Field Service Bulletin

October 14, 2020

Contents

Bulletin Overview

Notice Date

October 14, 2020 rev. A

Name of Product(s)

RostockMAX v3.2, RostockMAX v4, Artemis 300, BOSSdelta 500

Purchase Date Range of Product(s)

November 2016 through October 7th, 2020

Service Required

Installation of a ground wire between the power supply DC negative circuit and AC Ground (GND).

Contact Information

Please email us with any questions at sales@seemecnc.com or call 765-884-4100. If you are unable to source a piece of wire for this field service, SeeMeCNC may be contacted for a free wire. The order number, receipt, or reference to the original purchaser of the printer in question is required so we may ensure the correct part(s) will ship. If you do not have the order number, we may ask for a photograph of the machine to determine we are taking the proper course of action.

Technical questions may be submitted using a **Support Ticket** through our website www.seemecnc.com by selecting the **support tab** and **'Submit A Support Ticket'**.

Our mailing address:
SeeMeCNC
601 Sroufe St., STE 200
Ligonier, IN 46767

Summary

The printer DC Negative output of the power supply needs to be connected to the AC Ground (GND). This guide will provide instructions on how to perform the installation of the grounding wire for each specific model. This guide also provides the proper method of testing to ensure the service has been completed properly.

Safety

WARNING	
Personal property damage, serious injury, or death can result from not following instructions or warnings in the manual or misuse of the machine.	
Adult supervision required. Children under 18 years of age require supervision.	
	The machine power supply is connected to AC voltage and can be hazardous. Disconnect power before servicing this machine.
Use genuine parts manufactured or designated by SeeMeCNC®	
CAUTION: Safety glasses required. Wear proper eye protection.	

Ohm Meters Notes

- ❏ Ohm meters may vary from the shown picture. It is your responsibility to understand the proper function and use of your ohm meter. These images are shown for reference.
- ❏ The ohm meter we used shows the setting on ohm's (Ω) and display reading "OL" meaning, the circuit is "open", there is no continuity.

- ❏ Verify your ohm meter (volt meter) is working properly by touching the leads and observing "000" of the display (on this ohm meter, yours may vary).
- ❏ The "000" reading shown here means there is a "closed circuit" or continuity between the test leads we have shown touching each other.

Installation Procedure for the ARTEMIS 300

Tools Needed for the Artemis 300

- Safety Glasses
- Small screwdriver or thin prying tool
- 5/32 inch or 4mm Hex Key Wrench
- Wire Cutter / Strippers
- No. 2 Phillips Screwdriver
- Volt-Ohm Meter

Parts Required for the Artemis 300

Grounding Wire Bill Of Materials for Artemis			
Qty	Part No.	Description	Image
1	N/A	Short (~50mm Long) 20AWG Green Grounding Wire with a minimum 300V insulation rating. The wire shown may optionally be terminated with common ring terminals available at a hardware store.	

