



Prestige SOLO 299/399 ACVMax Boilers Natural to Propane Instructions

Applicable Kit Part Number:

- PARKIT67

Kit Includes:

- Rating Label
- Conversion Label
- (1) Propane Gas Orifice
- T-25 Torx Wrench

Recommended Tools

- Adjustable Wrenches
- Phillips-Head Screwdriver
- Flat-blade Screwdriver
- Calibrated Combustion Analyzer

WARNING

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

NOTICE

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

WARNING

Failure to follow instructions below can result in substantial property damage, serious injury, or death.

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

NOTICE

Upon completion of the conversion from Natural Gas (NG) to Propane (LP), affix the new rating label included in the kit to the unit adjacent to the existing rating label. **DO NOT** affix the new label over the existing rating label. Add propane conversion labeling to the gas valve.

WARNING

For your safety, turn off electrical power supply at service panel before proceeding to avoid possible electrical shock hazard. Failure to do so can result in substantial property damage, serious injury, or death.

NOTICE

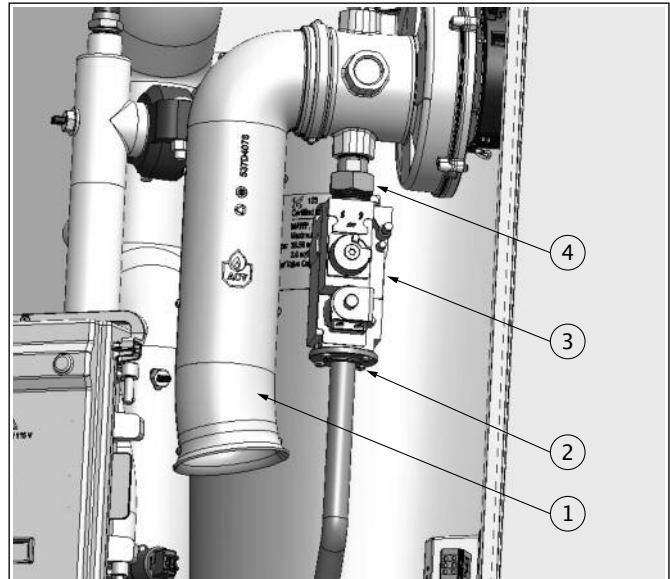
These instructions cover NG to LP conversion for ACVMax controlled Prestige Solo 299 & 399 boilers only. Each kit is supplied with one orifice suitable for use with that particular boiler model.

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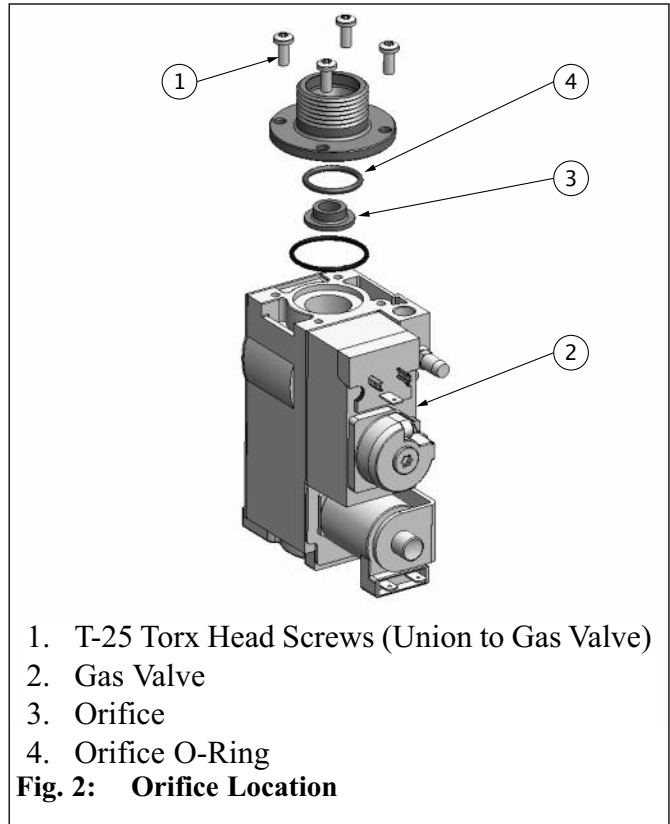
1.0 Installation of the Propane Orifice

1. Turn off the electrical power supply to the boiler.
2. Close the manual gas shut off valve to the unit.
3. Remove the front panel of the Prestige by removing the screws along the bottom edge of the unit. Pull the bottom of the panel forward and then lift up to remove the front panel from the unit.
4. Remove the air inlet elbow (Fig 1, Item 1) from the venturi using a twist and pull motion.
5. Remove four (4) electrical plugs and one (1) ground wire connection from gas valve.
6. Disconnect the gas supply piping inside the Prestige enclosure at the brass union located just above the gas valve. See Fig. 1.
7. Remove the four (4) T-25 Torx head screws used to mount the gas supply piping to the bottom of the gas valve. Do not discard the screws. Remove the gas valve assembly from the gas piping. See Fig. 1.
8. Remove the four (4) T-25 Torx head screws attaching the brass union collar to the top of the gas valve. Do not discard the screws. Remove the brass natural gas orifice from the underside of the brass union collar. See Fig. 2.
9. Install the appropriate brass propane orifice from Table 1 in the gasket between the brass union collar and the venturi. The rubber o-ring must remain attached to the brass union collar. See Fig. 2.



