

Prestige Gas Valve Replacement



Kit Part Number	Description	Model
PTRKIT111	Gas Valve Replacement	Prestige 250
TCRKIT18	Gas Valve Replacement	Prestige 299/399

Each Kit Includes:

- Gas Valve
- Gas Valve Gasket
- Venturi/Blower Gasket
- Gas Valve Screws

Recommended Tools:

- Adjustable Wrench
- Torx Screwdriver
- Phillips Head Screwdriver

WARNING

Indicates a potentially hazardous situation which, if ignored, can result in serious injury or substantial property damage.

NOTICE

Indicates special instructions on installation, operation or maintenance, which are important to equipment but not related to personal injury hazards.

WARNING

For your safety, turn off electrical power supply at service panel and allow unit to cool before proceeding to avoid possible electrical shock and scald hazard. Failure to do so can cause severe personal injury or death.

WARNING

Failure to follow instructions below can result in severe personal injury or damage if ignored.

- Instructions are for a qualified installer/ service technician only.
- Read all instructions before proceeding.
- Follow instructions in proper order.

Prestige Gas Valve Replacement



1. Preliminary Instructions:

1. Verify that the Gas Valve replacement kit is correct for the model of boiler. See table on page 1.
2. Carefully open and unpack the PARTS BOX from its shipping carton.
3. Carefully remove and check for any damage.

NOTICE

Do not proceed with installation and contact Triangle Tube right away if the gas valve is damaged in any way.

4. Turn off the electrical power supply to the boiler.
5. Close the manual gas shut off valve to the unit.

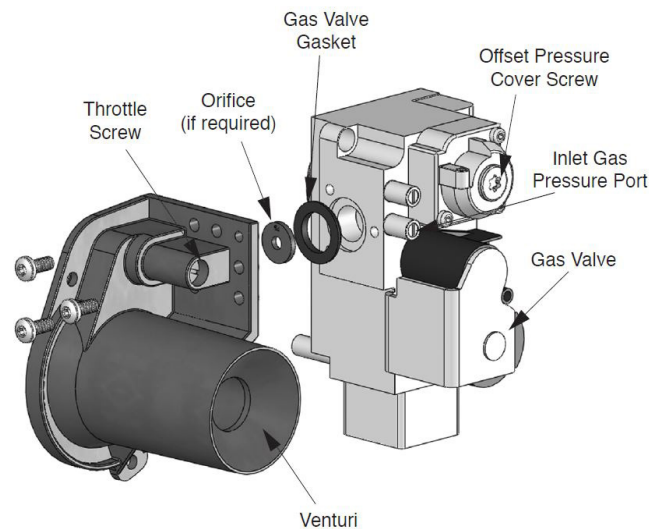


Fig. 1: Prestige 250

2. Gas Valve Removal Instructions:

1. Remove the front jacket panel.
2. Disconnect the Molex plugs to the gas valve.
3. Remove the screws/nut securing the gas valve from the gas valve piping below. Discard the gas valve gasket as a replacement is included in the kit.
- 4a. (Prestige 250) Remove the three screws securing the gas valve from the venturi. Discard the gas valve gasket as a replacement is included in the kit. Do NOT discard the Orifice or gasket as it will be reused.
- 4b. (Prestige 299/399) Remove the four screws securing the gas valve from the piping to the venturi. Discard the gas valve gasket as a replacement is included in the kit.
5. Remove the old gas valve from the unit.

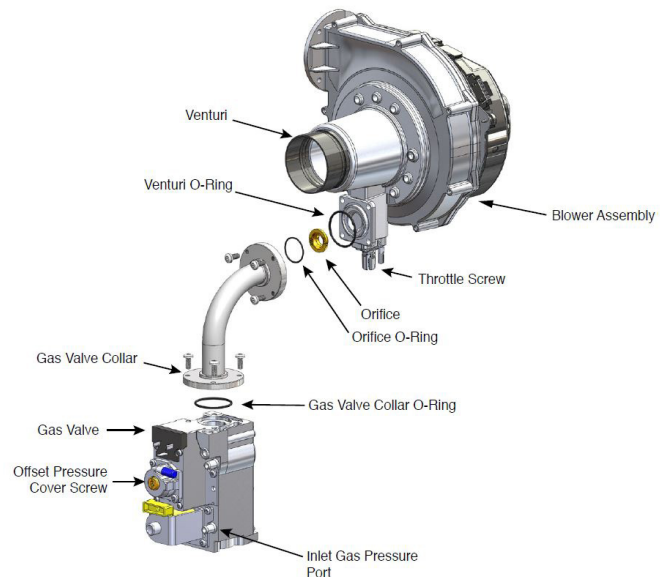
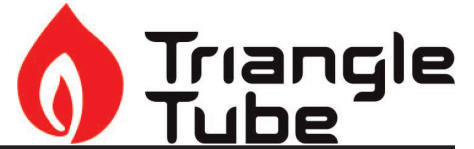


Fig. 2: Prestige 299-399

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3. Gas Valve Installation Instructions:

- 1a. (Prestige 250) Install the orifice and orifice gasket between the gas valve and venturi. Tighten the three screws securing the gas valve to the venturi.



Ensure the orifice is installed with the gasket as previously installed. Installing the orifice incorrectly can result in improper combustion and can result in substantial property damage, serious injury, or death.