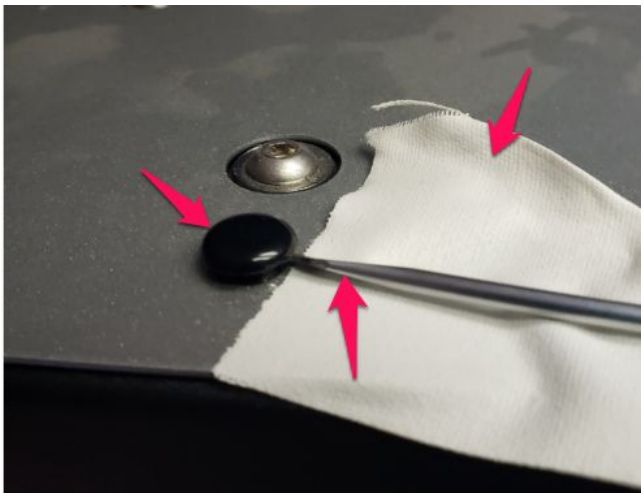
Procedure Steps for the Artemis 300

1. Installation Preparation

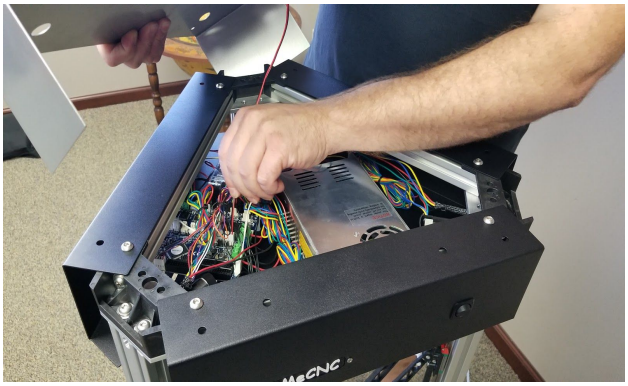
- ❑ **WARNING:** Ensure the A/C power cord is disconnected from the printer.
- ❑ Turn Off and Disconnect power from the printer
- ❑ Double check the list of required parts for repair
- ❑ Before beginning, read the safety information included in this bulletin

2. Removing the Top Cover

- ❏ Apply tape to help avoid scratches to the finish.
- ❏ Use a small screwdriver or thin prying tool to carefully remove the cover push-in rivets.
- ❏ Use the 5/32” hex wrench to remove the button head screw and spike grounding washer.

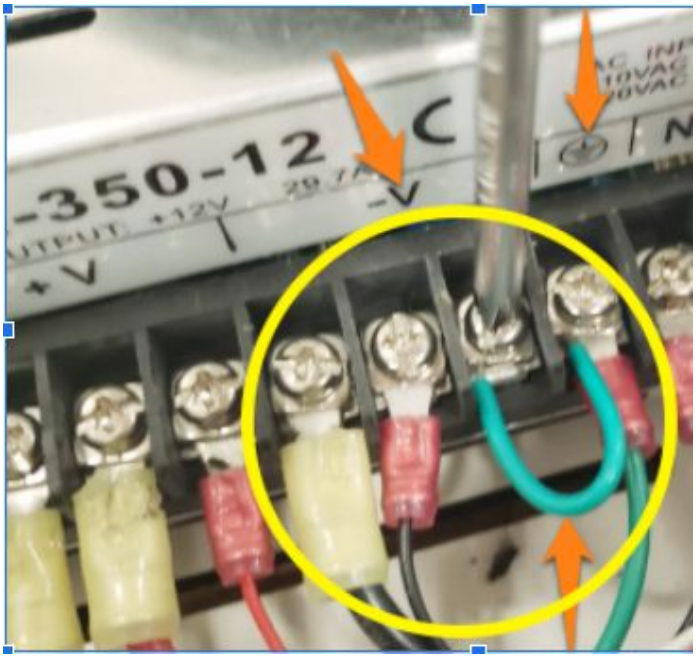


- ❏ If the Artemis is an early model, partially lift the top cover and carefully unplug the two pin case fan power connector from the duet board. Keep note of the location it was plugged in for reinstallation later. Note that this fan is not needed and is not installed on later models of the Artemis.



3. Installing the Green Ground Wire

- ❏ Locate the ~50mm Long Green Grounding Wire. Strip each end 10mm and form into a U shape.
- ❏ Note the marking indicating electrical ground (⏚) on the power supply
- ❏ Using a phillips screwdriver, connect the new grounding wire between the **Ground terminal** and one of the **DC Negative terminals**.



4. Test the connection

- ❏ Locate the **middle ground terminal** of the IEC input AC power connector. One lead of the ohm meter will contact this terminal as shown.

- ❏ Using the ohm meter, check for continuity between one of the **DC Negative terminals** at the power supply and the **Ground middle terminal** of the IEC AC power input connector (as shown in the previous photo above).

5. Reinstall Cover(s) and finish

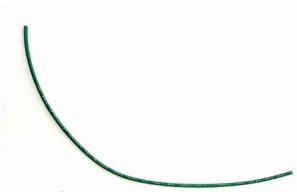
- ❏ Replace the machine enclosure covers.
- ❏ The field service is complete and the Artemis is ready to use.

