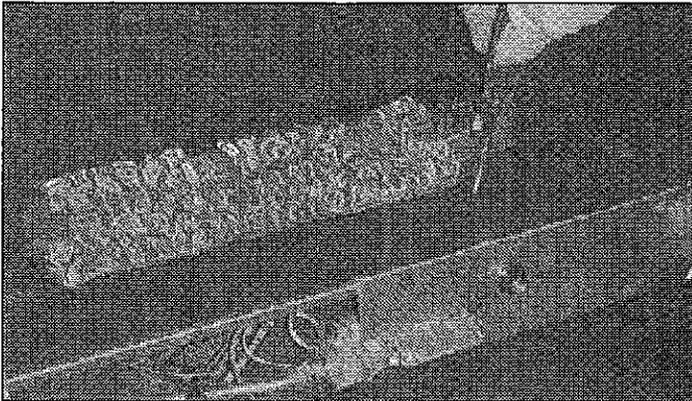


Figure 3.5 Loosen Valve Assembly

- Remove the valve assembly as shown in Figure 3.6.
- Go to section 4 Converting the Appliance.

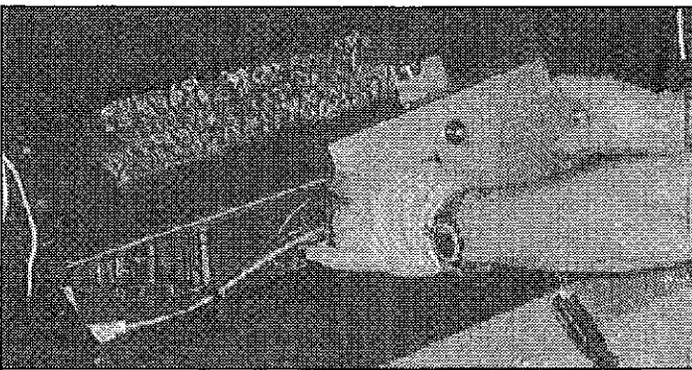


Figure 3.6 Remove Valve Assembly

E. Caliber GCBC, GCDC, CD Series and Caliber Designers

- Remove the control access panel so you can observe the control area of your gas appliance.
- Turn off the gas and electricity. Locate the manual shutoff valve in the control area in the bottom of the appliance. Turn the manual shutoff valve so it is perpendicular to the gas line. If electricity has been brought to the appliance, shut off all power by turning off the appropriate circuit breaker or removing the fuse in the electrical panel.
- Remove the screen and glass frame assembly.
- Remove the log set (GCBC, GCDC and Designers) by removing two screws, one at each end of the grate. Grasp the grate as shown in Figure 3.7 and pull the log/grate assembly up and off the burner.

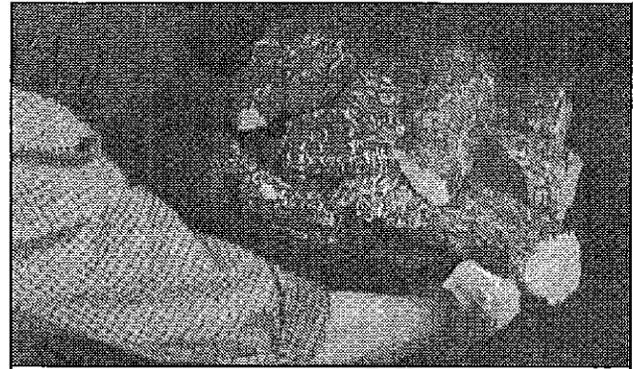


Figure 3.7 Removing Grate & Logs

- Remove the Log Set (CD Series)
 - Lift the two top logs off the log set. See Figure 3.8.
 - Remove the grate/log assembly by removing two screws as shown in Figure 3.8. Lift and pull grate/log assembly from front of firebox.
 - Remove four screws securing the rear log (Figure 3.9). Lift rear log and remove from firebox.
- Remove the main burner by removing four screws (Figure 3.9), one at each corner. Slide the burner to the left and lift out. Set aside.
- Designer burners will lift straight up or slide forward then up.
- Go to section 4 Converting the Appliance.