- 1b. (Prestige 299/399) Insert a new o-ring between the gas valve and gas piping. Tighten the four screws securing the gas valve to the venturi.
2. Tighten the screws to secure the gas valve to 31-35 in-lbs of torque.
3. Insert a new gasket between the gas valve and gas piping. Tighten the screws/nut securing the gas valve from the gas valve piping below.



For the reassembly process do not use adhesive on any gasket surface.



Ensure the o-ring/gasket are in place before reassembly. Failure to do so can result in death, serious injury or substantial property damage.



Ensure the gas valve is properly sealed in order to prevent a gas leak. Gas leaks can result in death, serious injury or substantial property damage.

4. Reconnect the Molex plug to the gas valve.
5. Open the main shutoff valve to the gas supply piping. Before placing the boiler back into service check and test all gas piping connections for leaks. Repair leaks if found.



Do not check for gas leaks with an open flame. Use a bubble test. Failure to check for gas leaks can cause severe personal injury, death or substantial property damage Combustion Test and Adjustments

4. Combustion Test and Adjustments



The installer MUST perform a complete combustion check to ensure the following combustion levels are met at high and low input firing rates and the burner is operating at optimum conditions.

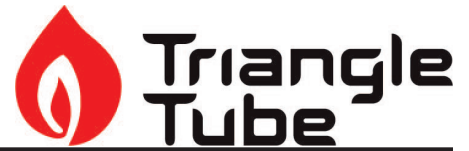
Table 1: Recommended Combustion Settings

		NG All Modes	Propane 250/299	Propane 399
High Fire	CO ₂ Range	8.8 to 10.5%	10.7 to 12.0%	10.4 to 11.4%
	CO ₂ Target	9.2%	11.0%	
	O ₂ Range	2.3 to 5.3%	2.7 to 4.7%	3.7 to 5.2%
	O ₂ Target	4.6%	4.2%	
	CO Max	100 ppm	150 ppm	
Low Fire	CO ₂ Range	0.5 to 0.6% Lower than or equal to High Fire CO ₂ level		
	O ₂ Range	0.8 to 0.9% Higher than or equal to High Fire CO ₂ level		



The combustion testing and adjustments must be performed by a qualified installer, service agency or the gas supplier. All combustion measurements must be performed with calibrated equipment to ensure proper readings and accuracy.

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WARNING

Failure to perform a complete combustion test at both high and low input rates may result in incomplete combustion and the production of carbon monoxide, which can cause severe personal injury, death or substantial property damage.

1. Press the round INSTALLER button.

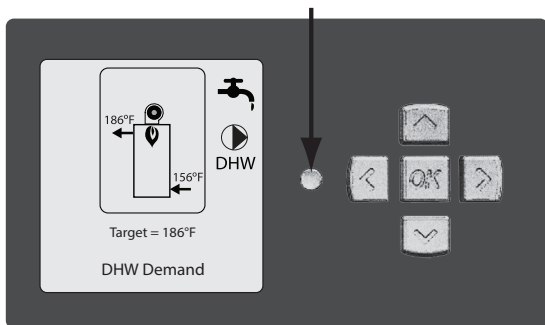


Fig. 3: Navigation Buttons

2. Enter the installer access code "054" by using the LEFT and RIGHT buttons to select a digit and the UP and DOWN buttons to change the digit. Press the OK button to enter the access code.
3. Press the RIGHT button to highlight the Manual Operation icon then press the OK button.
4. Press the OK button while the FAN icon is highlighted to manually fire the burner and power the CH1 circulator (see Fig. 6)

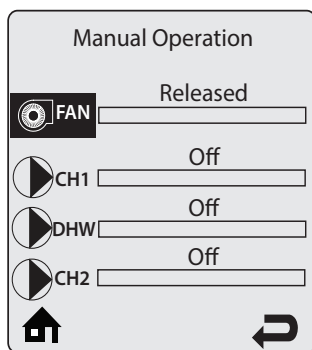


Fig. 4: Manual Operation

NOTICE

An adequate CH load must be present to dissipate the heat generated during the combustion test. If an adequate CH load is not available an indirect water heater can be used to dissipate the heat by creating a DHW call which will enable the DHW circulator.

5. Press the RIGHT button to adjust the firing rate to 100% (high fire). Hold down the RIGHT button to rapidly increase the firing rate.
6. If the combustion levels during high fire are outside the recommended combustion settings adjust the THROTTLE SCREW using a flat-blade screwdriver as follows:

Counter-clockwise adjustment of the THROTTLE SCREW at High Fire (100% firing rate):

O₂ decreases and CO₂ increases

Clockwise adjustment of the THROTTLE SCREW at High Fire (100% firing rate):

O₂ increases and CO₂ decreases

7. Once the combustion level is set at high fire, manually place the boiler into low fire mode by pressing the LEFT button to adjust firing rate down to 1% (low fire) to verify low fire combustion settings.
8. If the combustion levels (O₂ & CO₂) during low fire are outside the recommended combustion settings in Tables 2, contact Triangle Tube Technical Support Department for assistance.
9. Press the OK button while the fan icon is highlighted to shutdown the burner.
10. 11. Press the LEFT or RIGHT button to highlight the home screen icon to exit the service mode.
11. Replace the front jacket panel and secure with screws.

12. Turn on the electrical power supply to the Prestige boiler and return the unit back to service.