Installation Procedure for RostockMAX v4

Tools Needed for the RostockMAX v4

- Safety Glasses
- Wire Cutter / Strippers
- Small size flat screwdriver
- Volt-Ohm Meter

Parts Required for the RostockMAX v4

Grounding Wire Bill Of Materials for RostockMAX v4			
Qty	Part No.	Description	Image
1	N/A	200mm length of minimum 20AWG Green Grounding Wire having at least 300V insulation rating	
1	N/A	A) 3 position Wago Connector OR B) A regular electrical wire nut may also be used for connection.	A)  OR B) 

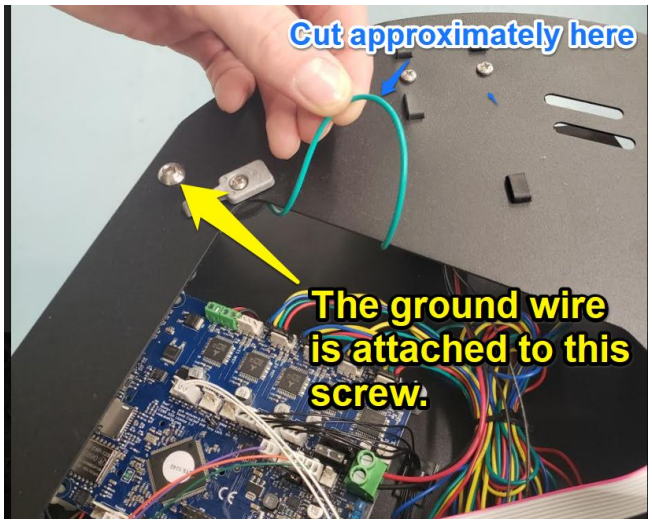
Procedure Steps for the RostockMAX v4

Installation Preparation

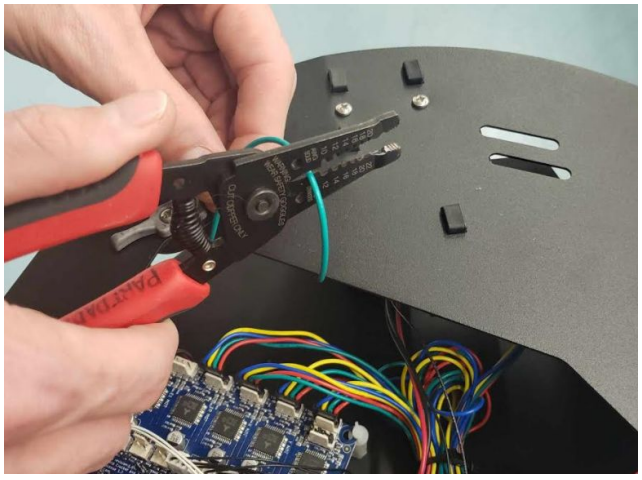
- ❑ **WARNING:** Ensure the A/C power cord is disconnected from the printer.
- ❑ Turn Off and Disconnect power from the printer
- ❑ Double check the list of required parts for repair
- ❑ Before beginning, read the safety information included in this bulletin

2. Locate, cut, and strip existing green ground wire:

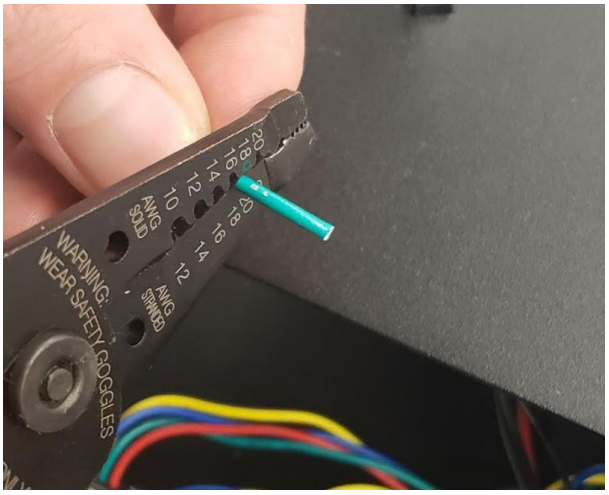
- ❏ (tools not required) Turn the 4 corner clamps and remove the top cover. Pull the green ground wire away from other wires. The existing GREEN grounding wire is attached to the case bolt as shown.