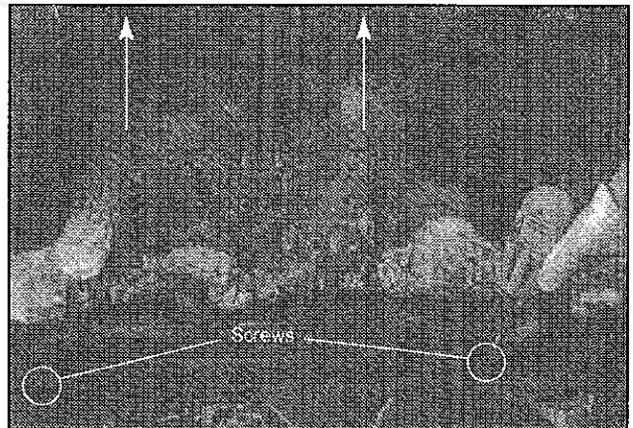


Figure 3.8 Loosen Grate

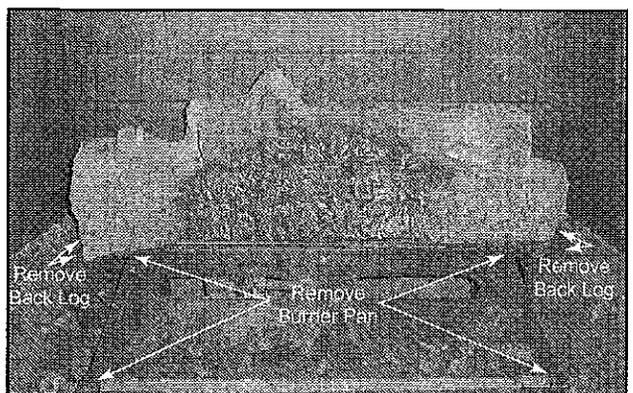


Figure 3.9 Remove Rear Log

4 Converting the Appliance

Determine what type of valve you have. Look in the control area at the bottom of the appliance and compare your valve with those shown in Figures 4.1 through 4.3.

After determining the type of valve (standing pilot ignition model or electronic ignition model), go to the following applicable instructions.

A. Standing Pilot Ignition Models

If you have a Robertshaw valve, use only the Robertshaw variable regulator replacement kit. Follow the regulator replacement instructions, Steps 1-3 that come with the regulator replacement kit. After completion of Step 3, return to these instructions.

Note: Save the label that came with the Robertshaw conversion kit for later placement.

B. White-Rodgers 25M Valve

- Using a 7/16 wrench, unscrew the brass manifold pressure adjustment fitting. See Figure 4.2.
- Remove the blue rubber cover from the end of the fitting and replace on the opposite end.
- Screw the appropriate end (marked either "NAT" if the model is being converted to natural or "LP" if the model is being converted to propane) into the valve where it was removed and tighten.

C. Robertshaw 2500 DERC Electronic Valve

- Using a 9/16 wrench, unscrew the manifold pressure adjustment fitting. See Figure 4.3.
- Remove the black rubber cover from the end of the fitting and replace on the opposite end.
- Screw the appropriate end (marked either "NAT" if the model is being converted to natural or "LP" if the model is being converted to propane) into the valve where it was removed and tighten.

