



Prestige

Off Board Spark Ignition Kit Installation Instructions

Kit Part Number

Kit numbers vary based on boiler size. Additional differences are needed at higher altitudes. Use the table below to confirm the correct replacement kit is installed on the boiler.

	Low Altitude (0 - 5,000 ft)	Hi Altitude (5,000 + ft)
PA 80	PARKIT141	PARKIT151
PA 110	PARKIT142	PARKIT152
PA Excellence	PARKIT142	PARKIT152
PA 155	PARKIT143	PARKIT153
PA 175	PARKIT144	PARKIT154
PA 250	PARKIT145	PARKIT155
PA 299 V2*	PARKIT146	PARKIT156
PA 399 V2*	PARKIT147	PARKIT157
PA 299 V1*	PARKIT148	PARKIT158
PA 399 V1*	PARKIT149	PARKIT159

Table 1 - Kit Numbers

*See paragraph 1.1 for more details.



Indicates the presence of a hazardous situation which, if ignored, will result in substantial property damage, serious injury, or death.



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.

1.1. V1 and V2 PA299 and PA399 Boilers

There are two different blower/venturi arrangements that result in two different required ignition kits. The separate blower and venturi (V2) configuration applies to PA299s and PA399 with serial numbers after PA11700. Units with serial numbers below PA117000 have a single piece blower venturi (V1). Some V1 models may have been converted to the V2 configuration as well.

Before installing the ignition kit, confirm your blower/venturi configuration. See Engineering Bulletin dated Oct. 24, 2018 for more information.



Installation of the wrong replacement kit will cause the improper operation of the boiler resulting in substantial property damage, serious injury, or death.

1.2. Purpose

This kit (see Fig. 1 for details) replaces the existing igniter and its wiring, as well as the printed circuit board and the front cover of the control box on all Prestige boilers.

NOTICE

This modification disables the Alarm Relay function which is used in several system configurations. Therefore, to allow the heating system configuration to be operational, some wire connections must be modified and some CTRL-Max settings changed, as required. Please refer to paragraph 1.6 for more information.

