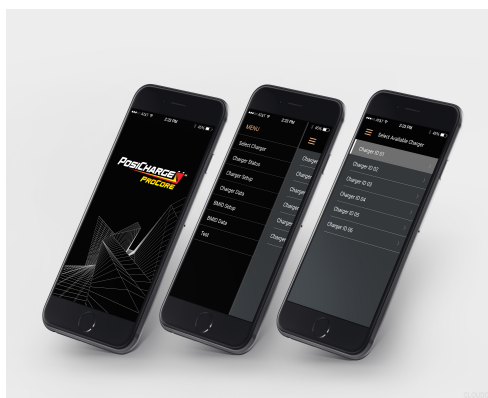


PosiCharge ProCore Service Manual



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Changes or modifications to this product not completed by an authorized service provider could void the product warranty.

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OWNER'S RECORD

Model:
PosiCharge ProCore

Serial number (s/n):

Purchase date: _____

Output power: _____

A NOTE ABOUT CUSTOMER SUPPORT

To ensure superior service, please write down the unit's serial number in the owner's record above and have it available when contacting Webasto customer support. The serial number can be found on the nameplate rating label on the left side of the unit.

Customer Support:

1.866.767.4242
IPCService@Webasto.com

Parts:

WCSIParts@Webasto.com

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CHAPTER 1

SERVICE

1.1 SYMBOL USAGE

The PosiCharge ProCore is designed with safety as the highest priority. Installation must comply with all local codes and the following safety precautions must be read and observed.



DANGER

Indicates information about safety practices which, if not followed, may result in serious injury or death.



WARNING

Indicates information about safety practices which, if not followed, could result in personal injury, fire, or equipment overheating.



NOTE

Indicates helpful information for installation or usage, but does not contain personnel or equipment safety-related information.

1.2 GENERAL SAFETY PRECAUTIONS



WARNING

BEFORE YOU BEGIN

- Read the important safety instructions below.
- Only qualified personnel should install, use, or service this unit.
- Read and understand these manufacturer's instructions and your employer's safety practices manual.



DANGER

ELECTRIC SHOCK CAN KILL

- Touching live electrical parts can cause fatal shocks or severe burns.
- The input power circuitry and internal circuits are live whenever input power is on.
- An incorrectly installed or improperly grounded unit is a hazard.
- Do not operate the unit if there is physical damage to the unit, coupler, or cable.
- Do not subject the cable to damage or stress.
- Do not step on the DC output cable.
- Do not operate the unit if any access panels are open.

1.3 ABOUT THIS MANUAL

This service manual provides instructions for replacing certain components of PosiCharge ProCore battery chargers. The procedures should only be performed by trained and qualified technicians to enhance safety and protect equipment integrity. The following procedures are described:

- Replace the charging module
- Replace the output cable
- Replace the system controller
- Replace the fuses on the backplane
- Replace the control power transformer
- Replace the backplane board
- Update the firmware

1.4 REPLACE THE CHARGING MODULE

1. Unplug any vehicles connected to the charger.
2. Turn OFF AC power at the breaker and lock it out.
3. Wait five minutes for capacitor voltages to bleed down.
4. On the right side of the charger, remove the side panel screws, then remove the panel.
5. The charging module weighs 35 lbs. If you have difficulty holding that weight, get assistance before you attempt to remove the module from the cabinet.
6. Grasp the charging module by the hand holes and pull firmly until disengaged.
7. Slide the module out of the charger.
8. Carefully insert replacement module into the cabinet until module face is flush with cabinet sill and has connected with the bus bar connectors.
9. Replace right side panel and screws.
10. Remove lock out and turn on AC breaker.

1.5 REPLACE THE OUTPUT CABLE

1. Unplug any vehicles connected to the charger.
2. Turn off AC power at the breaker and lock it out.
3. Wait five minutes for capacitor voltages to bleed down.
4. Remove right side panel.
5. The charging module weighs 35 lbs. If you have difficulty holding that weight, get assistance before you attempt to remove the module(s) from the cabinet. Slide module(s) out of charger.
6. Grasp the charging module by the hand holes and pull firmly until disengaged.
7. See Figure 1. Using a socket wrench, remove bolts from the output cable connections.

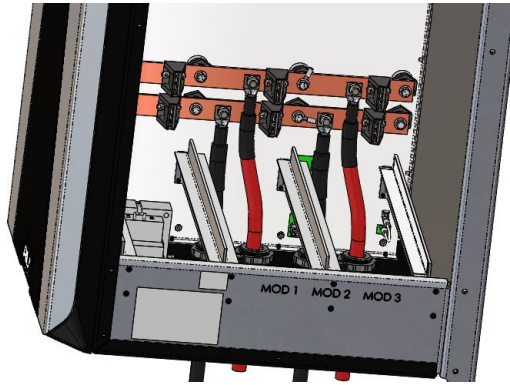


Figure 1: Output Connector Bolts

8. See Figure 2. Unplug the four-pin Molex Comm cable connector from the bottom left corner of the backplane. You may need to unbolt the cable on the bus bar above it to access the connector.