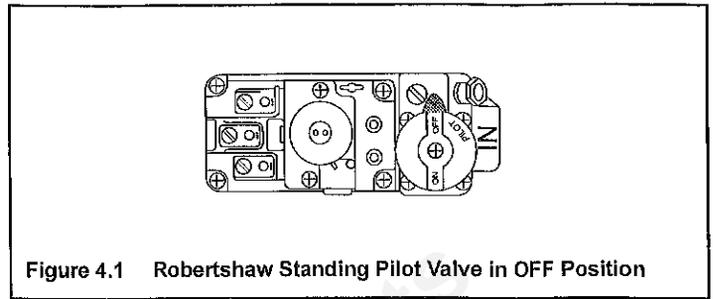


Figure 4.1 Robertshaw Standing Pilot Valve in OFF Position

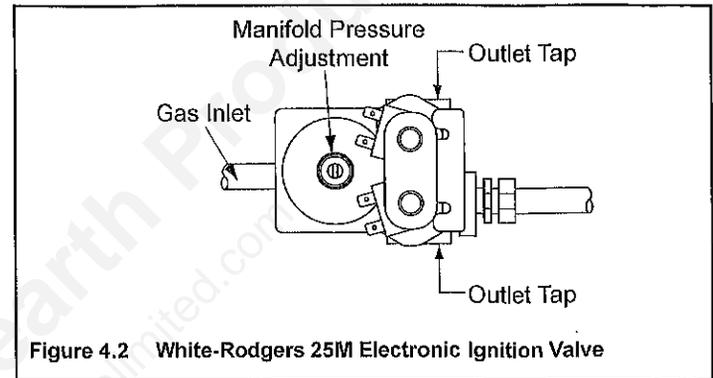


Figure 4.2 White-Rodgers 25M Electronic Ignition Valve

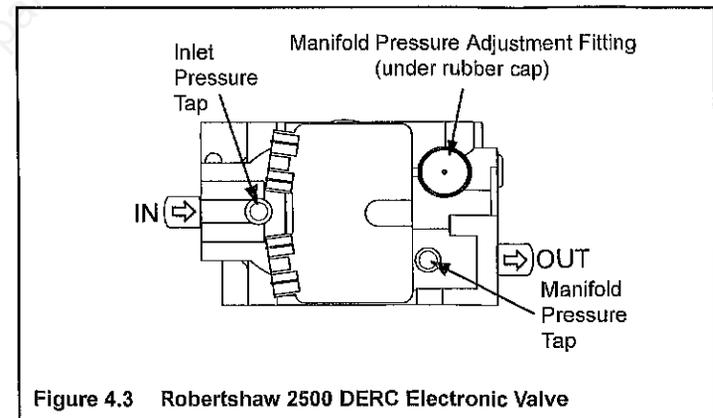


Figure 4.3 Robertshaw 2500 DERC Electronic Valve

5 Replace the Pilot and Burner Orifice



WARNING

Fire Risk

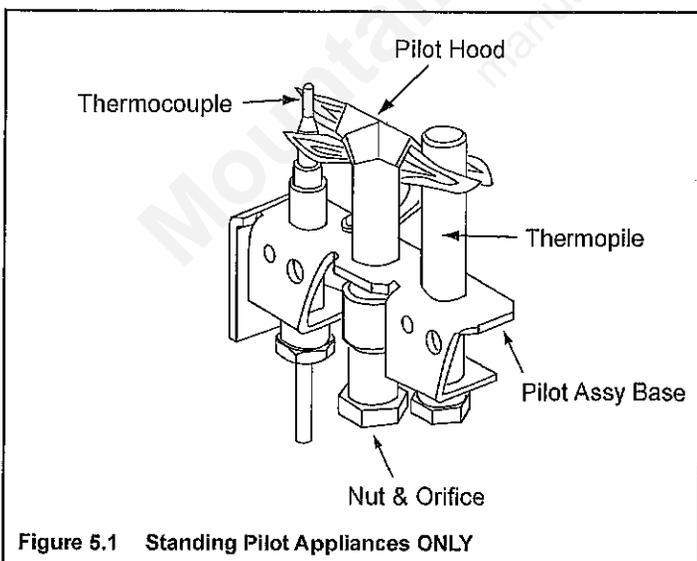
- Orifices **must** be replaced
- Failure to replace the orifices could result in overheating the gas appliance and possibly damaging your appliance and your home.

Note: Remove all components blocking your access and set aside.

A. Pilot Orifice

If your appliance has standing pilot ignition, the pilot orifice **MUST** be replaced.

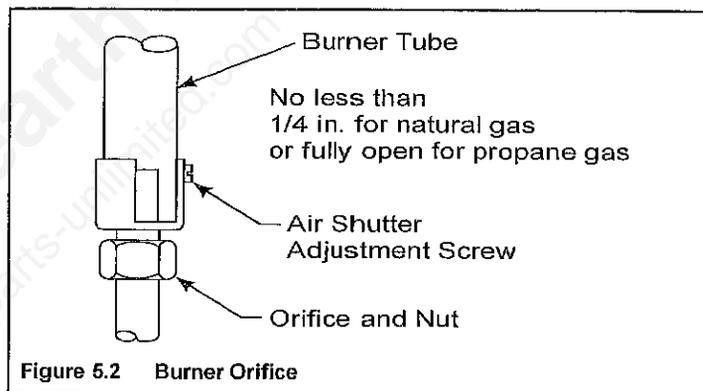
- Grasp the base of the pilot assembly firmly with pliers and loosen the nut at the base of the pilot hood with a 1/2 in. wrench. See Figure 5.1.
- Turn the nut until it comes free of the pilot.
- Remove the two screws securing the pilot assembly in position and pull it free of the tubing.
- Discard the existing orifice and replace it with the new orifice (propane orifice marked with LP11).
- Replace the pilot assembly (being careful not to drop the orifice) onto the tubing and finger tighten the nut. Secure the pilot assembly with the two screws. Using the 1/2 in. wrench, snugly tighten the nut at the base of the pilot tube.



B. Burner Orifice - All Appliances Except Caliber CD Series, Novus ND/NB Series and GB Series

Use Table 2.1 and the existing rating label (located in the control area) to determine the correct orifice for your appliance.