PRESTIGE SOLO & EXCELLENCE IGNITION KIT - INSTALLATION INSTRUCTIONS

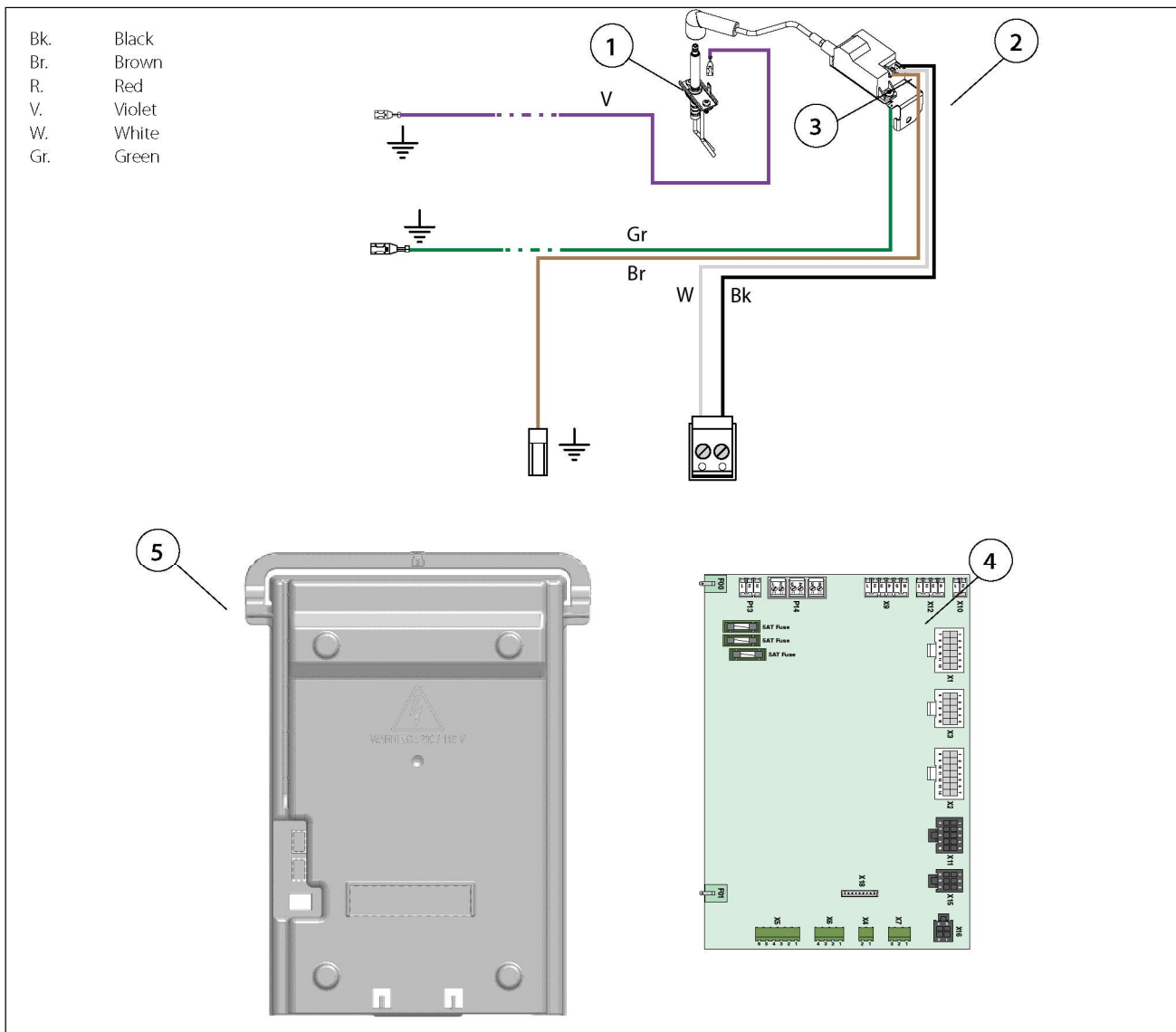


Fig. 1 - Prestige Solo & Excellence - Ignition Kit

Item	Description	Qty
	Igniter	1
1	Screws, igniter	2
	Gasket, igniter	1
2	Bracket, spark generator	1
3	Spark generator	1
	Wiring, spark generator	1
4	Printed circuit board, ACVMax	1
5	Cover, front, control box	1
	Connector, Fast-on (not illustrated)	2
6	"PB" Sticker, S/N adaptation (not shown)	1
7	Combustion Chamber Insulation/gasket (not shown)	1

PRESTIGE SOLO & EXCELLENCE IGNITION KIT - INSTALLATION INSTRUCTIONS

1.3. Initial task

Write down all the appliance settings and the chosen configuration for reference before bringing any change to the appliance. A reference table is provided on the last page of this document.

1.4. Boiler preparation

1.4.1 Required Tools and Material

- Flathead and Phillips Screwdriver
- Torx 20 Wrench

1.4.2 Combustion Chamber Insulation

1. The Ignition kit is shipped with a new combustion chamber 2in1 insulation/gasket. This may need to be installed with the new ignition kit. Boilers with serial number before those listed in the table below need to be replaced.

Model	Serial Number
PA80	PA132660
PA110	PA131779
PA155	PA13163
PA175	PA127120
PA250	PA137281
PA299	PA127280
PA399	PA128691
PA Excellence	PA131819

2. If the Prestige serial number is after the listed number above, no change is required to the insulation/gasket.
3. Refer to the installation manual for installation procedure.

1.4.3 Procedure

4. Turn the boiler off by pressing the power switch
5. Disconnect electrical power at the external electric box



- **Avoid electrical shock by disconnecting the electrical supply prior to performing any operation on the internal parts of the boiler.**
- **Before any operation on the internal components of the appliance, allow the appliance to cool down to room temperature. Some components can be very hot.**
- **Failure to comply will result in substantial property damage, serious injury, or death.**

6. Shut off the gas supply to the boiler at the main manual shut off valve.
7. Remove boiler front panel to access the electronic board and the burner (See Fig. 2).

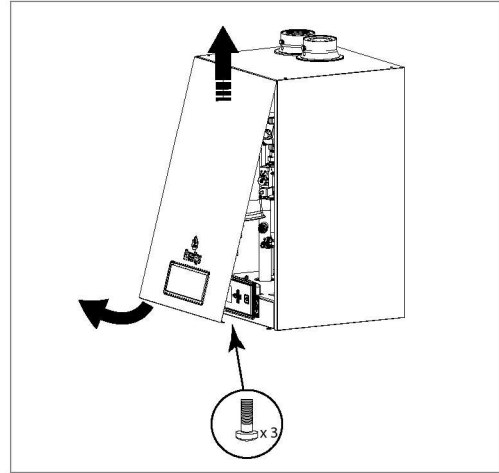


Fig. 2 - Prestige Solo & Excellence - Front Panel Removal

8. Disconnect the black ignition cable from the front of the electronic box.
9. Open the front cover of the electronic box (See Fig. 3). Discard the cover.