1. Air Inlet Elbow
2. T-25 Torx Head Screws (Gas Valve to Gas Piping)
3. Gas Valve
4. Brass Union

Fig. 1: Prestige Gas Valve/Piping Assembly



1. T-25 Torx Head Screws (Union to Gas Valve)
2. Gas Valve
3. Orifice
4. Orifice O-Ring

Fig. 2: Orifice Location

Table 1: Propane Gas Orifice

Model	Orifice Size
Solo 299/399	0.315 inch (8.0 mm)

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⚠ WARNING

Failure to retain both rubber o-rings on the brass union collar will cause an improper seal between the piping and gas valve resulting in a potential risk of a gas leak. Any potential gas leakage can result in substantial property damage, serious injury, or death.

⚠ WARNING

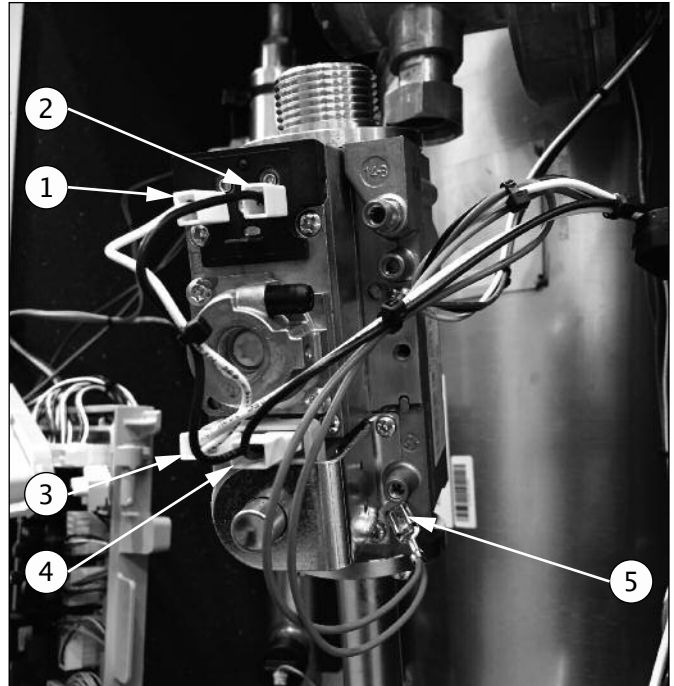
Ensure the proper orifice for the model is installed per Table 1 on page 2. Failure to comply will affect input rate and combustion of the boiler which can result in substantial property damage, serious injury, or death.

10. Reassemble the brass union collar onto the gas valve using the four (4) T-25 Torx head screws. Ensure the o-rings are properly placed and in good condition.
11. Place the gas valve between the brass union and the gas supply piping. Retighten the union just above the gas valve and install the four (4) T-25 Torx head screws to attach the gas supply piping to the gas valve.
12. Reconnect the gas valve electrical connections as shown in Fig. 3.
13. Open the manual gas shut off valve. Before placing the Prestige boiler back into operation check and test all gas connections for leaks. Repair leaks if found.

⚠ WARNING

Do not check for gas leaks with an open flame. Use a bubble test. Failure to check for gas leaks can result in substantial property damage, serious injury, or death.

14. Reattach the air inlet elbow to the venturi.
15. Replace the front jacket panel and secure with screws.
16. Turn on the electrical power supply to the Prestige boiler and return the unit back to service.



1. Single White Wire
2. Single Black Wire
3. Double White Wire
4. Double Black Wire
5. Double Green Wire

Fig. 3: Gas Valve Electrical Connections

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2.0 Combustion Test and Adjustments

- The installer **MUST** perform a complete combustion check to ensure the following combustion levels in Tables 2 and 3 are met at high and low input firing rates and the burner is operating at optimum conditions.

Table 2: Recommended Propane Combustion Settings

		PA 299	PA 399
High Fire	CO ₂ Range	10.7 to 12.0%	10.4 to 11.4%
	CO ₂ Target	11.0%	
	O ₂ Range	2.7 to 4.7%	3.7 to 5.2%
	O ₂ Target	4.2%	
Low Fire	CO ₂ Range	0.5 to 0.6% Lower than H.F. CO ₂	
	O ₂ Range	0.8 to 0.9% Higher than H.F. O ₂	
	CO Max	150 ppm	

⚠ WARNING

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.