- ❏ Locate and cut the existing green ground wire using the wire cutters. Reference the photo to ensure you are cutting the correct wire.

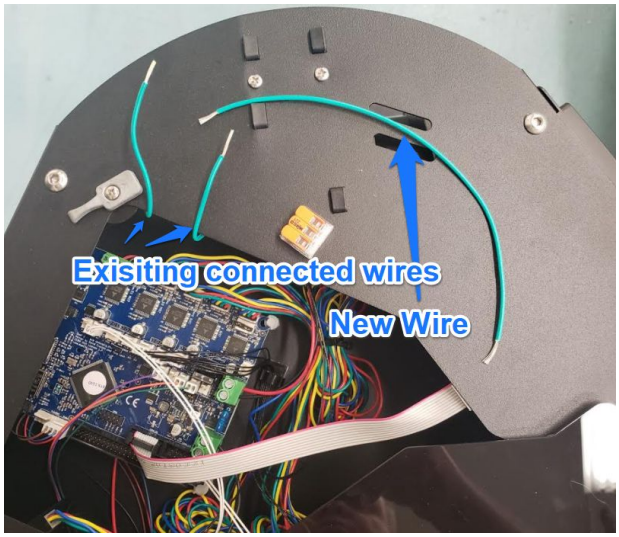


- ❏ Using wire cutters, cut and strip 11mm length of each side of the cut wire.

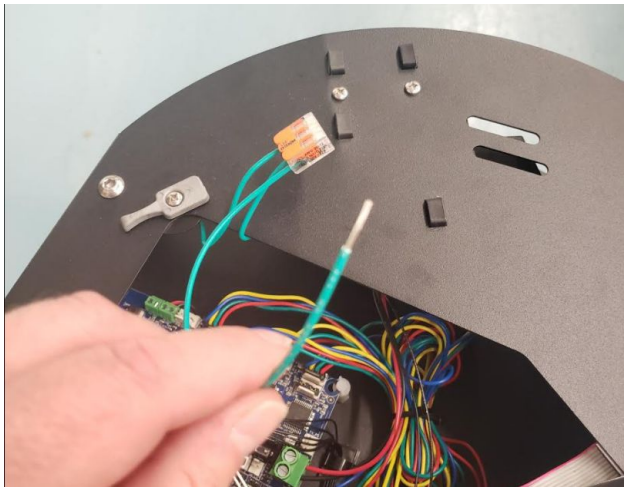


3. Install the new green grounding wire

- ❏ We will now connect the new ground wire to the existing ground circuit of the printer. The photo shows a Wago 3 position wire connector, however a common electrical wire nut may be used as a substitute.

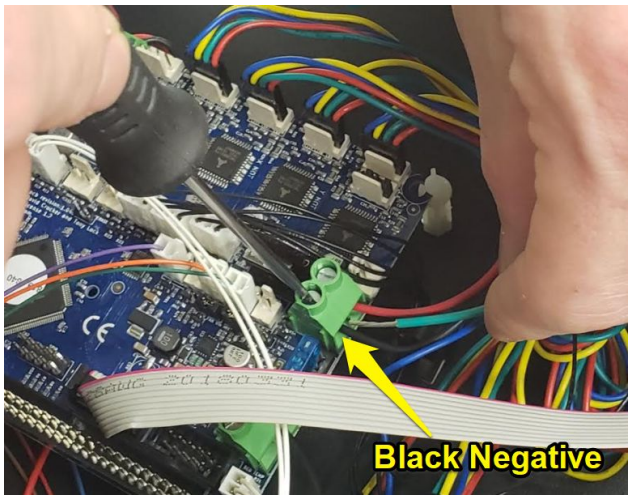


- ❏ All 3 ground wires are connected together. This leaves one free end of the ground circuit ready for final connection.



