

Natural Gas to Propane Conversion Kit for PERFORMANCE Products



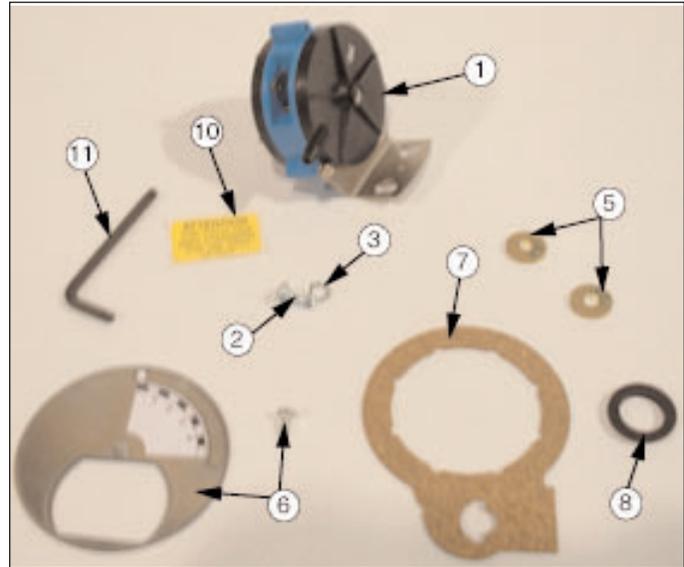
Kit Part Number PGRKIT07

Parts List

1. 3.35 inch pressure switch (blue label)
2. Self tapping screw.
3. Lock washer.
4. Wire tie. (not shown)
5. Propane orifices
6. Adjustable air shutter with screw.
7. Venturi to blower housing gasket
8. Orifice gasket.
9. Rating label.(not shown)
10. Propane label for the gas valve.
11. # 25 torex wrench.

Recommended tools:

- A. Pipe wrench.
- B. Phillips screw driver.
- C. Needle nose pliers.
- D. Flat bladed putty knife.
- E. # 25 torex wrench. (Furnished in kit.)



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

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

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

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 cause severe personal injury or death.

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Instructions:

1. Turn power to the unit "OFF".
2. Shut off gas supply to the inlet of the unit at the main manual shutoff valve.
3. Disconnect the gas supply piping to the PERFORMANCE product.
4. Remove air inlet elbow from the venturi.
5. Unscrew the Phillips screw attaching the rectifier plug to the gas valve and remove the plug.
6. Remove the two screws attaching the venturi/gas valve assembly from the blower housing. Remove the venturi/ gas valve assembly from the blower housing. Use torex wrench supplied in kit to remove screws.

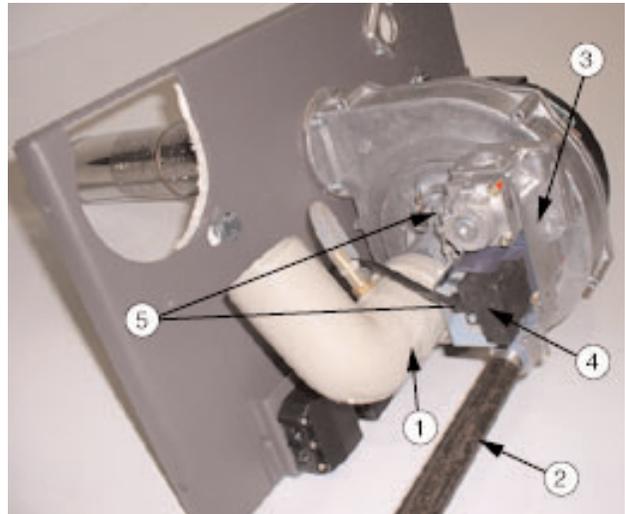
NOTICE

There is a gasket between the venture and blower housing. If the gasket "sticks" to the blower housing use a flat bladed putty knife to remove any gasket material. Make sure not to scratch or score the mating surface on the blower housing.

7. Remove the three screws attaching the gas valve to the venturi. Use torex wrench supplied in kit to remove screws. Note orientation of the venturi to the gas valve for reassembly.
8. Determine which propane orifice to use based on Chart 1.