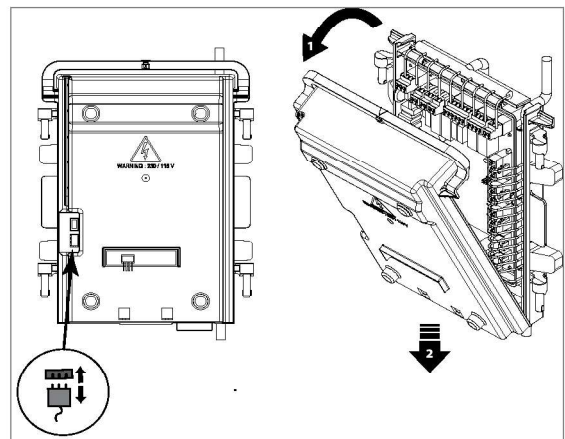


Fig. 3 - Prestige Solo & Excellence - Removal of Control Box Front Cover

10. Disconnect the igniter wiring from the igniter. Discard.
11. Using the Torx wrench, release two screws and remove the igniter and gasket from the burner mounting plate. Discard all.

NOTICE

If the gasket is stuck on the igniter support, use a flat head tool and release it carefully from the surface. Be careful not to scratch the surface.

PRESTIGE SOLO & EXCELLENCE IGNITION KIT - INSTALLATION INSTRUCTIONS

1.5. Kit installation

1.5.1 Required tools and material

- Wrench, Torx, 25
- Wrench, 10 mm

1.5.2 Installation of Igniter and Spark Generator

1. Install the new igniter, with its new gasket, on the burner mounting plate support (See Fig. 4).
2. Tighten 2 igniter screws by hand, then torque screws between 13 and 18 lbf-in.

NOTICE

Do not exceed the recommended max. torque value for the igniter attachment screws to prevent the igniter stems from distorting.

3. Connect the ignition wire to the spark generator (1). Slide the protection sleeve (2) over the connector (See Fig. 5).

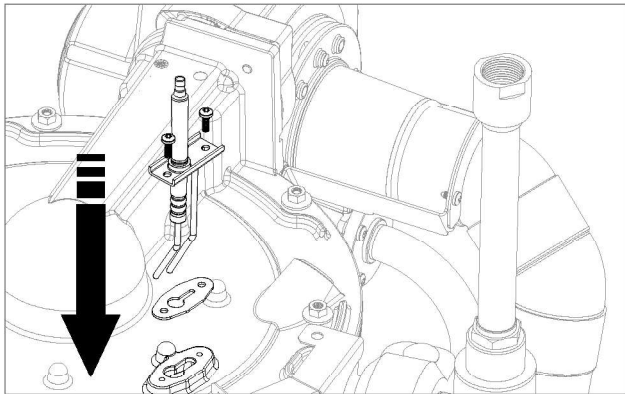


Fig. 4 - Prestige Solo & Excellence - New igniter Installation

4. Remove the blower clamp screw (A). Retain for reinstallation. (See Fig. 6).

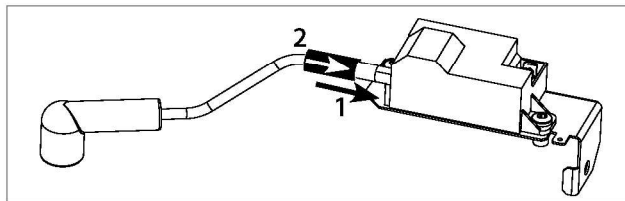


Fig. 5 - Prestige Solo & Excellence - Ignition Wire Connection

5. Locate the spark generator with bracket (B) on the blower clamp (A), aligning bracket hole with blower clamp hole. (See Fig. 6).
6. Reinstall the blower clamp screw (A) to secure the spark generator bracket to the blower clamp. Torque screw between 62 and 71 lbf-in.
7. Install the igniter cable boot so that the cable is smooth with no sharp bends and doesn't curl on itself. See Fig. 7 & Fig. 8.