- Completely loosen the nut securing the orifice with a 5/8 in. wrench (see Figure 5.2).
- Remove the orifice (this may require unfastening the burner or valve), discard and replace it with the appropriate orifice.
- Tighten the nut and return all components to their original position.
- Test for leaks between the valve and burner with the burner lit as indicated in 7.A.



Note: Test fittings for leaks with the pilot lit and the burner off.

C. Burner Orifice - Novus ND/NB & Caliber CD-Series

Use Table 2.2 and the existing rating label (located in the valve compartment) to determine the correct orifice for your appliance.

- For Caliber CD Series remove the two screws so air shutter cover can be removed.
- Using a 1/2 in. wrench, remove the threaded orifice (see Figure 5.3), discard and replace with the appropriate orifice. Make sure the orifice is screwed on completely. Failure to have the orifice completely screwed on will result in the valve plate assembly not fitting together properly.
- Replace air shutter cover (CD Series).

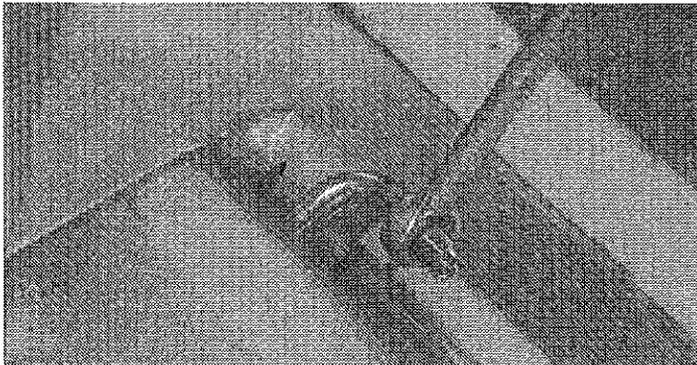


Figure 5.3 Remove the Burner Orifice - Novus ND/NB Series

D. Burner Orifice GB Series

Use Table 2.3 and the existing rating label (located in the control area) to determine the correct orifice for your appliance.

- Using a 3/8 in. wrench, loosen and remove the existing orifice and discard. See Figure 5.4.
- Replace it with the appropriate natural gas orifice and tighten.
- Return the valve assembly to it's original position.

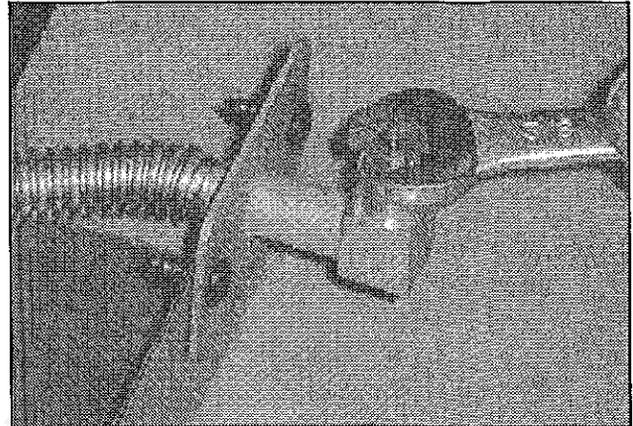


Figure 5.4 Remove the Burner Orifice - GB Series

6 Adjust the Air Shutter

A. GCDC60, GCDC80, CD Series, GDST60, GDFL60, GDCR60, GDCL60, and GDCH60 Series Appliances

To adjust the air shutter, open the lower grille. Turn the air shutter handle clockwise up all the way to open the air shutter (for propane gas), and turn the air shutter handle down counterclockwise completely to close the air shutter (for natural gas). See Figure 6.1.

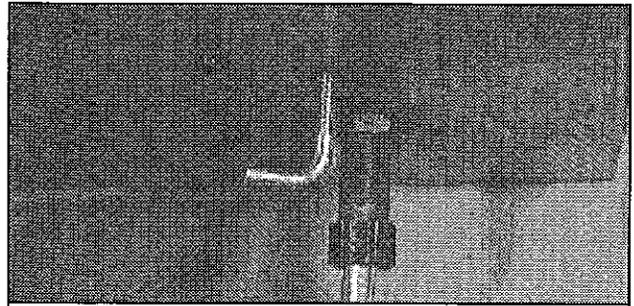


Figure 6.1 Air Shutter Adjustment GCBC, GCDC & CD Series

B. For all appliances other than GCDC, GCBC, Designer and CD Series

- To adjust the air shutter at the base of the burner tube/neck, loosen the 1/4 in. nut, using either a 1/4 in. nut driver or stubby screwdriver.
- Slide the shutter open to 1/4 in. (for natural gas) or fully open (for propane gas).
- Secure.