Chart 1: Propane Orifice

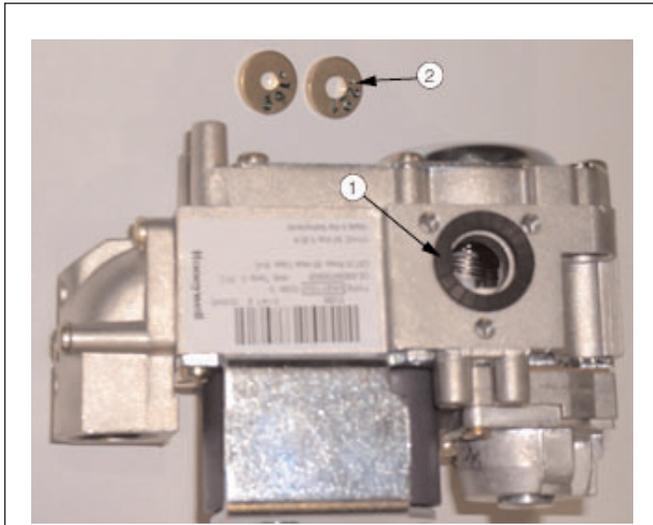
Model	Orifice size
PG-25/30/35	0.169"
PG-40/45	0.221"
PG PLUS-25/30/35	0.185"
PG PLUS-40/45	0.221"



1. Air inlet elbow
2. Gas inlet pipe
3. Gas valve
4. Rectifier plug and philips head screw
5. Venturi mounting screws. Attaching gas valve/venturi to blower/motor assembly. (two screws)

Photo 1

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1. Orifice gasket
2. Brass propane orifices are shown. Only use one orifice as per Chart 1

Photo 2

9. With the orifice gasket and correct propane orifice in place take the gas valve and three screws from the kit and reassemble the gas valve to the venturi

WARNING

Make sure the orifice gasket is in place with the correct brass propane orifice before reassembling the gas valve and venturi. Failure to do so can result in death, serious injury or substantial property damage.

WARNING

Failure to insert the brass orifice before reassembling the gas valve and venture can result in the production of carbon dioxide due to incomplete combustion and may result in death, serious injury or substantial property damage.

10. With the venturi to blower housing gasket in place reassemble the venturi/gas valve to the blower housing.

NOTICE

For the reassembly process do not use adhesives on ANY gasket surface .

11. Reconnect the rectifier plug to the gas valve using the Philips head screw.
12. Reattach air inlet elbow to the venturi

Reference Chart 2 to determine if the pressure switch needs to be replaced with a switch from the kit.

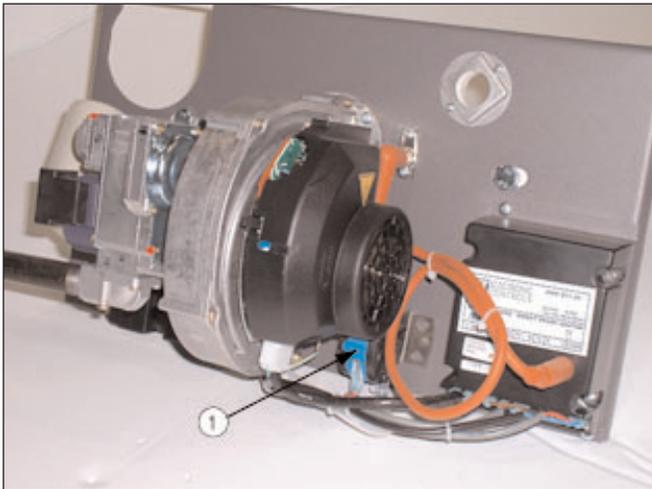
If from Chart 2 it has been determined the pressure switch does not require replacing then proceed to step 19 .

13. Remove the two wire leads from the pressure switch. (Photo 2)
14. Remove the rubber tube from the pressure switch.
15. Unscrew the self tapping screw attaching the pressure switch to the burner mounting plate. Discard the old pressure switch.
16. Insert the self tapping screw into the pressure switch mounting bracket and then place the lock washer between the mounting bracket and burner mounting plate before reassembly. Tighten the screw.

NOTICE

For proper operation the pressure switch should be fastened in the vertical position. The lock washer will help to “hold” the pressure switch in place while tightening the bracket.

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1. Pressure switch

Photo 3

17. Attach the rubber tube to the barbed fitting on the pressure switch. Use the wire tie to hold the tube on the back side of the barbed fitting.

18. Attach the two wire leads to the pressure switch.

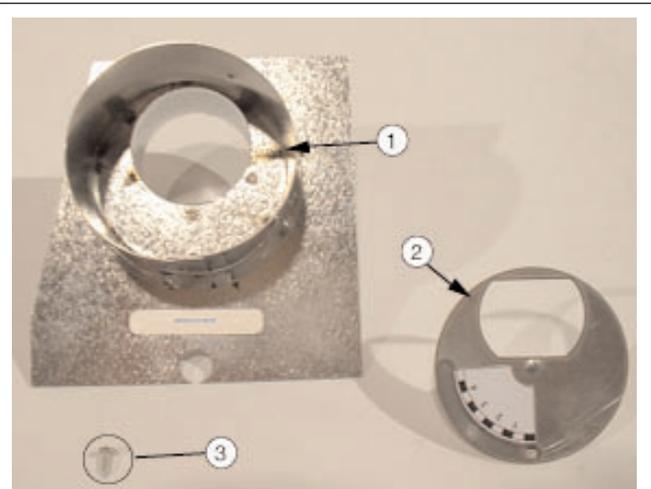
19. Installation of Air Shutter (if applicable)
a. Disconnect and remove the air inlet duct system from the air inlet adapter located on the upper left portion of the unit.

