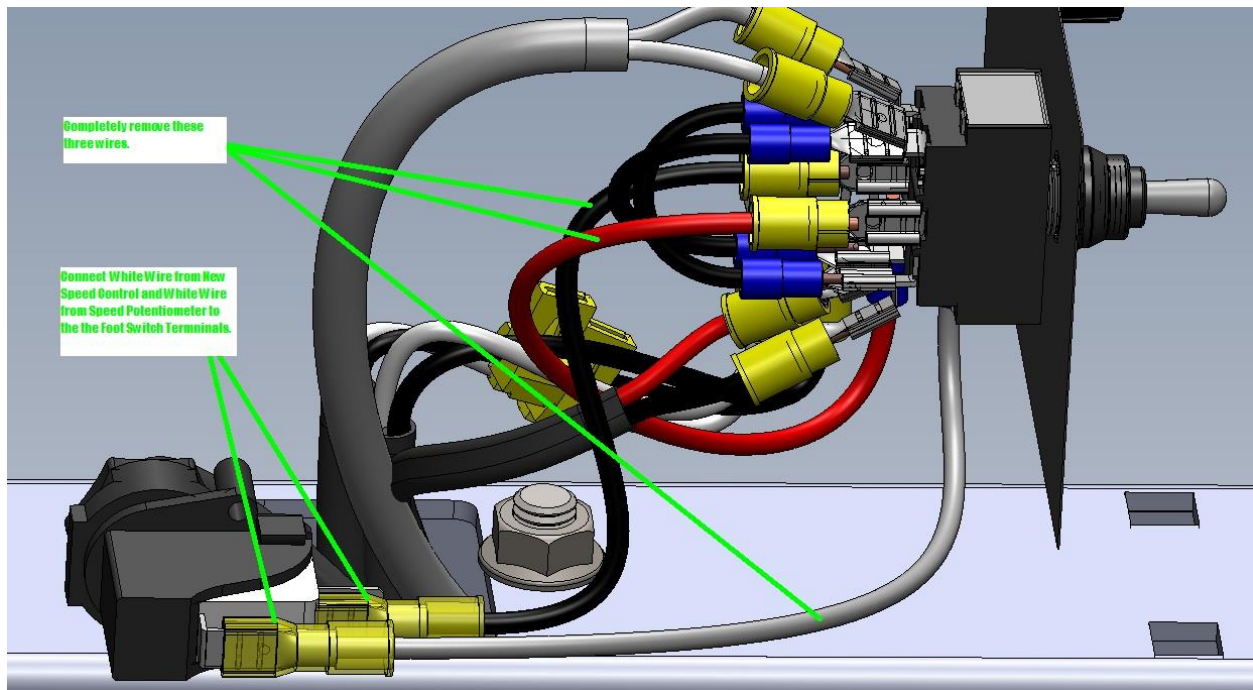


## PA1600 Speed Control Update from PA1578 to GSD1-48-20C

Step 1. Remove cover from control unit

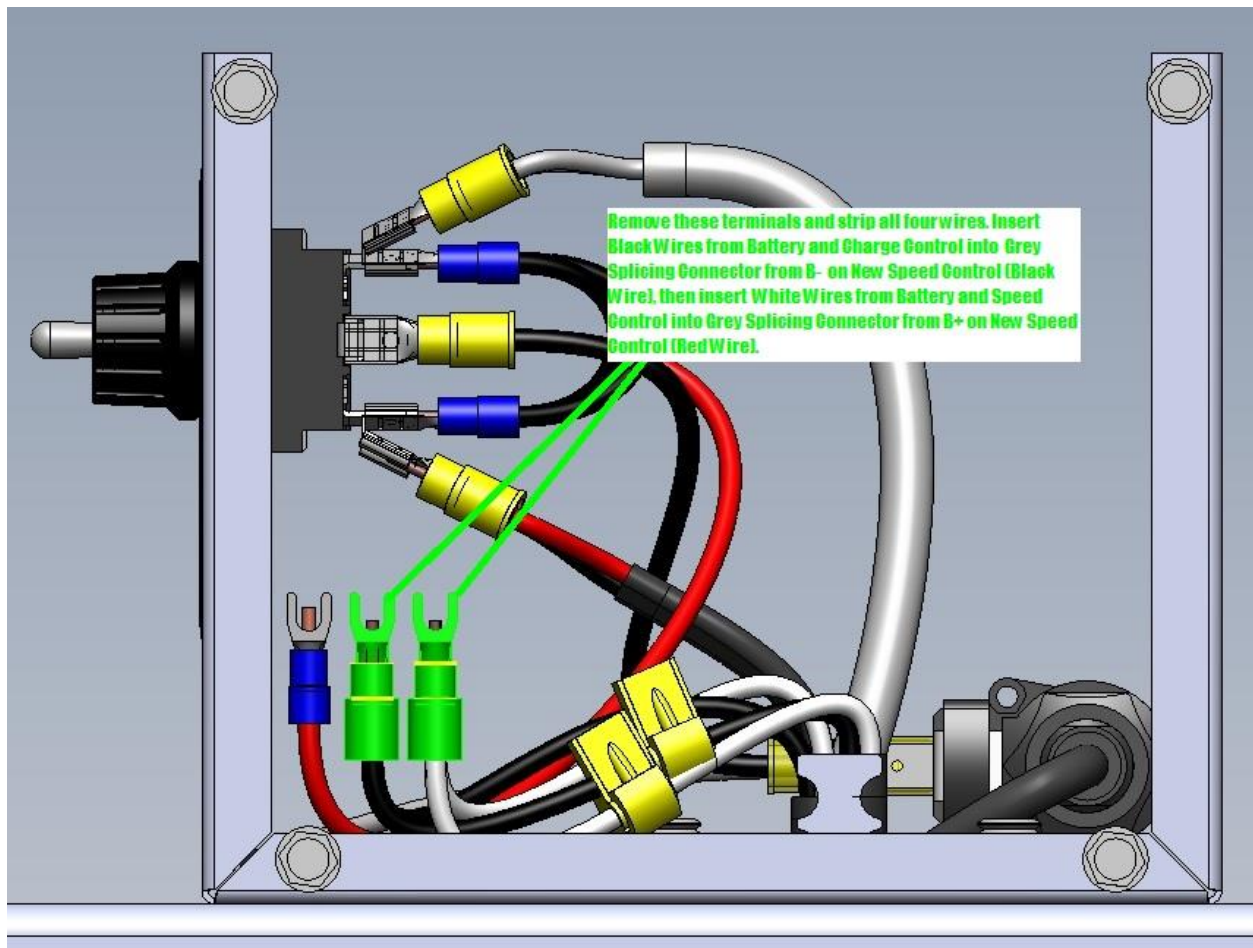
Step 2. Remove wires (see image 1 below).