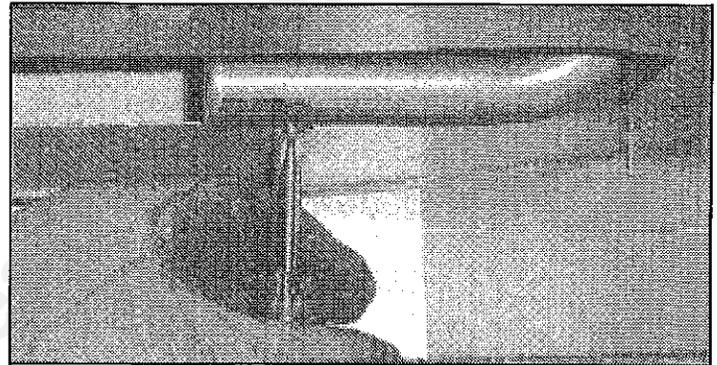


Figure 6.2 Air Shutter Adjustment Novus ND/NB Series

C. Novus ND/NB Series

- Locate the burner tube in the valve compartment. See Figure 6.2.
- Loosen the 1/4 in. nut using a nut driver or stubby screwdriver. The air shutter should be adjusted to 1/8 in. open for natural gas, appliances, 3/8 in. open for propane (30 in. & 33 in.) appliances, and full open for 36 in. & 42 in. propane appliances.
- Tighten the nut to lock the air shutter in position.

D. GB Series

- While the log/grate assembly is out of the appliance, locate the air shutter on the end of the burner. Loosen the screw and adjust the shutter to full open when converting to propane or fully closed when converting to natural gas, and tighten screw. See Figure 6.3.
- Reinstall the log/grate assembly.

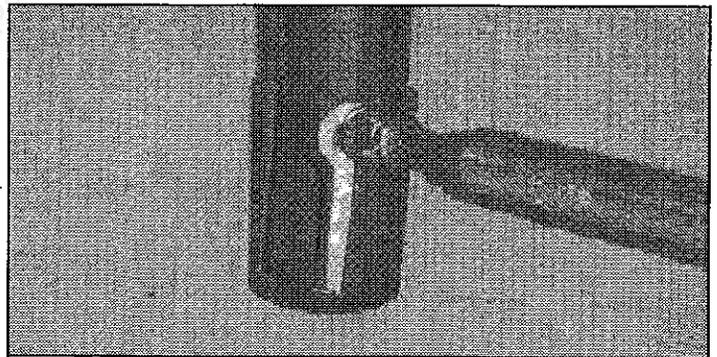


Figure 6.3 Air Shutter Adjustment - GB Series

E. Caliber CD & CB Series - Reinstall Rear Log

The rear log must be installed using the rear set of holes for LP. The front set of holes are used if converting to natural gas. See Figure 6.4.

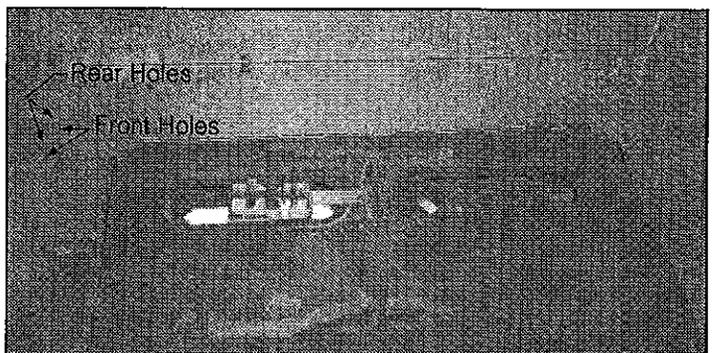


Figure 6.4 Reinstall Rear Log Location

7. Checking Your Conversion

A. Leak Test

	▲ WARNING
	Fire Risk Explosion Risk <ul style="list-style-type: none">All connections must be checked and leaks must be eliminated. <p>Incomplete gas line connections could cause a gas leak.</p>

Turn on the gas for the standing pilot ignition, or turn on gas and electricity for electronic ignition.