- ❏ Connect the new green ground wire to the DC negative power input terminal of the controller board as shown. Carefully hold the green connector while firmly when tightening.

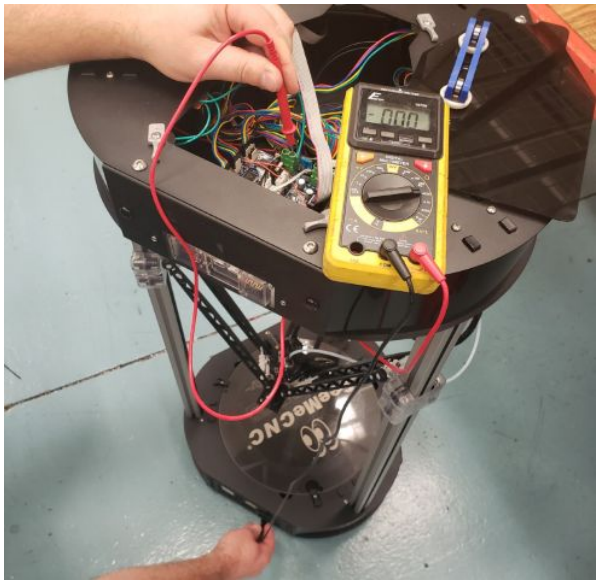
- ❏ Note: Take a moment to perform maintenance. Check other electrical screw terminals for proper tightness and connectors are seated.



4. Test the connection

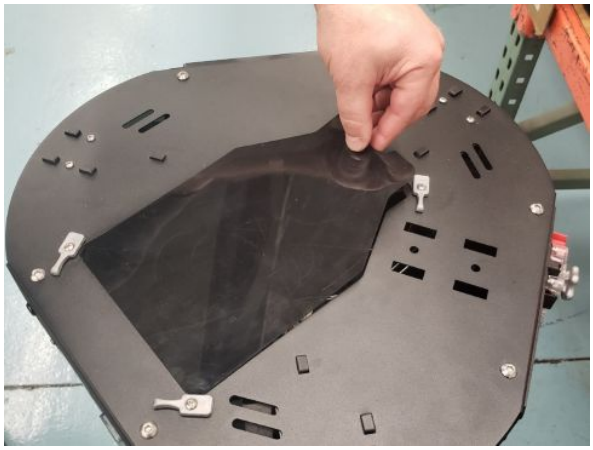
- ❏ Locate the middle ground terminal of the IEC input AC power connector. This is the **middle** terminal as shown. One lead of the ohm meter will contact this terminal as shown.

- ❏ Using the ohm meter, check for continuity between the DC Negative terminal of the control and the ground terminal of the IEC connector (as shown in the previous photo). The photo to the right shows one lead of the ohm meter touching the DC Negative input of the controller and the second lead of the ohm meter touching the middle ground terminal of the AC input at the IEC connector.



5. Install Cover(s) and finish

- ❏ Replace the protective covers
- ❏ The field service is complete. The RostockMAX v4 is ready for use.



Installation Procedure for BOSSdelta 500

Tools Needed for the BOSSdelta 500

- Safety Glasses
- Thin flat pry tool or small screwdriver
- Wire Cutter / Strippers
- No. 2 Phillips Screwdriver

Parts Required for the BOSSdelta 500

Grounding Wire Bill Of Materials for BOSSdelta 500			
Qty	Part No.	Description	Image
1	N/A	Short (~50mm Long) 20AWG Green Grounding Wire with a minimum 300V insulation rating. The wire shown may optionally be terminated with common ring terminals available at a hardware store.	