Step 3. Disconnect remaining wires from existing PA1578 speed control.

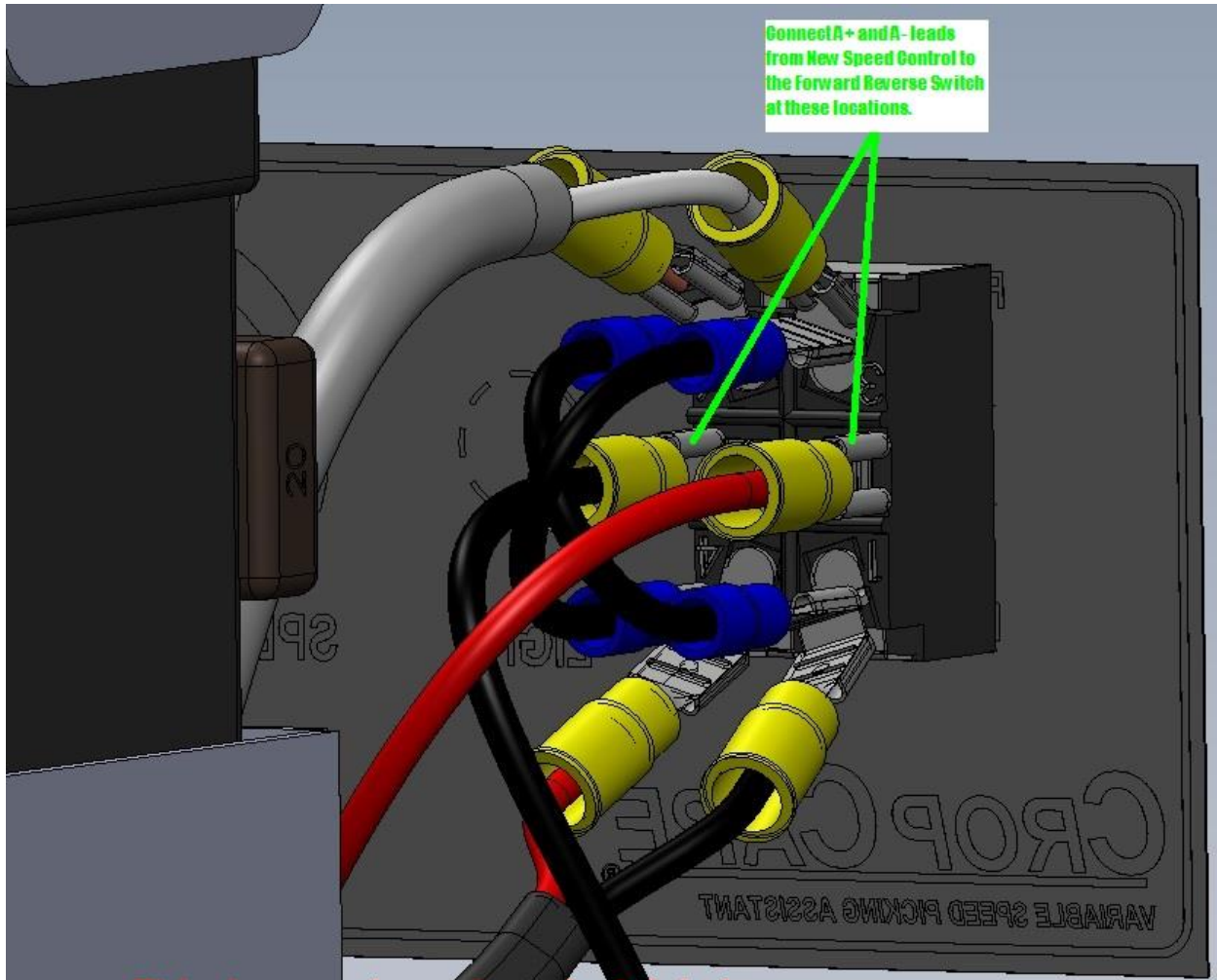
Step 4. Remove speed control from control box housing by removing speed control knob and mounting nut.