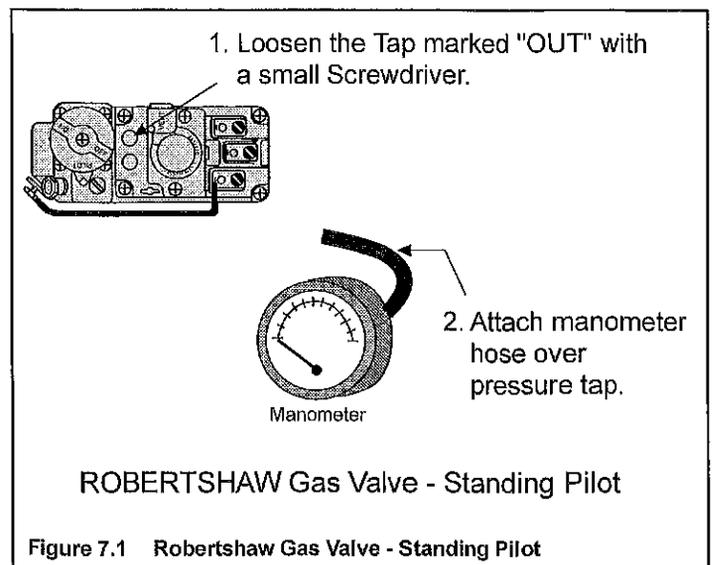
- **Gas Leak Test**
 - All connections must be tightened and checked for leaks with a commercially available, non-corrosive leak check solution. Be sure to rinse off the solution when done leak testing.
 - If the solution indicates there is a leak, tighten and seal the connection and then retest.
- **Leak Test Standing Pilot Ignition Models**
 - Turn position indicator to "PILOT" position and depress. Press the push button ignitor and light the pilot. Continue holding the position indicator in the depressed position until the pilot stays lit (approximately 30 seconds). Test for leaks at the pilot assembly using the method in "Gas Leak Test."
 - Turn the position indicator to the "ON" position and test for leaks at the valve and the burner orifice using the method in "Gas Leak Test."
- **Leak Test Electronic Ignition Models**
 - Turn on the main burner and test for leaks at the valve and the burner orifice using the method in "Gas Leak Test."

B. Checking the Pressure

	▲ WARNING	
	Fire Risk Explosion Risk Asphyxiation risk	
Ensuring correct pressures is imperative!		

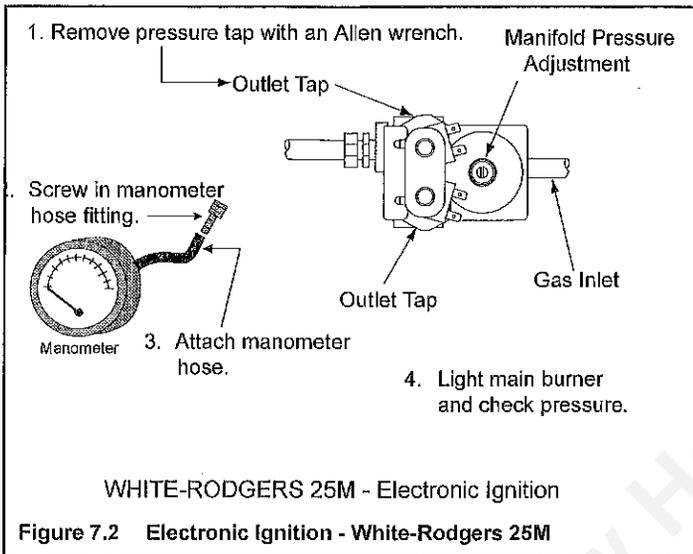
The gas input, inlet gas supply pressure and manifold pressure must be as indicated on the rating label located in the control area of the appliance. Any other input, inlet pressure or manifold pressure could cause your gas appliance to operate other than intended and could cause serious injury or property damage.

- **Verify the Inlet Pressure - Standing Pilot Models**
 - Verify that the gas valve is set at the "PILOT" position.
 - Verify the inlet gas supply pressure by loosening the screw located inside the inlet pressure tap (see Figure 7.1).
 - Connect a manometer to the inlet pressure tap by pushing the manometer hose over the pressure tap.
 - Turn the valve to the "ON" position. If the inlet gas pressure is incorrect, **DO NOT** adjust without specific approval and instruction from the gas supplier. Changing the inlet pressure may affect other appliances in the residence.
 - When finished, disconnect the manometer and tighten the inlet pressure tap screw.



