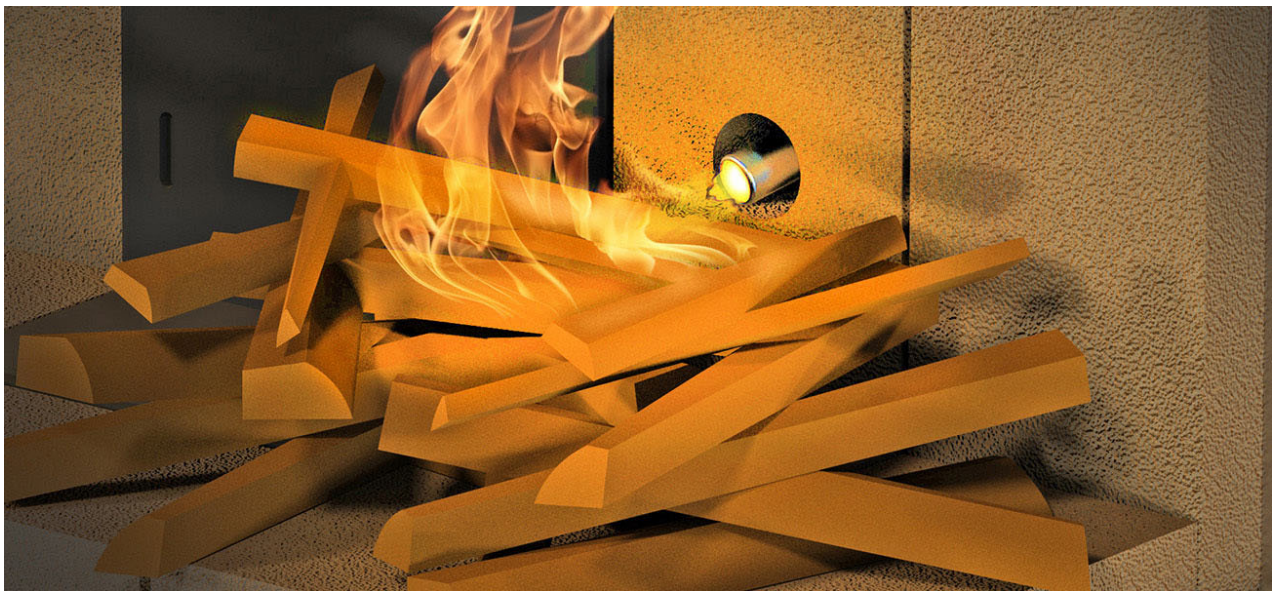
GreenStart™ Igniter Troubleshooting Guide



TRAVIS INDUSTRIES
HOUSE OF FIRE

Contents

Power Requirements:

- USA or CANADA: This kit requires 8 amps, 120 Volts AC.
- AUSTRALIA: This kit requires 4 amps, 240 Volts AC.

Sequence of Operation:

NOTE: When power is supplied to the assembly the “compressor only” will cycle on for 30 seconds, this is normal operation.

1. Press the igniter button to start the ignition process. The green indicator light on the start button will turn on solid.
2. The Compressor starts at 100% line voltage for 15 sec.
3. After 15 seconds the voltage reduces to 65% line voltage to the pump and the igniter turns on.
4. After 5 minutes the pump increases to 100% line voltage.
5. After 10 minutes the igniter turns off.
6. At 15 minutes the pump stops, the button light turns off, and the lighting sequence ends.

Bellows Mode:

Bellows Mode is used to refresh a dying fire or help light a new load of fuel if it is slow to catch.

To use “Bellows Mode” push the start button at any time during the lighting sequence and the igniter button will flash to indicate bellows mode has been enabled. In bellows mode, the igniter turns off and the pump will operate at 100% line voltage for 7 minutes at which time the system will shut down regardless of where in the operational sequence the system is.

Push the button again during that 7 minutes and the button light will display solid, the sequence will start from the beginning and begin a 15-minute lighting sequence, then shut off.

NOTE: If the control board **or** the pump fails, the entire assembly must be replaced due to the required calibration between the two components.