Step 5. Remove solderless terminals from Battery Harness and Charge Control Harness and strip wires (see image 2 below).



Step 6. Connect Battery Harness and Charge Control Harness to splicing connectors.

Step 7. Connect the red and black wires with yellow solderless connectors from New Charge Control to center blades on Forward Reversing Switch (see image 3 below).



Step 8. Connect White Wires from New Speed Control to blades on Foot Switch (see image 1).

Step 9. Remove backing from adhesive tape on rear of New DSD1-48-20C Speed Control and press control firmly in place on rear of control box housing.

Step 10. Configure New DSD1-48-20C Speed Control settings (see below).

### **Trim Pot Adjustments**

**Before the power is applied, set the voltage selection jumper to the correct voltage.** An incorrect jumper setting will not damage the drive, but will affect the trim pot adjustments. The speed potentiometer and trim pots should be preset as follows:

#### **TRIM POT PRESET**

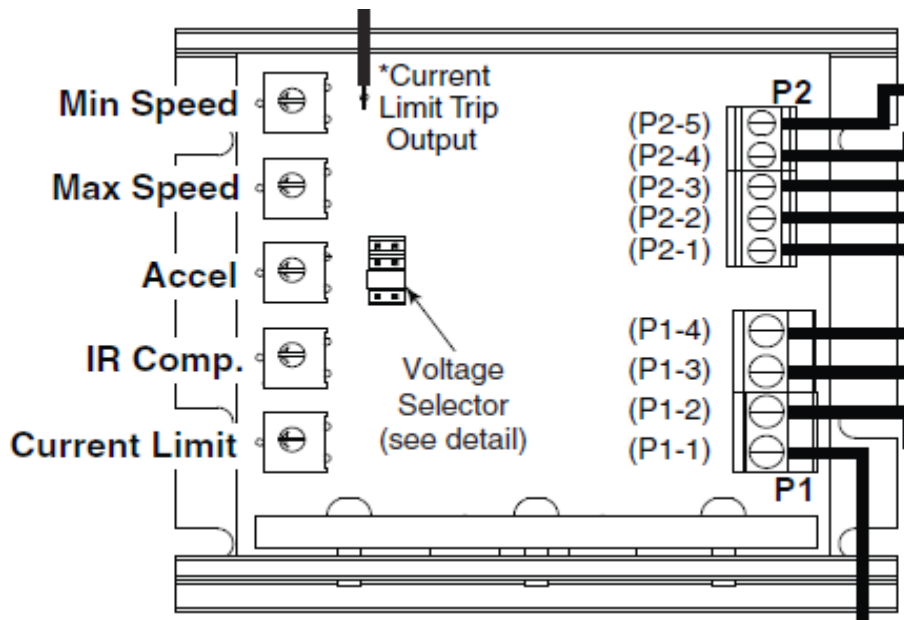
- 1) Preset Speed pot fully CCW.
- 2) Preset MAX trim pot CW 1/2 way.

- 3) Preset CURRENT LIMIT trim pot fully CW.
- 4) Preset MIN trim pot fully CCW.
- 5) Preset ACCEL trim pot CW 1/2 way.
- 6) Preset IR trim pot fully CCW.

DC power can now be applied to the system and the DC Drive adjusted as follows:

#### **TRIM POT ADJUSTMENT**

- 7) Increase the MIN trim pot CW until just before reaching an output voltage (deadband), or until the desired minimum speed is reached.
- 8) Turn the Speed pot fully CW and adjust the MAX trim pot until the desired maximum speed is reached.
- 9) Adjust the ACCEL trim pot to achieve the desired soft start time. (CW rotation will increase accel time.)
- 10) Rotate the CURRENT LIMIT trim pot fully CCW. Apply a full load to the motor. While motor is stalled, adjust the CURRENT LIMIT trim pot CW until a desired current setting is obtained. (Approximately 125% of rated motor current is recommended.)
- 11) For 20A models GSD1-48-20C: Adjust the IR trim pot CW 1/2 way. If the motor speed is inconsistent (jumpy), rotate the IR trim pot CCW until the motor rotation becomes stable.



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# IRONHORSE™

G501 SERIES DC DRIVES USER MANUAL  
USER MANUAL PARTNO: 01-G501-8-00 8/2018 01

