



Moving AC 100.100-24 12V Supply Wire from C2 (A2) to C1 (A2)



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1. Introduction

1.1 Scope

These non-binding instructions are intended to support authorized personnel in moving the 12V supply wire on the AC 100.100-24 (7700-00005) from C2 (A2) to C1 (A2).

NOTICE: Contactor C1 is labeled “C9” on some units.

The following information is subject to change without notice.

CAUTION: Correct location of all components is essential for proper operation of the system. Failure to comply with these instructions may result in poor operation, no operation, and/or damage to the unit, the vehicle, or the vehicle’s components. Non-compliance with the instructions and information contained herein will void the warranty.

1.2 Meanings of **WARNING**, **CAUTION**, and **NOTICE**

WARNING: This heading is used to highlight that non-compliance with the instructions and/or procedures may cause injury or death.

CAUTION: This heading is used to highlight that non-compliance with the instructions and/or procedures may cause damage to equipment.

NOTICE: This heading is used to draw attention to specific information.

1.3 Safety

WARNING: Before proceeding, press the hybrid disconnect to ensure that the system is disabled. Ensure that shore power is disconnected, then disconnect the 21-pin Deutsch connector and both Rebling connectors. Note that the batteries are still energized even when connected.

WARNING: The cable connections (other than those specified) must not be relocated. Doing so could cause a direct short which could lead to personal injury or damage to equipment.

WARNING: Employers are required to establish a program and use proper procedure for affixing appropriate lock-out/tag-out protectors to energy-isolating devices, and to otherwise disable machines or equipment to prevent unexpected energization, start-up, or release of stored energy to prevent injury to employees. Refer to your employer’s lock-out/tag-out program for more details.

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2. Tools Required

Tools	Notes
standard ratchet set	
standard socket set	9/16"
metric socket set	13mm, 15mm
12V-20V battery-powered driver	
Torx bit set	T25
torque wrench(es)	145 in-lbs, 167 in-lbs, 180 in-lbs
white paint marker	
flush cutters	

3. PPE Required

Tools	Notes
safety glasses	
lock-out/tag-out protectors	Follow your company's standards for use.
any other company-mandated PPE	

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4. Procedure

WARNING: Remove jewelry (including rings, necklaces, and watches) before proceeding.

- Engage the hybrid disconnect



- Confirm that no external power source is plugged into the vehicle's external shore power port.
- Remove the primary Rebling connector, the auxiliary Rebling connector, and the 12-pin and 21-pin Deutsch connectors from the unit.



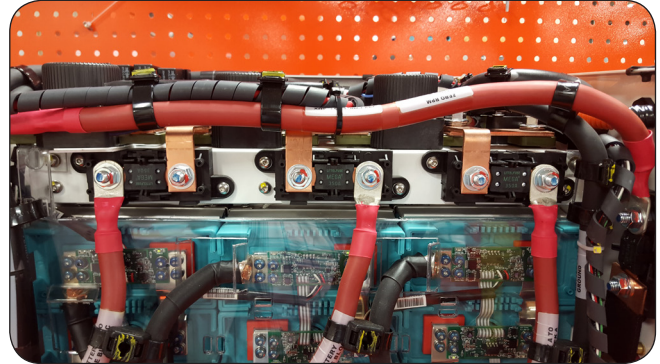
- Remove the lid.

Requires: 12V-20V battery-powered driver
T25 Torx bit



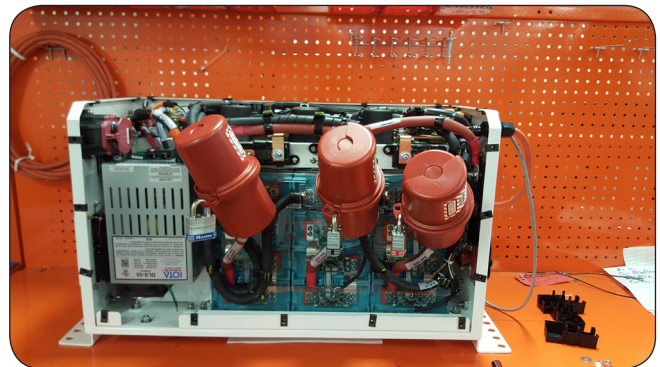
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- Remove the fuse holder covers.