Troubleshooting

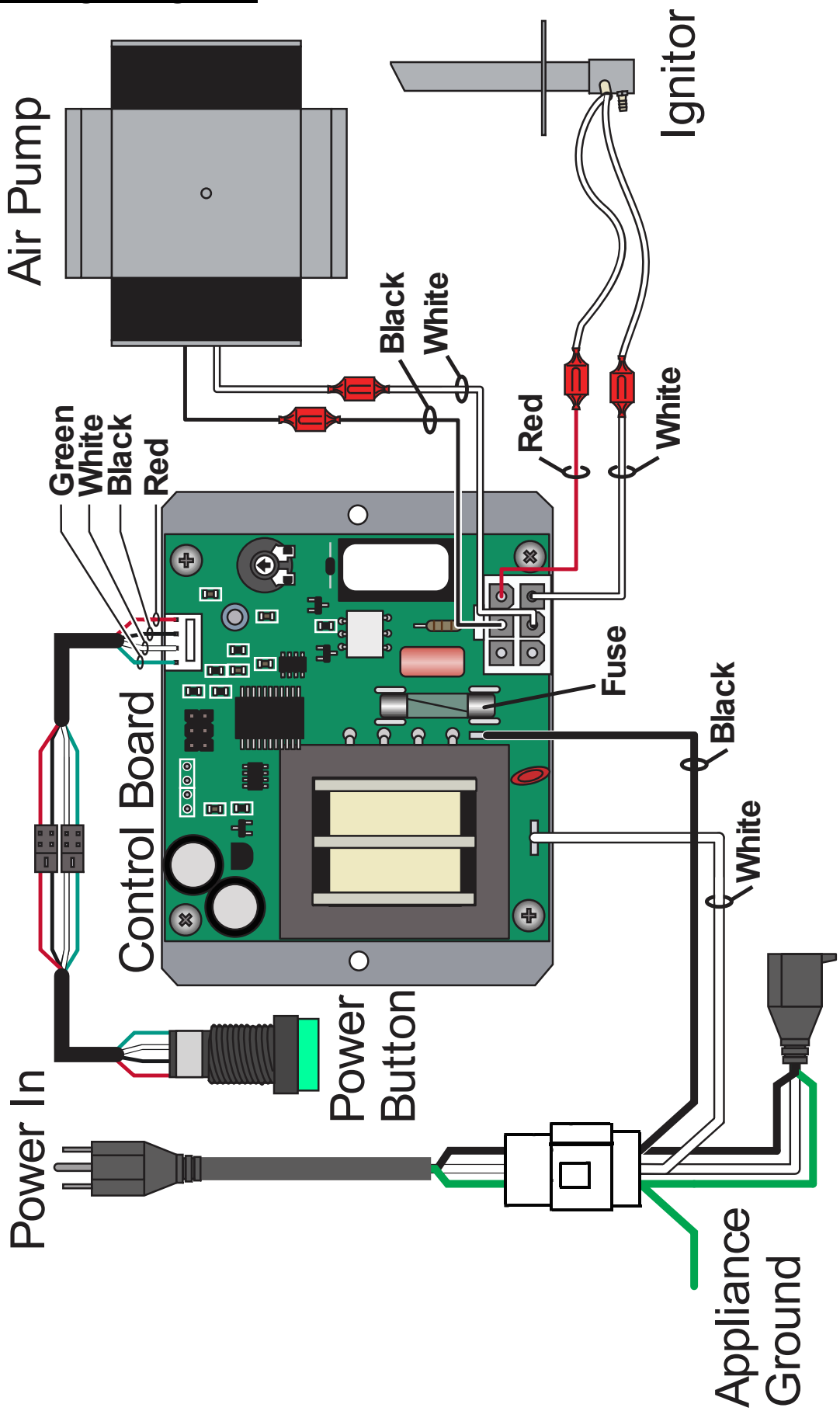
• Pump does not cycle on when power supplied.	
Possible Cause:	**What to Check:**
Bad power source	• Verify power to assembly.
Bad fuse	• Check 10 Amp Fuse on control board.
No power to board	• Check “power in” connection at control board.

• Pump does not start when Start Button pushed.	
Possible Cause:	**What to Check:**
Bad connection	• Verify Molex connections at control board and on the button wiring harness.
Incorrect Voltage	• Check voltage at the connector at the control board, the voltage at the black connectors in the button harness, and the voltages at the back of the push button. Black-Red = 1.9 VDC Green-White = 5 VDC Red-Green = 5-7 VDC - If the voltage is not correct at the control board, replace the control board and pump. - If the voltage is correct at the board but is incorrect at the black connectors or the back of the button, look for a damaged or pinched wire and/or replace the button wire harnesses.
Bad switch	• Check for continuity between White-Green wires when the push button is engaged.