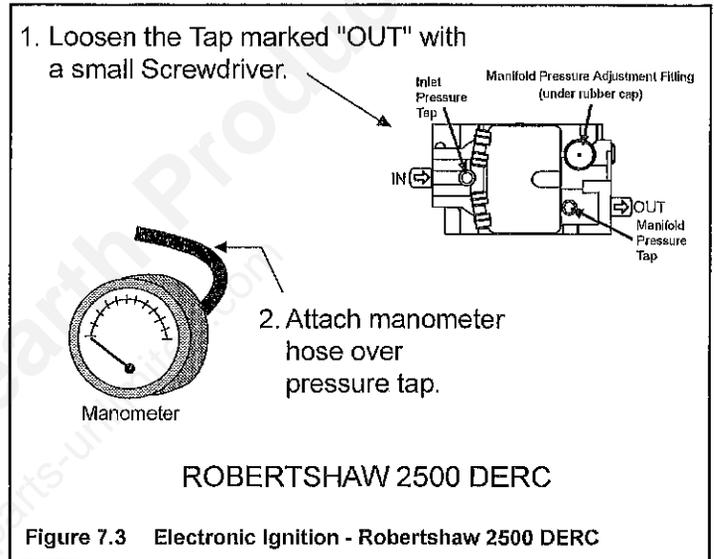
- **Verify the Inlet Pressure - Electronic Ignition (White-Rodgers 25M)**

- Verify the inlet gas supply pressure by connecting a manometer to a tap located before the valve (see Figure 7.2). Tap is not supplied.
- If the inlet gas pressure is incorrect, **DO NOT** adjust without specific approval and instruction from the gas supplier. Changing inlet pressure may affect other appliances in the residence.
- When finished, disconnect the manometer and remove inlet pressure tap.



- **Verify the Inlet Pressure - Electronic Ignition (Robertshaw 2500 DERC)**

- Verify the inlet gas supply pressure by loosening the screw located inside the inlet pressure tap (see Figure 7.3).
- Connect a manometer to the inlet pressure tap by pushing the manometer hose over the pressure tap.
- If the inlet gas pressure is incorrect, **DO NOT** adjust without specific approval and instruction from the gas supplier. Changing inlet pressure may affect other appliances in the residence.
- When finished, disconnect the manometer and tighten the inlet pressure tap screw.



8 Attaching Labels

All labels must be filled out and/or installed by the individual completing the conversion. This must be finished or the conversion is not complete. See Figures 8.1-8.7.

- Fill out the installer conversion label (Figure 8.1). After filling out the label, clean an area near the existing rating label and attach.
- Attach the valve manufacturer conversion labels as indicated in Figures 8.2-8.5.
- Locate the lighting instruction card and attach the gas type label (included with this conversion kit, Figures 8.6 and 8.7) over the existing Natural Gas or LP label.

CKN	CKGP	DCKGP	DCKVN	CKMAX6N
CKP	CKMP	DCKN	DCKVP	CKMAX6P
CKVN	CKMN	DCKP	DCKVNNXT	DCKVNNXTPLUS
CKVP	MHCK		DCKVPNXT	DCKVPNXTPLUS

THIS PLATE MUST BE AFFIXED AS CLOSE AS POSSIBLE TO THE EXISTING RATING PLATE.

THE FOLLOWING MUST BE COMPLETED BY THE INDIVIDUAL CONVERTING THIS APPLIANCE:

THIS APPLIANCE HAS BEEN CONVERTED TO _____ FUEL, ORIFICE _____, MANIFOLD PRESSURE _____, AND INPUT _____, ON _____ (date), WITH KIT # CKVP, CKVN, CKN, CKP, CKMAX6N, CKMAX6P, DCKP, DCKN, DCKGP, CKGP, CKMP, MHCK, CKMN, DCKVN, DCKVP, DCKVNNXT, DCKVPNXT, DCKVNNXTPLUS, DCKVPNXTPLUS (circle one), BY (name & address of organization making this conversion)