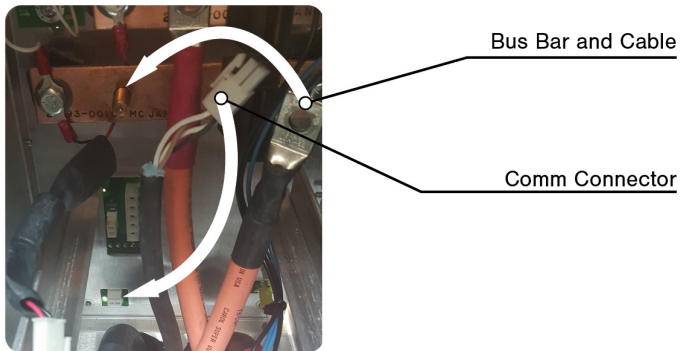


Figure 2: Comm Cable Connector

9. See Figures 1 and 3. Inside the cabinet, loosen the strain relief nut for the Comm cable and pull the cable until you can access the ferrite filter. Remove the snap-on ferrite filter from the Comm cable.



Figure 3: Snap-On Ferrite Filter

10. See Figures 1 and 4. The strain relief nuts are permanently attached to their respective cables. To remove the cables, unscrew the nuts holding them to the cabinet from inside the cabinet.

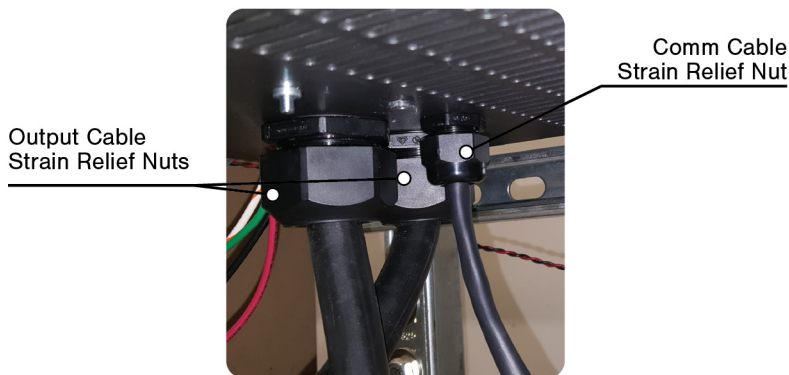


Figure 4: Strain Relief Nuts

11. Pull cables out of the cabinet.
12. Reverse above procedure to install new cable as follows.
13. Thread cables through cabinet openings and secure the strain relief nuts to the cabinet.
14. Loop the Comm cable and reinstall snap-on ferrite filter onto Comm cable as shown in Figure 3.
15. Connect Comm cable to backplane. Reconnect cable to bus bar.
16. Bolt output cables and two ring terminals to filter standoffs, red-to-red and black-to-black. See Figure 1. Torque to 72 lb-in \pm 7 lb-in.
17. Tighten strain relief nuts on all three cables.
18. Pull Comm cable from outside until ferrite filter is next to strain relief. Tighten strain relief.
19. Pull output cable from outside to remove slack inside. Tighten strain relief.
20. Replace modules, reinstall right side panel, remove lockout, turn ON AC power.

1.6 REPLACE THE SYSTEM CONTROLLER/DISPLAY

1. Unplug any vehicles connected to the charger.
2. Turn OFF AC power at the breaker and lock it out.
3. Wait five minutes for capacitor voltages to bleed down.
4. Remove right side panel.
5. The charging module weighs 35 lbs. If you have difficulty holding that weight, get assistance before you attempt to remove the module from the cabinet.
6. Grasp module by hand holes and pull firmly until disengaged.
7. Slide the module out of the charger.
8. See Figure 5. Use a stubby Phillips screwdriver to remove four screws securing the system controller/display as shown below:

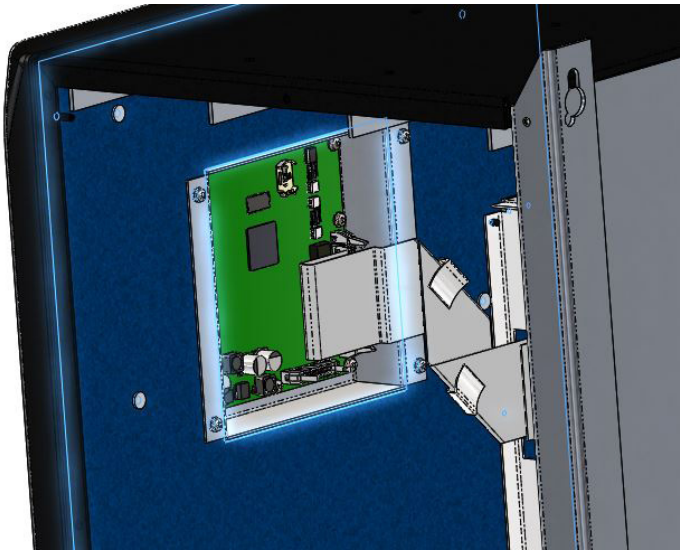


Figure 5: Removing the System Controller/Display Cover

9. Unplug the ribbon cable from the connector on the controller board.
10. See Figure 6. Remove controller board/display assembly from cabinet.