• Start Button does not illuminate when pushed.	
Possible Cause:	**What to Check:**
Bad connection	• Verify Molex connections at control board and on the button wiring harness.
Incorrect Voltage	• Check voltage from control board to switch at control board and on the button wiring harness. Black-Red = 1.9 VDC Green-White = 5 VDC Red-Green = 5-7 VDC - If the voltage is not correct at the control board, replace the control board and pump. - If the voltage is correct at the board but is incorrect at the black connectors or the back of the button, look for a damaged or pinched wire and/or replace the button wire harnesses.
Bad switch	• Check for continuity between White-Green wires when the push button is engaged. **NOTE:** If you take a voltage reading at the green and white wires you should get 5VDC. While taking the reading, press and hold the button down and the voltage should drop to 0 VDC. If this does not occur, replace the button
Bad switch	**NOTE:** When the button is pressed, if the pump runs but the switch does not light up, replace the switch.

• Igniter does not get hot when sequence started.	
!!CAUTION!!	
Do not supply voltage directly to igniter without pump producing airflow through igniter. Doing so will cause the igniter to fail.	
Possible Cause:	**What to Check:**
Loose connection	• Verify all connections to the control board.
No voltage to Igniter	• Verify igniter is receiving line voltage. 120 VAC
Damaged Igniter	• Verify heating element is intact
Igniter is burned out	• Check resistance of igniter Should be 18 OHM's +/- 2 ohms

Wiring Diagram



How To Test Components

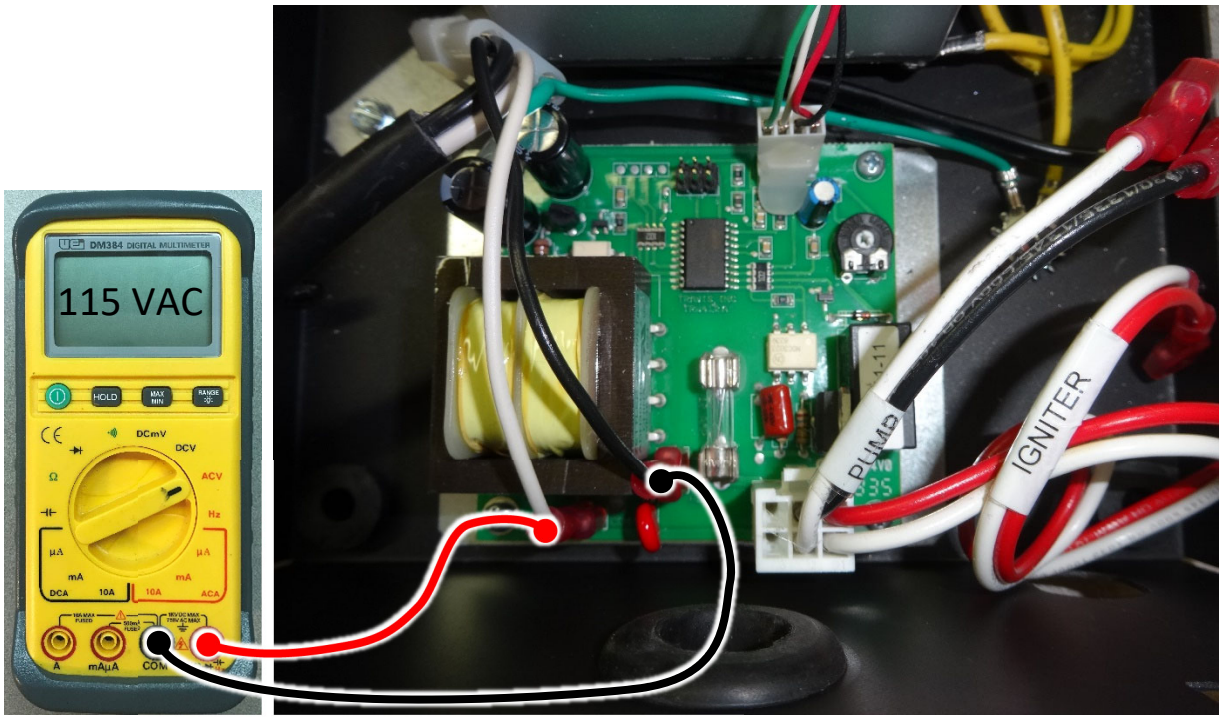
Below you will find details of how to test the individual components of the GreenStart igniter system. This information is for qualified technicians only.

Appearance of a Good Igniter Coil

- Look into the end of the igniter to verify the condition of the coil.
- If the coil inside the igniter is damaged, replace the igniter.