8. Connect the spark generator connector (C) to the new igniter.

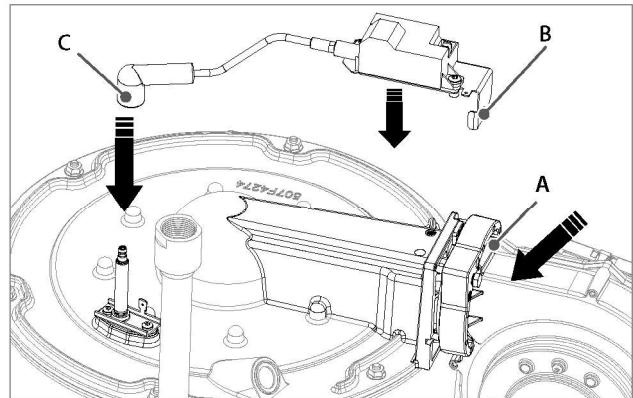


Fig. 6 - Prestige Solo & Excellence - Spark Generator Installation

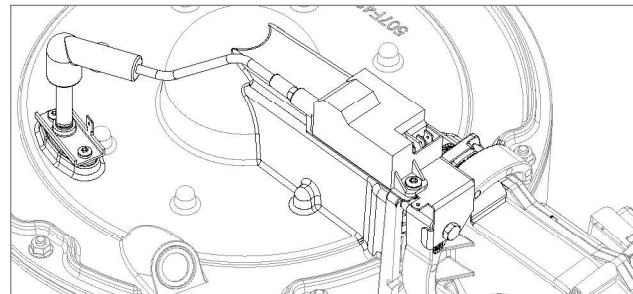


Fig. 7 - Prestige Solo 155 to 399 - Igniter Kit Installed

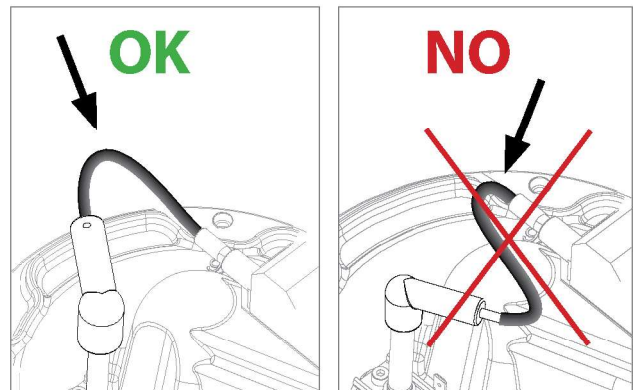


Fig. 8 - Prestige Solo & Excellence - Igniter Cable Installation

1.5.3 Printed Circuit Board replacement

1. Disconnect violet wire (ionization current return) (See Fig. 13) from circuit board ground connection. Discard the wire.
2. Disconnect all wire terminals from the board.
3. Remove the circuit board and discard according to applicable local regulations (See Fig. 9).
4. Install new circuit board, making sure it is secured in the retaining clips (See Fig. 10).

PRESTIGE SOLO & EXCELLENCE IGNITION KIT - INSTALLATION INSTRUCTIONS

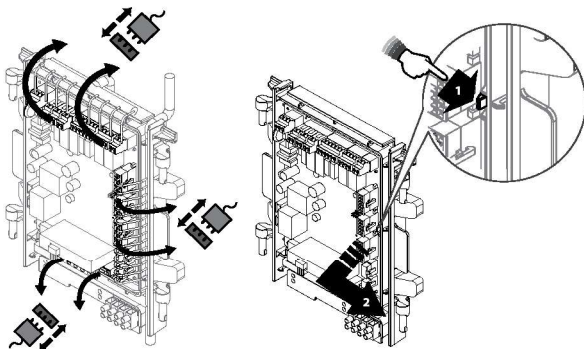


Fig. 9 - Prestige Solo & Excellence - Removal of old PCB

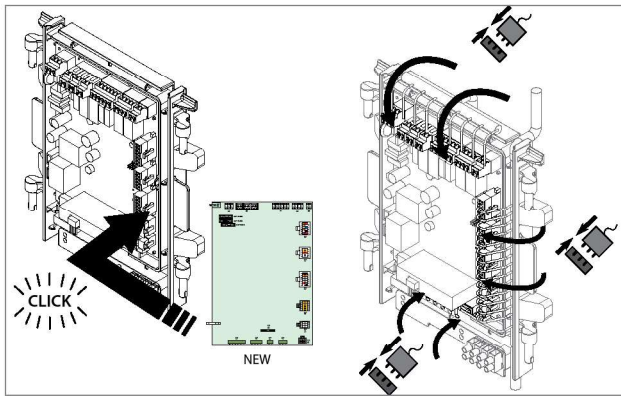


Fig. 10 - Prestige Solo & Excellence - Installation of new PCB

5. Reconnect all wire terminals to the new circuit board terminals, except P14, 1&2 (See Fig. 13).
6. Route the wiring over the top of the control box.
7. Connect the spark generator power supply connector to the free receptacle of the P14 terminal (pins 1&2) of the PCB (See Fig. 14).
8. Connect the violet ground wire to the ground connection on the PCB, and on the ground lug located on the igniter bracket (See Fig. 14).
9. Connect the green ground wire from the spark generator to the ground tab located at the bottom right hand side of the chassis (See Fig. 14).
10. Protect the bare pins of former P14 connector using 2 Fast-on connectors.
11. Route the wiring (unconnected former P14 connector included) in the plastic retaining clip located at the rear of the control box.
12. Install the new control box front cover (See Fig. 11).
13. Connect the brown ionization cable at the front of the control box (See Fig. 11).
14. Reuse the Control Board box to ship the old control board to Triangle Tube and using the preprinted shipping label.