WHO ACCEPTS THE RESPONSIBILITY FOR THE CORRECTNESS OF THIS CONVERSION. 27361H

Figure 8.1 Conversion Label

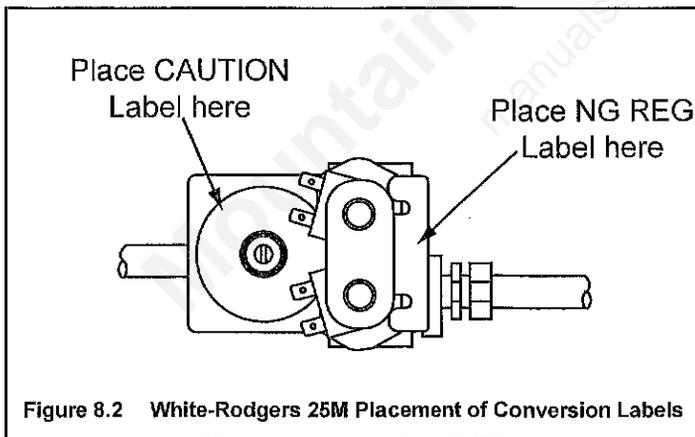


Figure 8.2 White-Rodgers 25M Placement of Conversion Labels

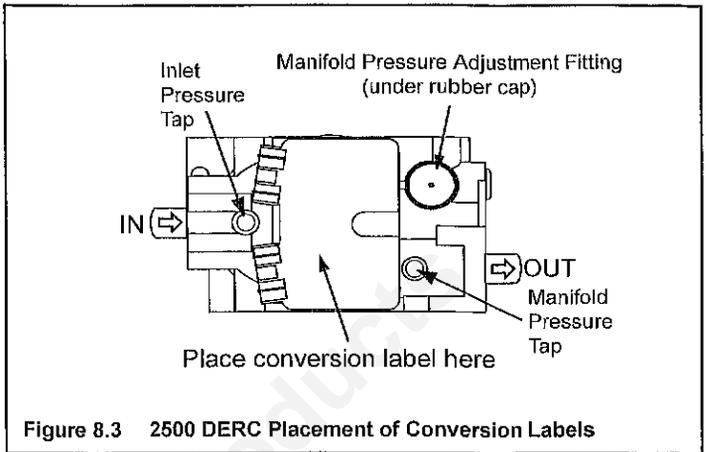


Figure 8.3 2500 DERC Placement of Conversion Labels

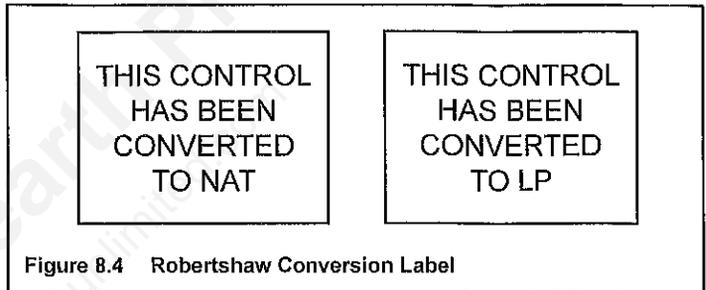


Figure 8.4 Robertshaw Conversion Label

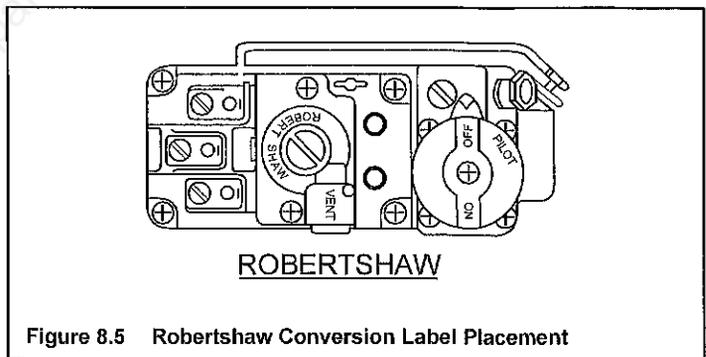


Figure 8.5 Robertshaw Conversion Label Placement

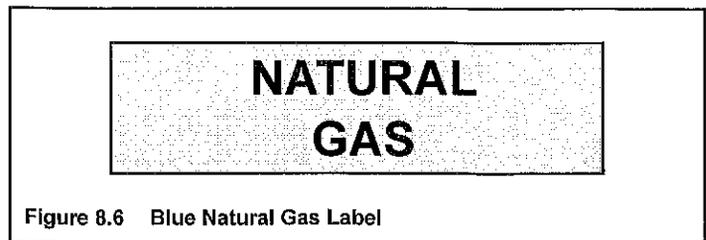


Figure 8.6 Blue Natural Gas Label

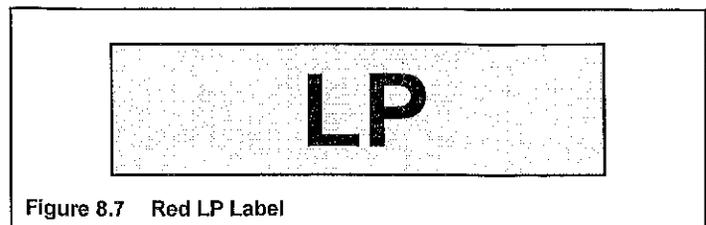


Figure 8.7 Red LP Label

Mountain View Hearth Products
manuals.stove-parts-unlimited.com