Testing Input Power

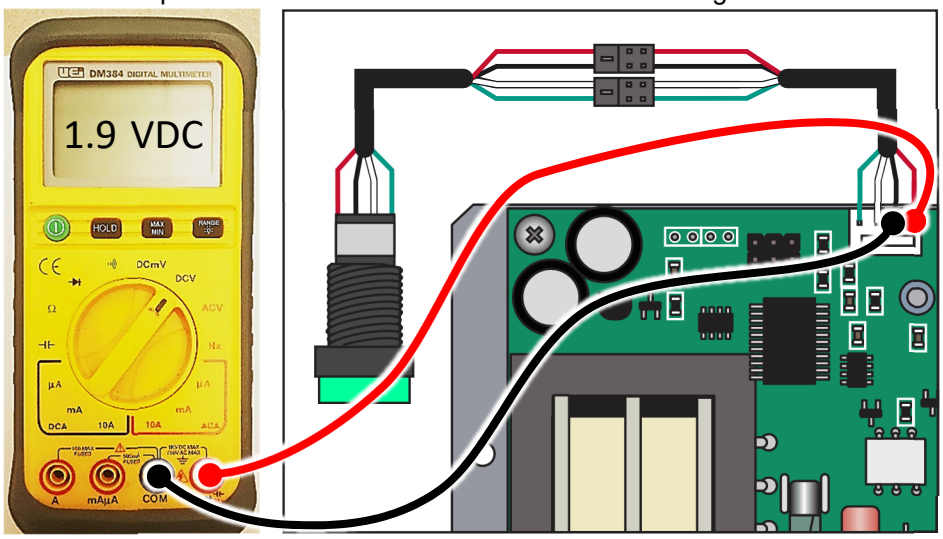
- Take a voltage reading at the outlet.
- Plug the power cord into the outlet.
- Set multimeter to read AC volts (VAC).
- Touch meter probes to the crimps. The VAC reading should be between 110-120 VAC.



Testing Voltage for the Push Button Light

Testing at the Board.

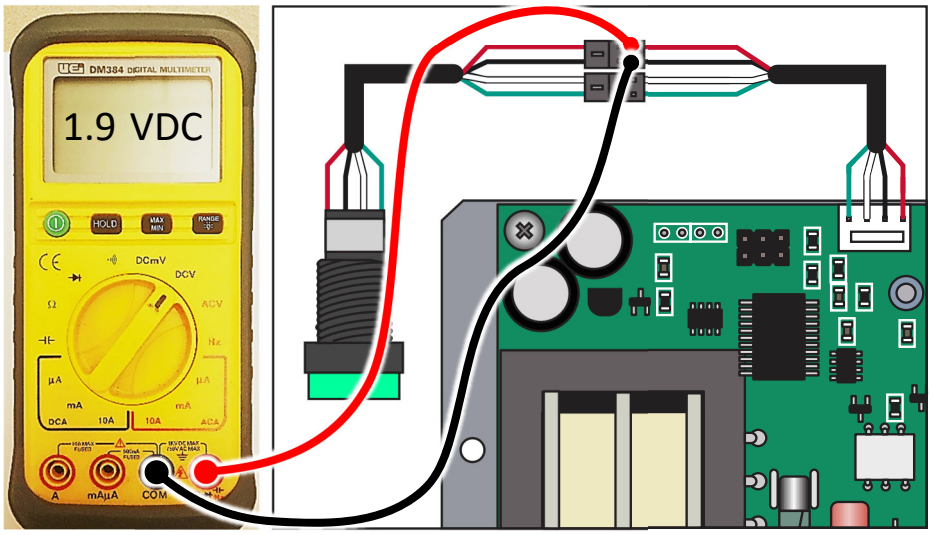
- Locate the red and black wires in the white connector on the control board.
- Set Multimeter to read DC Volts (VDC).
- Touch meter probes to the red and black wires. VDC reading should be 1.9 VDC.



- If the voltage is incorrect, replace the board and pump.
- If the voltage is correct proceed to the next test.

Testing at the Midpoint of the Wire Harness.