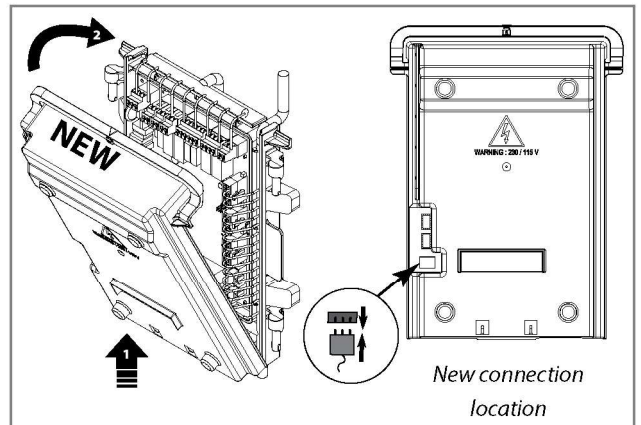


Fig. 11 - Prestige Solo & Excellence - Installation of new Front Cover

1.5.4 Follow-up Tasks

1. Perform any required configuration change in the wiring and CTRLMax setup according to Paragraph 1.6.
2. Reinstall the boiler front panel.
3. On the rating plate of the appliance, cover the "PA" of the Serial Number with the "PB" sticker provided with the kit. This will indicate that the boiler has been upgraded with the ignition kit, for future reference. See Fig. 12.



Fig. 12 - Prestige Solo & Excellence - Rating Plate Correction

1.5.5 Testing

1. Start up the boiler, refer to the Installation Manual of your appliance for the correct procedure and settings.
2. **Should hard ignition still occur**, please check the condition of the combustion chamber 2-in-1 insulation. Refer to the Installation Manual of your appliance for the correct removal procedure. (See Fig. 15 and refer to following step).
3. Replace the combustion chamber 2-in-1 insulation if:
 - There are released stitches around the igniter location hole (See Fig. 15, Detail B).
 - The insulation cloth shows frayed areas around the igniter location hole (See Fig. 15Detail A)

Refer to the installation manual of your appliance for part reference and installation procedure.