Procedure Steps for the BOSSdelta 500

1. Installation Preparation
   - ❑ **WARNING:** Ensure the A/C power cord is disconnected from the printer.
   - ❑ Turn Off and Disconnect power from the printer
   - ❑ Double check the list of required parts needed for repair
   - ❑ Before beginning, read the safety information included in this bulletin

2. Prepare and Remove the bottom cover of the BOSSdelta

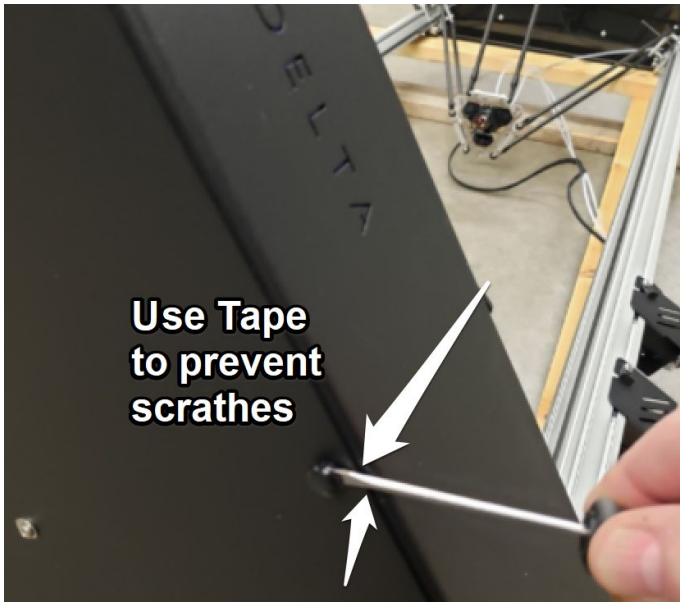
NOTES

- ❏ Use care with the Duet2 control board and alignment of the clear plastic side cover. Being careful not to damage the Duet2 controller USB or micro SD slot.

a. remove the micro SD card from the control board

b. lay the touchscreen controller on the bed of the printer being careful it does not fall to the floor in the next steps

c. Prepare to lay the printer on it's side. Two 4x4 by 36" long wood pieces or equivalent. The main t-slot towers of the printer will lay across these wood support pieces.

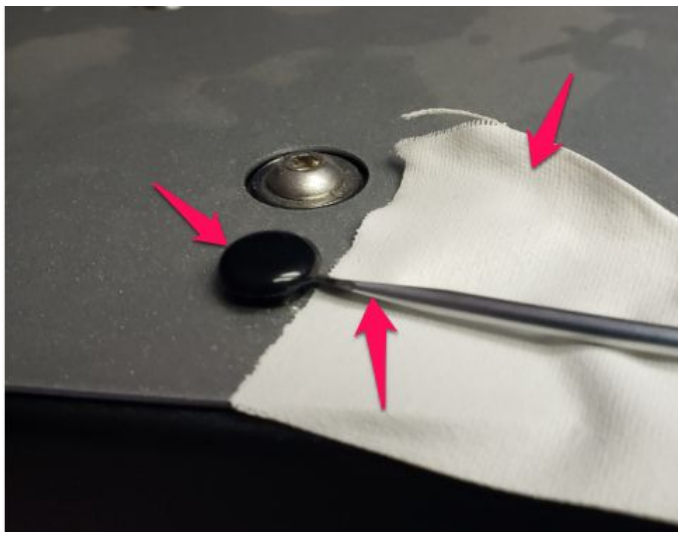


d. The printer will lay on it's side face-down with the control micro SD slot face-down.

e. Apply tape to prevent scratches at the location shown in the photo. Pry each rivet and save. Hold the bottom plate when removing the last rivet.

f. When laying open the bottom over, be careful of the ribbon cable connecting the front SD card reader

Note: Photo to the right showing protection from scratching using tape.