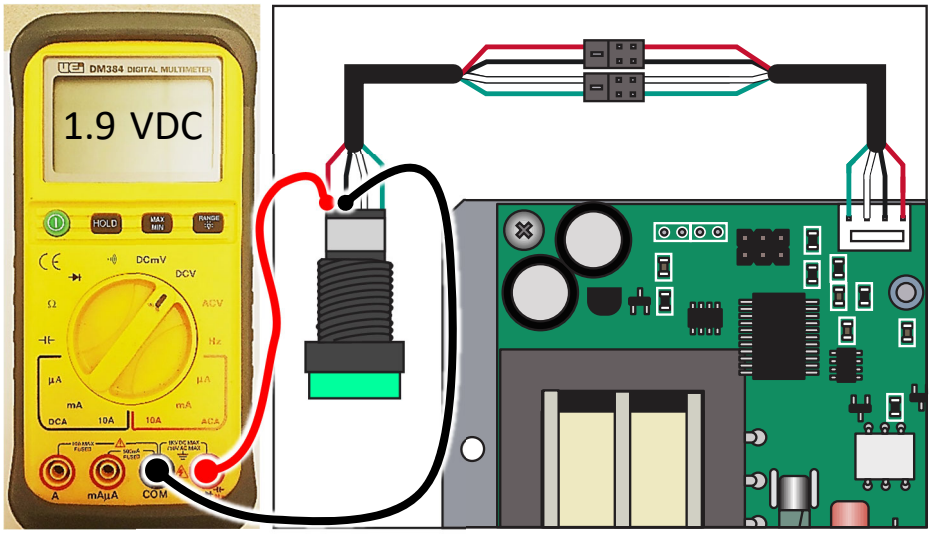
- Locate the two test points on the black connector on the red and black wires from the control board to the push button.
- Set Multimeter to read DC Volts (VDC).
- Touch meter probes to the red and black wire test points. VDC reading should be 1.9 VDC.



- If the voltage is incorrect, look for damage to the button wire harness and/or replace the button wire harness.
- If the voltage is correct proceed to the next test.

Testing at the Button.

- Locate the two test points on the black connector on the red and black wires from the control board to the push button.
- Set Multimeter to read DC Volts (VDC).
- Touch meter probes to the red and black wire. VDC reading should be 1.9 VDC.

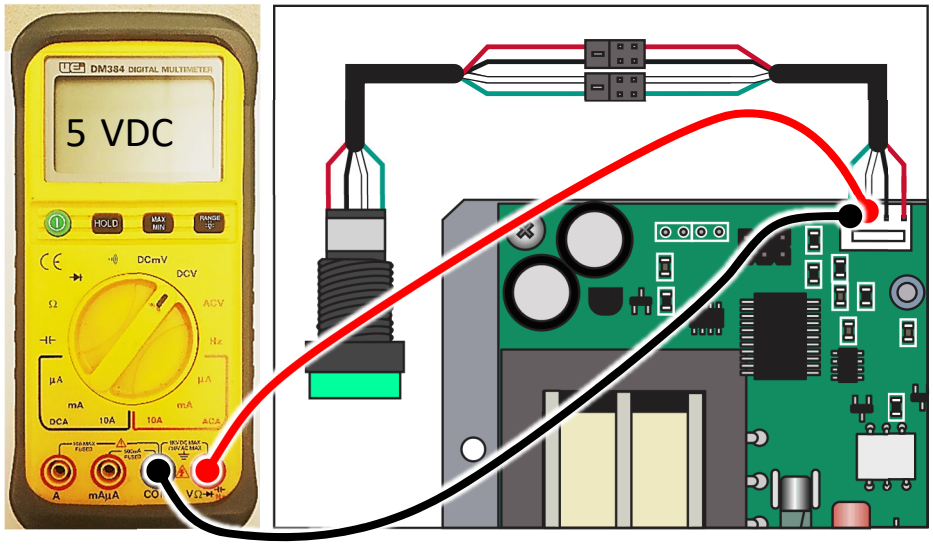


- If the voltage is incorrect, look for damage to the button wire harness and/or replace the button wire harness.

Testing Voltage from the Control Board to the Push Button

Testing at the Board.

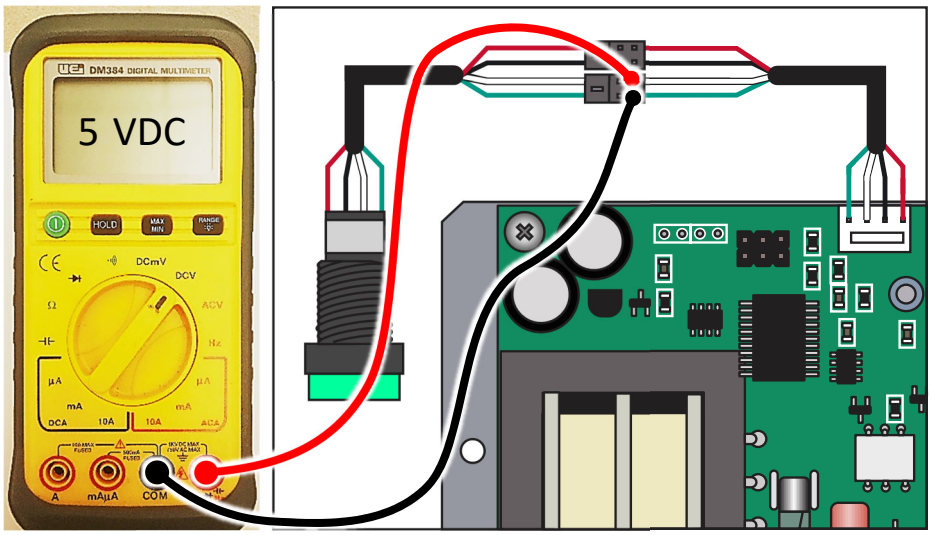
- Locate the green and white wires in the white connector on the control board.
- Set Multimeter to read DC Volts (VDC).
- Touch meter probes to the green and white wires. VDC reading should be 5 VDC.