PRESTIGE SOLO & EXCELLENCE IGNITION KIT - INSTALLATION INSTRUCTIONS

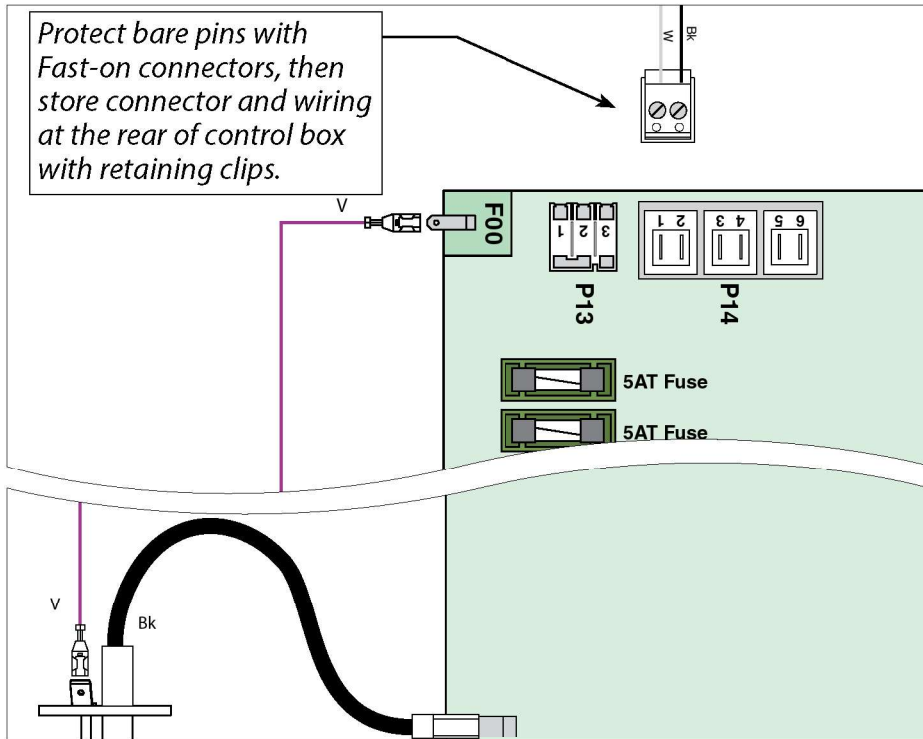


Fig. 13 - Prestige Solo & Excellence - PCB Wiring - Pre modification

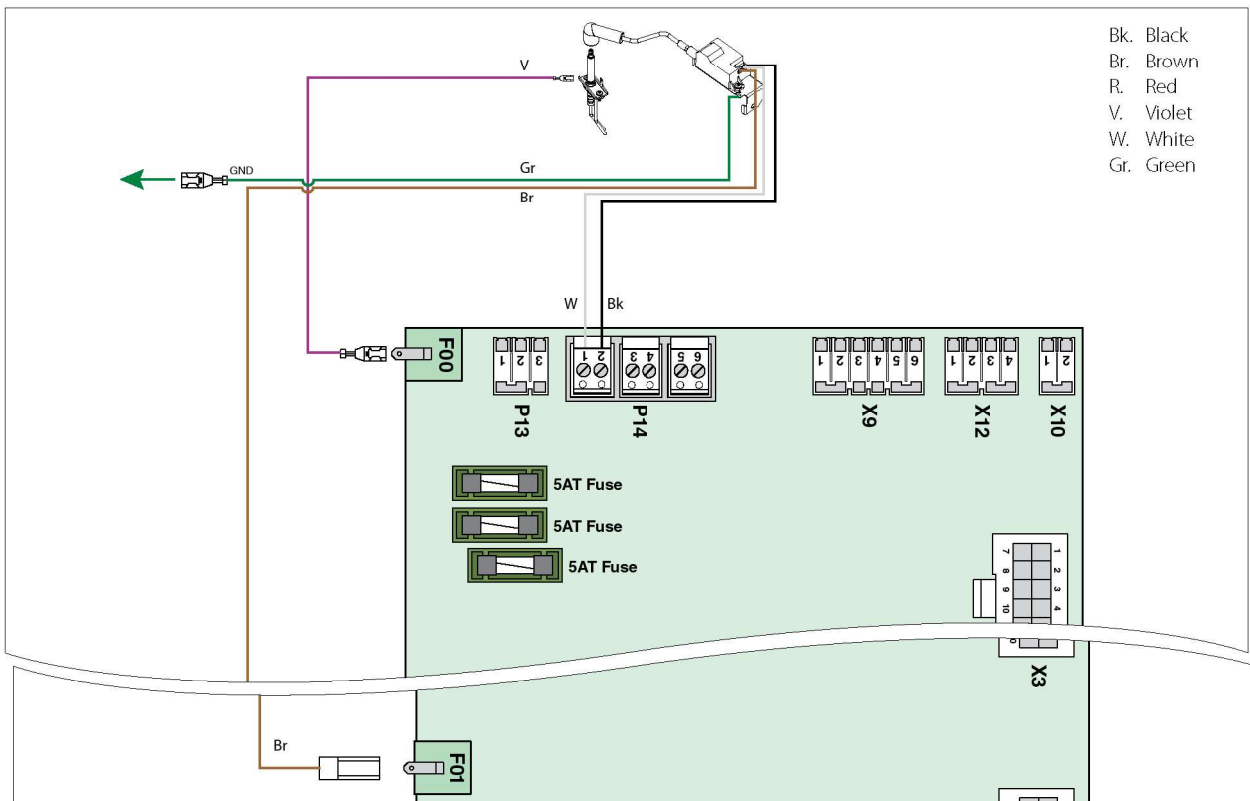


Fig. 14 - Prestige Solo & Excellence - PCB Wiring - Post Modification

PRESTIGE SOLO & EXCELLENCE IGNITION KIT - INSTALLATION INSTRUCTIONS

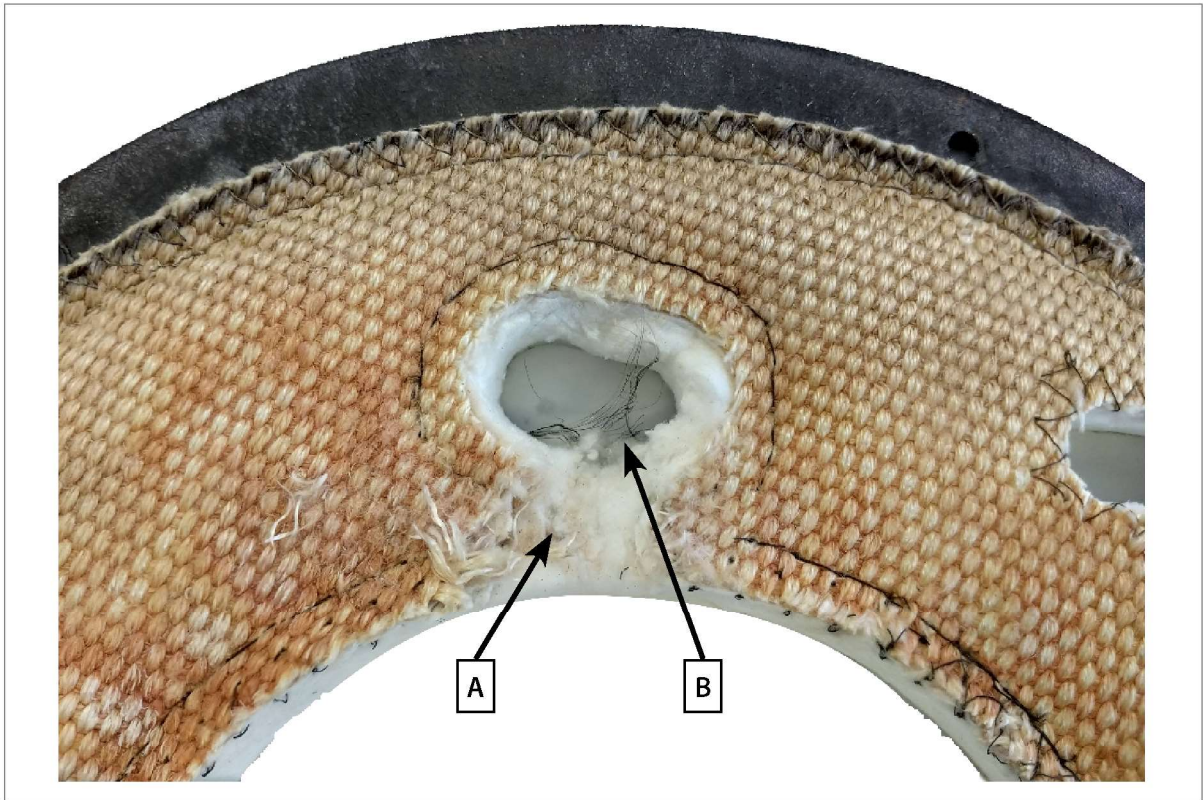


Fig. 15 - Prestige Solo & Excellence - Combustion chamber 2-in-1 Insulation Damages

PRESTIGE SOLO & EXCELLENCE IGNITION KIT - INSTALLATION INSTRUCTIONS

1.6. Configuration Changes

1.6.1 Wiring

Following the printed circuit board replacement and wiring changes, the ALARM relay function is no longer available for the configurations that use it. Therefore, anything wired to the Alarm relay needs to be rewired to a different relay if required (see table below).

1.6.2 CTRLMax Setup

Additionally, the setting of the relevant Flex relays needs to be adapted through the Installer menu, as indicated on the next page.