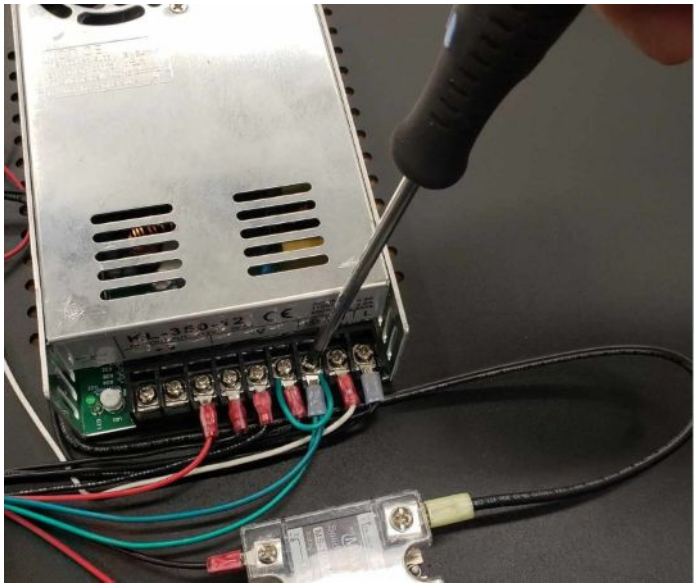


g. Once all rivets are removed the bottom cover will lay over on it's side. **Slowly lay over the bottom being careful of the wiring**

3. Installing the Green Ground Wire related to this Field Service Bulletin

- ❏ Bend the ~50mm Long Green Grounding Wire into a “U” shape and make connection as shown between the AC Ground and any of the DC Negative terminals.

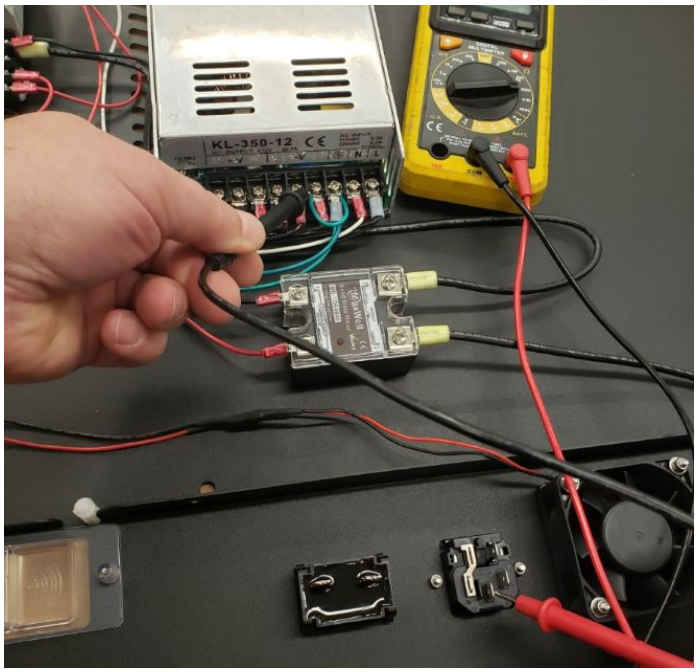
  Note: Some wiring and parts are removed in this photo for clarity.



4. Test the connection

- ❏ Using the ohm meter, check for continuity between one of the **DC Negative terminals** and the **AC Ground terminal** The photo to the right demonstrates the proper locations for performing the test.

  Note: Wiring is not shown for clarity.



- ❏ The ohm meter will indicate the proper connections were made.

5. Install Cover(s) and finish

- ❏ Re-install the BOSSdelta bottom cover, paying close attention the ribbon cable is fully plugged into the **Duet2 controller** AND **SD card reader** on the front of the printer as you close the bottom cover.
  (not pictured)

- ❏ The field service is complete and the BOSSdelta is ready to use.

Installation Procedure for RostockMAX v3.2

Tools Needed for the RostockMAX v3.2

- No. 2 Phillips Screwdriver
- Safety Glasses

Parts Required for the RostockMAX v3.2

Ground Wire Bill Of Materials for RostockMAX v3.2			
Qty	Part No.	Description	Image
1	N/A	Short (~50mm Long) 20AWG Green Grounding Wire with a minimum 300V insulation rating. The wire may be used with ring terminals.	