- If the voltage is incorrect, replace the board and pump.
- If the voltage is correct proceed to the next test.

Testing at the Midpoint of the Wire Harness.

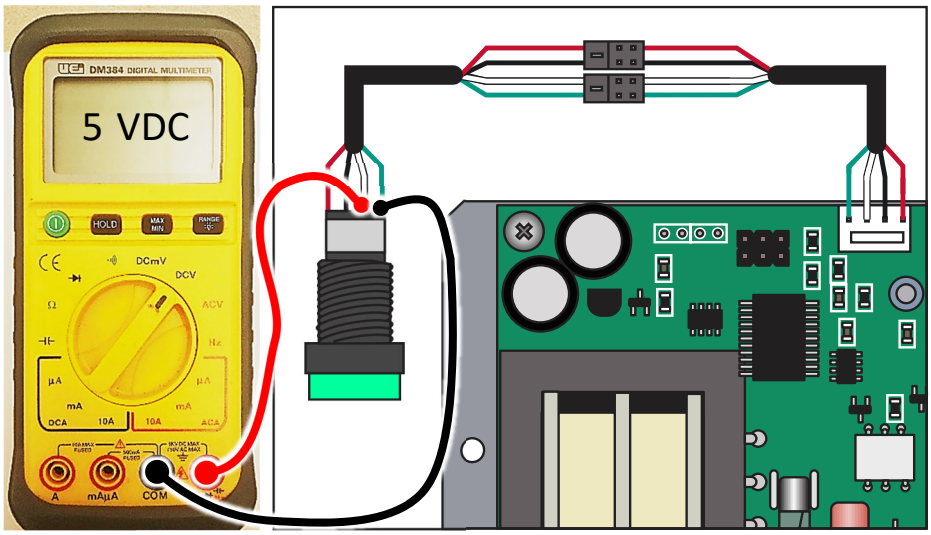
- Locate the two test points on the black connector on the green and white wires from the control board to the push button.
- Set Multimeter to read DC Volts (VDC).
- Touch meter probes to the green and white wire test points. VDC reading should be 5 VDC.



- If the voltage is incorrect, look for damage to the button wire harness and/or replace the button wire harness.
- If the voltage is correct proceed to the next test.

Testing at the Button.

- Locate the green and white wires on the back of the push button.
- Set Multimeter to read DC Volts (VDC).
- Touch meter probes to the green and white wire. VDC reading should be 5 VDC.

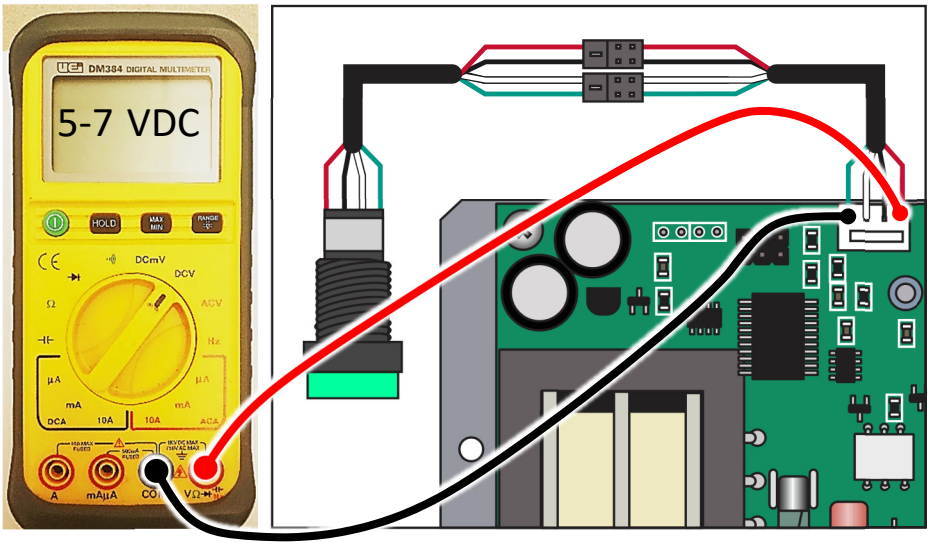


- If the voltage is incorrect, look for damage to the button wire harness and/or replace the button wire harness.