NOTICE

In some configurations, the Error function will no longer be available. Please contact your Triangle Tube assistance.

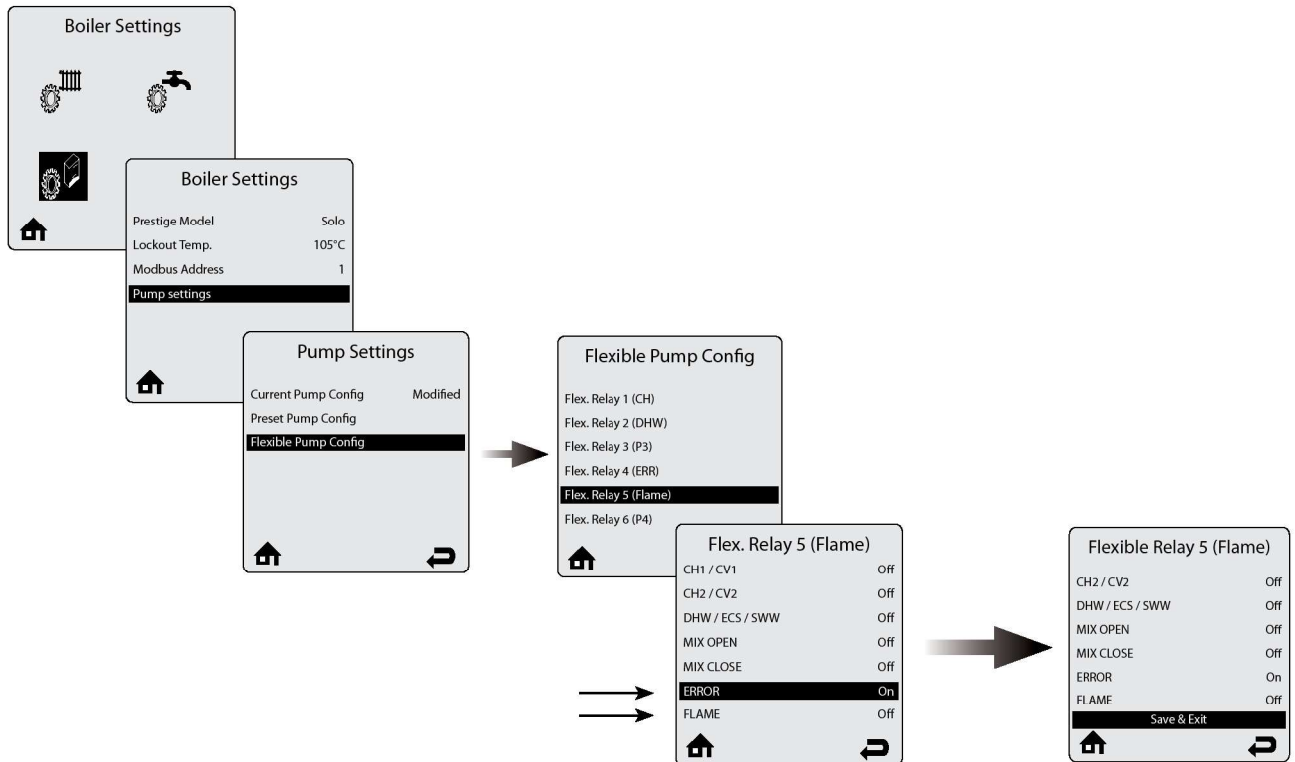
Preset config	Page *	Connected to	Reconnect to	ACVMax setup (Flexible pump config)	Remark
1	18	ALARM	FLAME	Flex. Relay 5 to be set to ERR : FLAME: OFF ERROR: ON	
2	19				
3	20				
4	21				
5	22				
6	23				
8	25				
10/11**	24**	ALARM	Pump 3	Flex Relay 3 to be set to MIX OPEN: MIX OPEN: ON	ONLY if no additional pump is connected to Flex Relay 3 (P3). If a pump is connected, please contact your TTP assistance.
7	-				Error function not available anymore
9	26				Error function not available anymore
10	27	These configurations are no longer available (no available relay for the motor open function that was implemented by the Error relay). Please contact your TTP assistance.			
11	28				
12	29				
13	30				Error function not available anymore