Procedure Steps for the RostockMAX v3.2

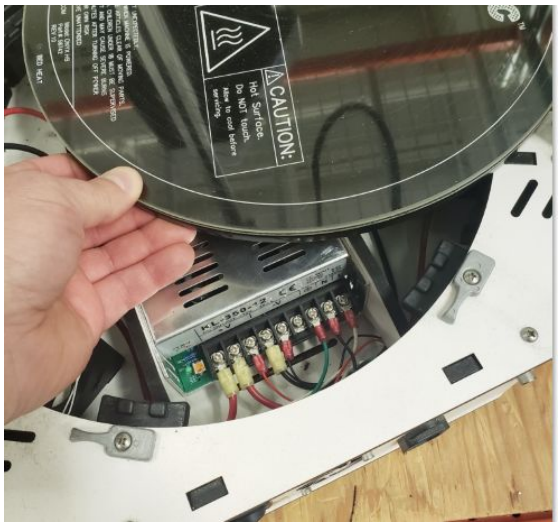
1. Installation Preparation

- ❑ **WARNING:** Ensure the A/C power cord is disconnected from the printer.
- ❑ Turn Off and Disconnect power from the printer
- ❑ Double check the list of required parts for repair
- ❑ Before beginning, read the safety information included in this bulletin

2. Removing the Heated Bed

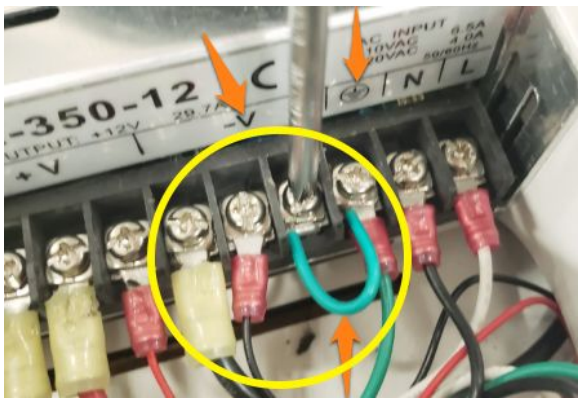
❏ Unclamp the bed glass.

❏ Set aside the whole bed assembly being careful of wiring attached to the bed.



3. Installing the Green Ground Wire

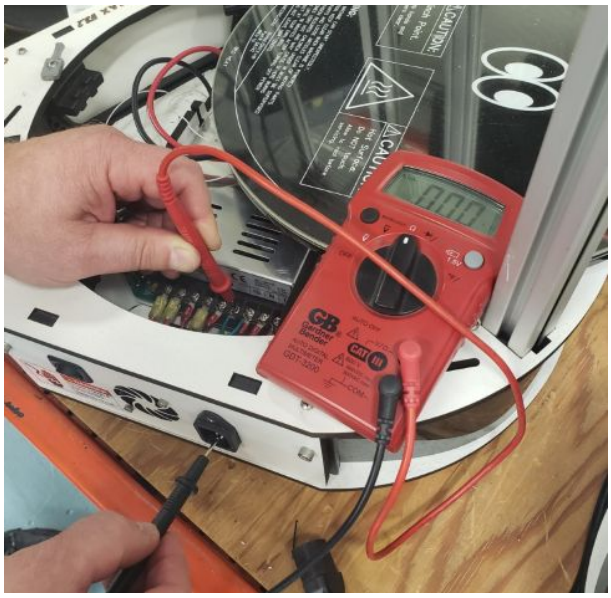
❏ Bend the ~50mm Long Green Grounding Wire into a “U” shape. Make connection as shown between the Ground any of the DC Negative terminals.



4. Test the connection

- ❏ Locate the middle ground terminal of the IEC input AC power connector. This is the **middle** terminal as shown. One lead of the ohm meter will contact this terminal as shown.

- ❏ Using the ohm meter, check for continuity between one of the **DC Negative terminals** and the **middle** terminal of the AC Ground input of the IEC connector. The photo shows where to perform the test. The meter should read zero indicating proper connection has been made.



5. Reinstall Cover(s) and / or Bed components

- ❏ Replace any protective covers that may have been removed and replace the bed components.

- ❏ The field service is complete. Your RostockMAX v3.2 is ready for use.