Testing Voltage from the Control Board to the Push Button (Continued)

Testing at the Board.

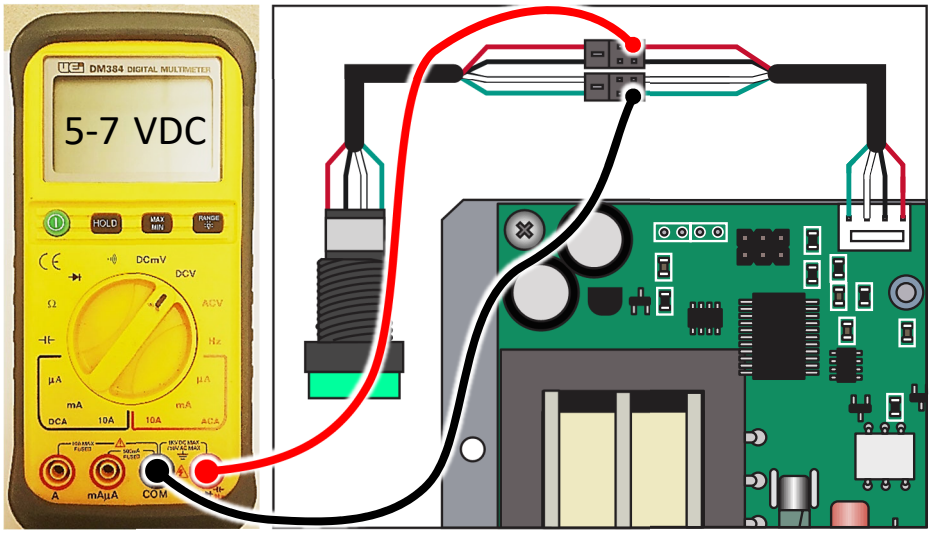
- Locate the green and black wires in the white connector on the control board.
- Set Multimeter to read DC Volts (VDC).
- Touch meter probes to the green and red wires. VDC reading should be 5-7 VDC.



- If the voltage is incorrect, replace the board and pump.
- If the voltage is correct proceed to the next test.

Testing at the Midpoint of the Wire Harness.

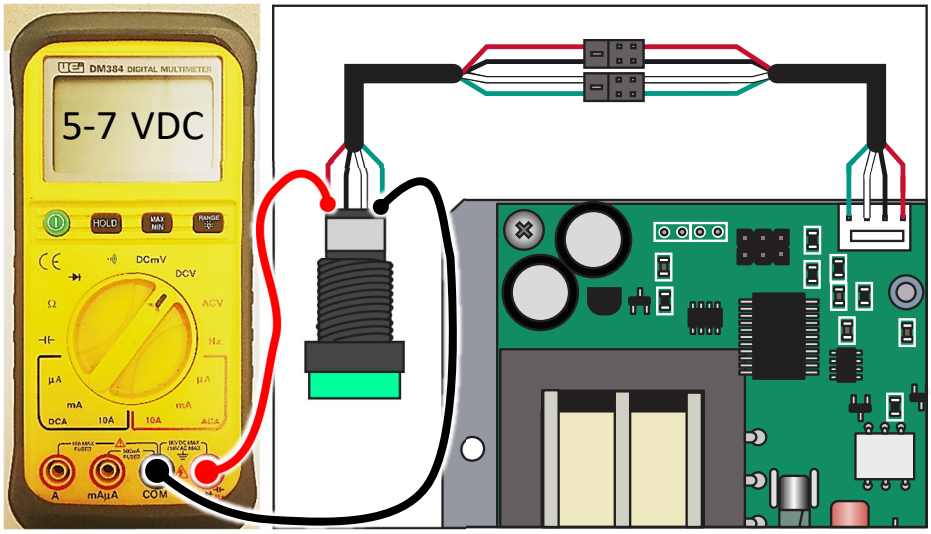
- Locate the two test points on the black connector on the green and red wires from the control board to the push button.
- Set Multimeter to read DC Volts (VDC).
- Touch meter probes to the green and red wire test points. VDC reading should be 5-7 VDC.



- If the voltage is incorrect, look for damage to the button wire harness and/or replace the button wire harness.
- If the voltage is correct proceed to the next test.

Testing at the Button.