b. Place the air shutter into the air adapter. With the air shutter set at "0" the air shutter should be centered over the 2" air inlet. Use the self-tapping screw to secure the air shutter into position.

c. Preset the air shutter per the recommended setting listed in Table 3.

20. Replace the rating label on the PERFORMANCE unit with the new rating label from the kit.

21. Add propane conversion label to the side of the gas valve.



1. Air inlet

2. Adjustable air shutter

3. Screw for adjustable air shutter

Photo 4

22. Using pipe dope compatible with propane gas reconnect the gas supply piping to the PERFORMANCE product.

23. Before placing the PERFORMANCE unit 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 cause severe personal injury, death or substantial property damage.

24. Ensure the vent system and air inlet duct are fully assembled and installed prior to the start up of the PERFORMANCE burner.

25. With the unit running and at operating temperature, ensure the following combustion levels are met and the burner is operating at optimum conditions:

O₂ - 4.0% to 4.5%

CO₂ - 11% to 11.5% (propane)

CO - 0 to 50 ppm

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WARNING

Failure to perform a complete combustion-test and setting the burner per the above recommended levels may result in incomplete combustion and the production of CO, which can cause severe personal injury, death or substantial property damage.

26. If applicable remove the air inlet duct and adjust the air shutter to achieve the recommended combustion levels. Rotation of the air shutter counter clockwise will decrease the O2 level. The CO2 level will response opposite of the O2 level.

NOTICE

Ensure the setscrew on the air shutter is tightened fully. Ensure the air inlet duct is fully assemble and connected to the air inlet adapter prior to conducting the combustion test.

WARNING

If the O2 level is measured below 4.0% with an air shutter setting of 0 or without any air shutter, contact Triangle Tube's Engineering Department immediately. Do not attempt any further adjustments.

Table 2 - Pressure Switch Requirement

Model	Natural Gas (inches w.c.)	Propane (inches w.c.)	High Altitude (Above 5,000 ft.)	
			Natural Gas (inches w.c.)	Propane (inches w.c.)
PG-25	1.84	3.35	N/A	N/A
PG-30	1.84	3.35	2.7	3.35
PG-35	1.84	3.35	3.35	3.35
PG-40	2.7	3.35	2.7	2.7
PG-45	2.7	3.35	2.7	2.7
PG PLUS-25	1.84	1.84	N/A	
PG PLUS-30	2.7	2.7		
PG PLUS-35	2.7	2.7		
PG PLUS-40	2.7	3.35		
PG PLUS-45	2.7	3.35		

Pressure Switches can be identified as the label outline color:
 Yellow - 1.84 inches
 Red - 2.7 inches
 Blue - 3.35 inches

N/R - Not Required
 N/A - Not Applicable

Table 3 - Recommended Air Shutter Settings

Model	Natural Gas (inches w.c.)	Propane (inches w.c.)	High Altitude (5,000 ft. elevation)		High Altitude (8,000 ft. elevation)		High Altitude (9,000 + ft. elevation)	
			Natural Gas (inches w.c.)	Propane (inches w.c.)	Natural Gas (inches w.c.)	Propane (inches w.c.)	Natural Gas (inches w.c.)	Propane (inches w.c.)
PG-25	N/R	3.5	N/A	N/A	N/A	N/A	N/A	N/A
PG-30	N/R	3.5	3.5	3.5	3.5	4.0	N/A	N/A
PG-35	N/R	3.5	3.2	3.5	3.5	3.75	N/A	N/A
PG-40	N/R	N/R	2	0	0	0	N/A	N/A
PG-45	N/R	N/R	0	0	0	0	0	0
PG PLUS-25	2.5	2.5	N/A	N/A	N/A	N/A	N/A	N/A
PG PLUS-30	2.5	2.5	N/A	N/A	N/A	N/A	N/A	N/A
PG PLUS-35	1.0	2.0	N/A	N/A	N/A	N/A	N/A	N/A
PG PLUS-40	N/R	0.0	N/A	N/A	N/A	N/A	N/A	N/A
PG PLUS-45	N/R	0.0	N/A	N/A	N/A	N/A	N/A	N/A

N/R - Air Shutter not required
 N/A - Not Available