⚠ 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 result in substantial property damage, serious injury, or death.

⚠ WARNING

The combustion levels should be measured at high firing rate. If the combustion levels are not within the range given in Table 2 for Low Fire after adjusting High Fire, shut the boiler down and contact Triangle Tube Technical Support Department. Failure to comply with this requirement can result in substantial property damage, serious injury, or death.

⚠ WARNING

The gas valve outlet pressure is factory set to the correct value and does not require field adjustment or measurement. Measurement or adjustments could result in damage to the gas valve and can result in substantial property damage, serious injury, or death.

- Press the round INSTALLER button. See Fig. 4.

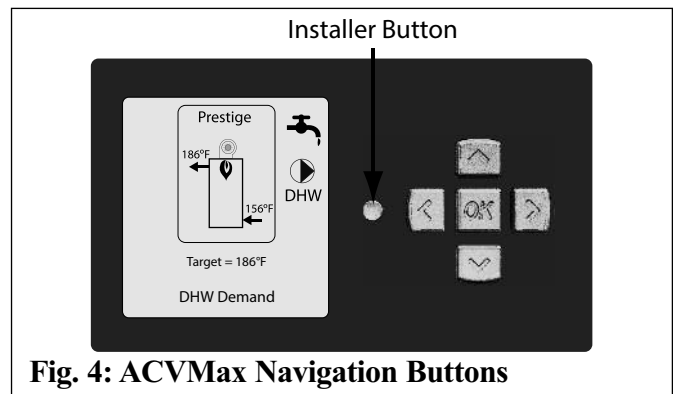


Fig. 4: ACVMax Navigation Buttons

- 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.
- Press the **RIGHT** button to highlight the Manual Operation icon then press the **OK** button.
- Press the **OK** button while the FAN icon is highlighted to manually fire the burner and power the CH1 circulator (see Fig. 5)

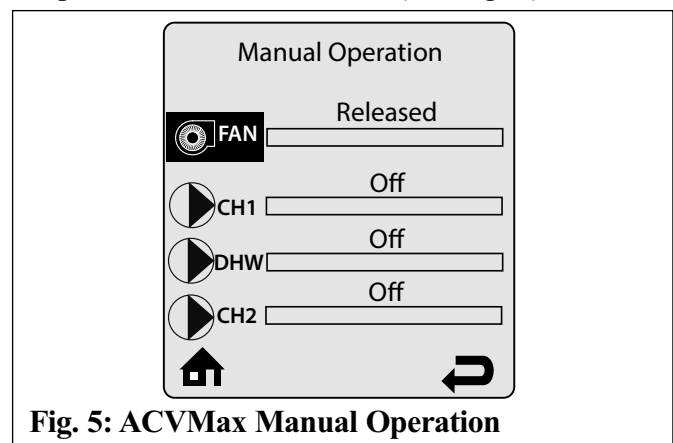


Fig. 5: ACVMax Manual Operation

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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.


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

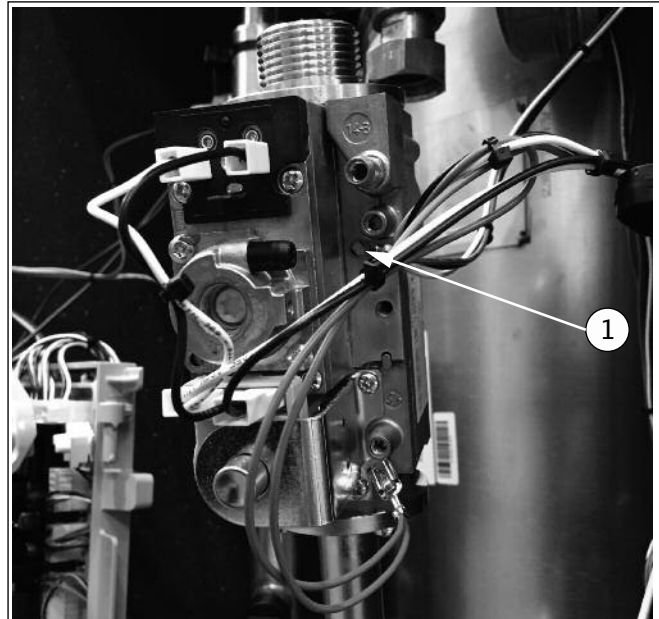
Counter-clockwise adjustment of the THROTTLE SCREW at High Fire (100% firing rate):

O₂ decreases and CO₂ increases

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

O₂ increases and CO₂ decreases

8. 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.
9. If the combustion levels (O₂ & CO₂) during low fire are outside the recommended combustion settings in Tables 2 & 3, contact Triangle Tube Technical Support Department for assistance.
10. Press the **OK** button while the fan icon is highlighted to shutdown the burner.
11. Press the **LEFT** or **RIGHT** button to highlight the home screen icon  to exit the service mode.



1. Throttle Screw

Fig. 6: Combustion Adjustment - Prestige Burner