Figure 6: Removing the System Controller/Display

11. Reverse the above procedure to reinstall.

1.7 REPLACE THE BACKPLANE FUSES

1. Unplug any vehicles connected to the charger.
2. Turn OFF AC power at the breaker and lock it out.
3. Wait five minutes for capacitor voltages to bleed down.
4. Remove left side panel.
5. See Figure 7. Test each fuse with an ohmmeter.



Figure 7: Backplane Fuses

6. Replace all three fuses due to stress on the others with a correctly-rated fuse (500V, 20A).
7. Replace left side panel.
8. Remove lock out and turn ON AC power.

1.8 REPLACE CONTROL POWER TRANSFORMER

1. Unplug any vehicles connected to the charger.
2. Turn OFF AC power at the breaker and lock it out.
3. Wait five minutes for capacitor voltages to bleed down.
4. Remove right side panel.
5. The charging module weighs 35 lbs. If you have difficulty holding that weight, get assistance before you attempt to remove the module from the cabinet. Slide the module out of the charger.
6. Unplug the five-pin 24V control power cable from backplane.
7. Unscrew mounting nuts from transformer and remove transformer.
8. Install new transformer on mounting studs and replace nuts.
9. Plug control power cable into backplane.
10. Replace module(s), reinstall right side panel, remove lockout, turn ON AC power.

1.9 REPLACE BACKPLANE BOARD

1. Unplug any vehicles connected to the charger.
2. Turn OFF AC power at the breaker and lock it out.
3. Wait five minutes for capacitor voltages to bleed down.
4. Remove right side panel.
5. The charging module weighs 35 lbs. If you have difficulty holding that weight, get assistance before you attempt to remove the module from the cabinet. Slide the module out of the charger.
6. Remove left side panel.
7. Remove screws securing the backplane.
8. See Figure 8. Tilt backplane board to expose connectors on the opposite side.

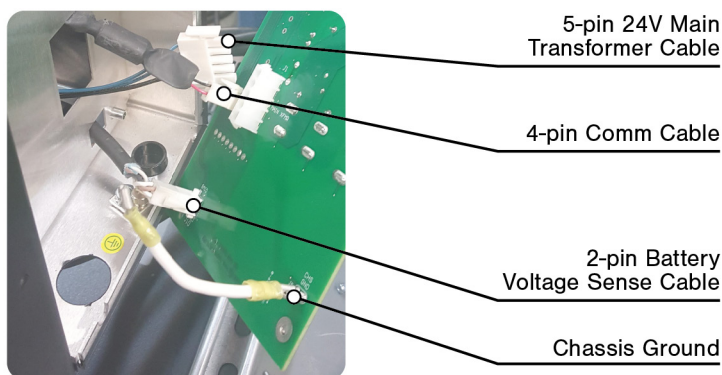


Figure 8: Backplane Cables and Connectors

9. Unplug all connectors and remove backplane board.
10. Reverse above procedure to install new backplane board.

1.10 UPDATE FIRMWARE

1. See Figure 9. Firmware is updated using the USB port on the left side of the charger under the standby switch.



Figure 9: Standby Switch and USB Connector

2. Contact WCSI Customer Support to download the PilotTerm utility. Install PilotTerm on a Windows laptop with PilotTerm software.
3. Save the update .AVB file to the Desktop of the laptop.
4. Connect the laptop to the charger using an A-B (printer-type) USB cable.
5. See Figure 10. Start the PilotTerm program and select Settings tab.

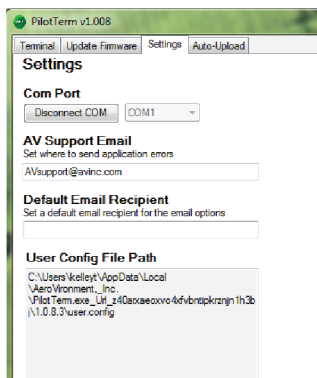


Figure 10: PilotTerm Settings Tab

6. Confirm that the correct comm port is selected and then click "Connect COM port" button.

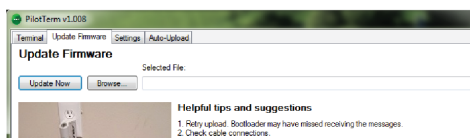


Figure 11: Update Parameter

7. See Figure 11. Select Update Firmware tab, click Browse to select the .AVB update, then click the Update Now button.
8. Progress displays on the screen bottom. When update is completed (about five minutes), close PilotTerm and disconnect laptop from the charger.

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