* refer to the manual "Prestige Control Application Supplement - ACVMax", 2015-10

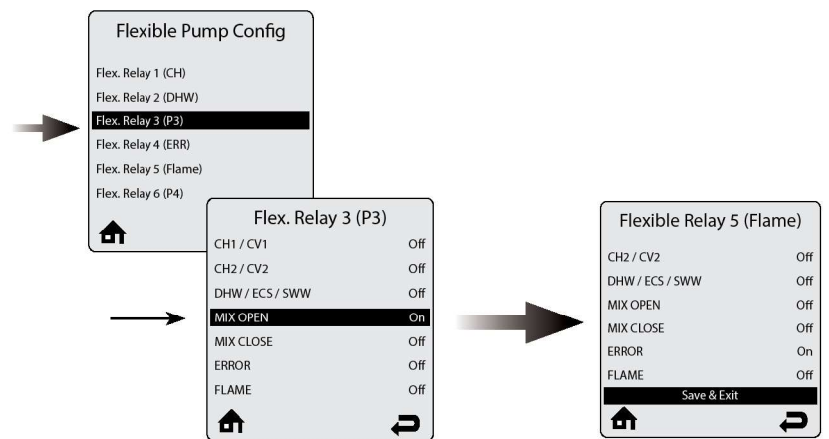
** The configuration mentioned on this page in the manual is mistakenly identified 7. It should be 11 (or possibly 10)

PRESTIGE SOLO & EXCELLENCE IGNITION KIT - INSTALLATION INSTRUCTIONS

1.6.3 Alarm relay function moved to the Flex relay 5 (Flame)



1.6.4 Alarm Relay function moved to the Flex Relay 3 (P3)



1.6.5 Configuration Record

	Preset Pump Config	Flex Relays Functions					
		Flex Relay 1	Flex Relay 2	Flex Relay 3	Flex Relay 4	Flex Relay 5	Flex Relay 6
Pre-Mod Configuration							
Post-Mod Configuration							

PRESTIGE SOLO & EXCELLENCE IGNITION KIT - INSTALLATION INSTRUCTIONS

1.7. Replacement Parts

1.7.1 In the event that spare parts are required, refer to the table below for the correct replacement number

Model	Low altitude Control Board	High Altitude Control Board (5000+ ft)	Igniter	Spark Generator	Igniter Cable
PA80	PARKIT111	PARKIT121	PARKIT130	PARKIT133	PARKIT134
PA110	PARKIT112	PARKIT122			
PAExcellence	PARKIT112	PARKIT122			
PA155	PARKIT113	PARKIT123	PARKIT131	PARKIT133	PARKIT134
PA175	PARKIT114	PARKIT124			
PA250	PARKIT115	PARKIT125			
PA299 V2	PARKIT116	PARKIT126	PARKIT132	PARKIT133	PARKIT134
PA399 V2	PARKIT117	PARKIT127			
PA299 V1	PARKIT118	PARKIT128			
PA399 V1	PARKIT119	PARKIT129			

1.7.2 PA 299 & PA 399 V1 & V2 designation

There are two different blower/venturi arrangements that result in two different required control boards. The separate blower and venturi (V2) configuration applies to PA299s and PA399 with serial numbers after PA11700. Units with serial numbers below PA117000 have a single piece blower venturi (V1). Some V1 models may have been previously converted to the V2 configuration.

Prior to ordering spare parts, confirm you have identified the correct version of the PA299/399. If you have any questions, contact Triangle Tube Tech Support at 856-228-8881, ext 575.

1.7.3 Univerisal Control Board (PARKIT102)

The Universal Control Board can be substituted for the specific model control module if the display software version is at least 4.03. The universal control board requires the appropriate appliance code to be entered during installation. The appliance code can be found on the rating plate.