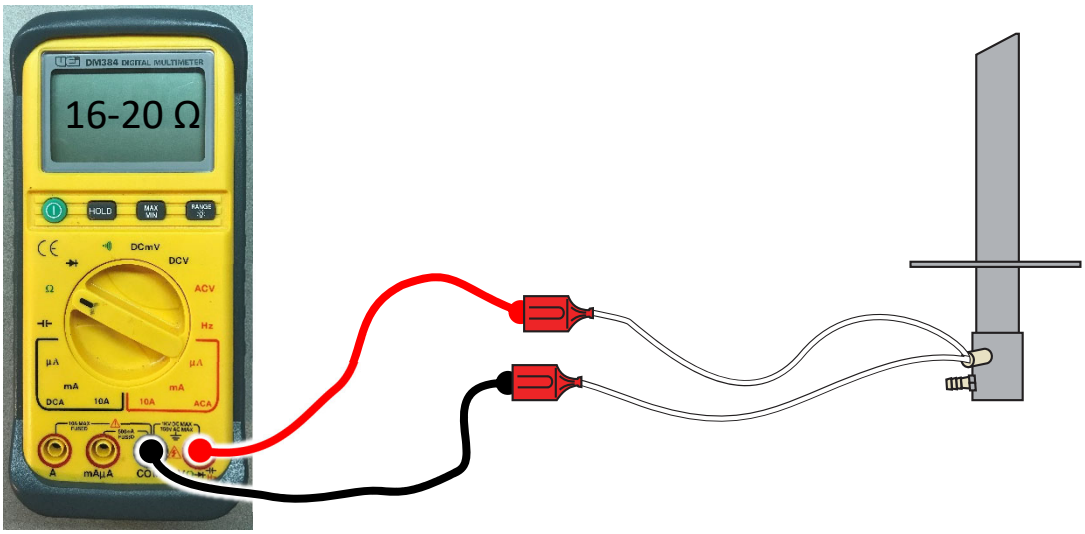
- Locate the green and red wires on the back of the push button.
- Set Multimeter to read DC Volts (VDC).
- Touch meter probes to the green and red wire. VDC reading should be 5-7 VDC.



- If the voltage is incorrect, look for damage to the button wire harness and/or replace the button wire harness.

Testing Igniter for Continuity

- Disconnect the igniter from the wire harness.
- Set multimeter to read ohms of resistance (Ω).
- Touch meter probes to the disconnected wires of the igniter. The meter should read 18 ohms +/- 2 ohms.



Replacement Parts

GreenStart™ Igniter Insert-Only Parts	
BRICK-CUT w/ HOLE 9x4-1/2x6 -- BRICK, INSERT	251-00072
GSKT, IGNITER -- IGN, INSERT	250-02519
HW PACK, IGNITER - INSERT -- INSERT	250-02518
NIPPLE, BARBED, 45deg Elbow -- INSERT	250-02512
WIRE HRNS EXT, PUSH BUTTN 120" -- INSERT	250-02514
– START BUTTON UPGRADE KIT -- INSERT	250-02515
COMPRESSOR ASS'Y -- INSERT	250-02517
IGNITER, GREENSTART -- INSERT	250-02710

GreenStart™ Igniter Stove-Only Parts	
BRACKET, LT, PUMP BOX -- STOVE	250-02522
BRACKET, RT, PUMP BOX -- STOVE	250-02521
BRICK-CUTw/ HOLE 9x4-1/2x1-1/4 -- STOVE	251-00073
COVER BOX, IGNITER -F/S -- STOVE	250-02530
GSKT, IGNITER F/S -- STOVE	250-02532
HW PACK, IGNITER - STOVE	250-02531
IGNITER SLEEVE, ASS'Y, FS -- STOVE	250-02520
NIPPLE, BARBED,1/4 HOSE id -- STOVE	250-02526
TEE, BARBED-FITTING -- STOVE	250-02523
WIRE HRNS EXT, PUSH BUTTON 30" -- STOVE	250-02527
WIRE HRNS, IGNITER - 12-1/2" -- STOVE	250-02529
START BUTTON UPGRADE KIT -- STOVE	250-02528
COMPRESSOR ASS'Y -- STOVE	250-02516
IGNITER, GREENSTART -- STOVE	250-02504

GreenStart™ Igniter Universal Parts	
ELBOW,BARBED,3/8 x 1/4 HOSE id -- STOVE/INSERT	250-02525
HOSE CLAMP, 5/8" - GREEN -- STOVE/INSERT	250-02511
POWER CORD, PS/PI 1997 & UP # -- STOVE/INSERT	250-00533
TUBING, NEOPRENE -- STOVE/INSERT	250-02524
TUBING, BUNA-N, BLACK, 10' -- STOVE/INSERT	250-02513