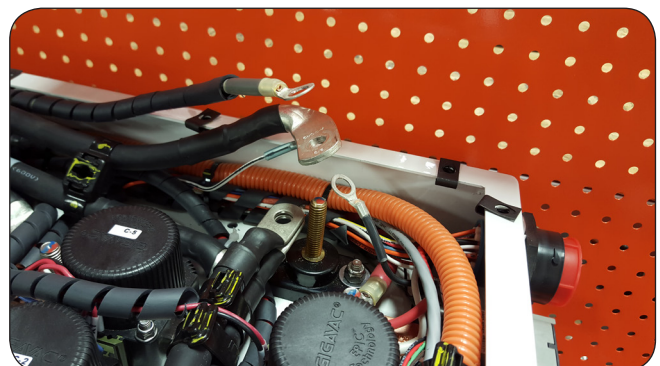
- Disconnect the battery power cables in order from right to left.
- As the cables are removed, cover them with lock-out/tag-out protectors in accordance with your company's standards to avoid shorting.

Requires: ratchet
13mm socket
lock-out/tag-out protectors



- Remove all connections from the ground stud. Take note of the orientation of the cables and their ring terminals.

Requires: ratchet
9/16" socket



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- Remove the cable ties from the Rebling ground cable and the Battery A ground cable.

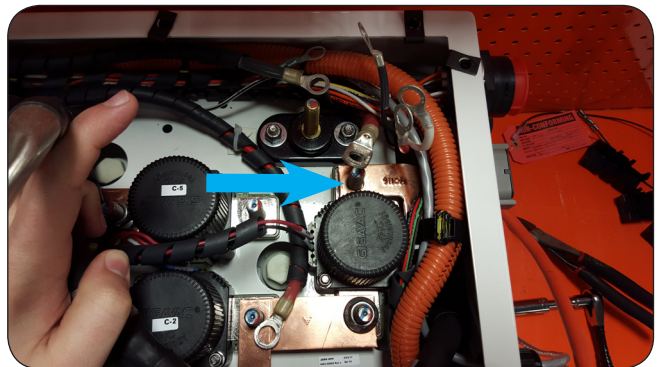
Requires: flush cutters



- Remove the connections from Gigavac contactor studs C1 (A2), C2 (A2), and C5 (A2).

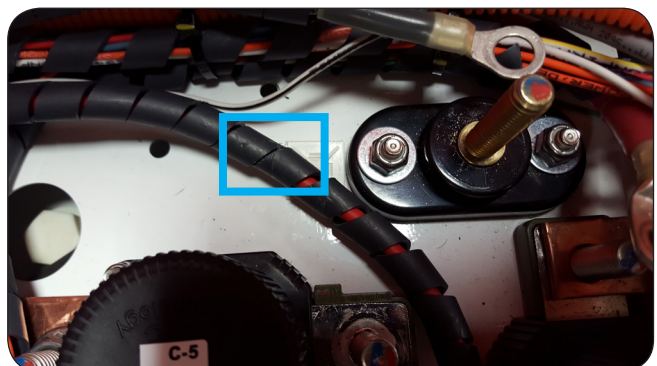
NOTICE: Contactor C1 is labeled “C9” on some units.

Requires: ratchet
15mm socket



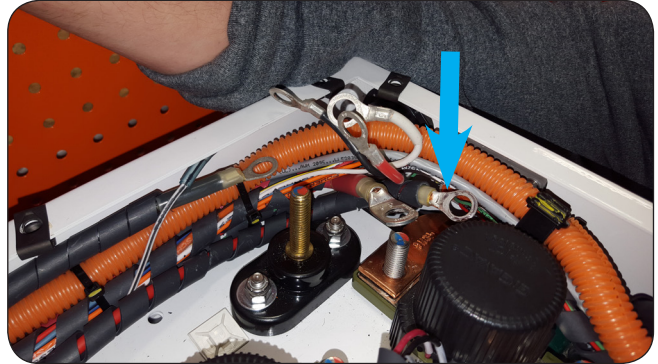
- Remove the zip tie from the adhesive zip tie mount to the left of the ground stud.

Requires: flush cutters



Moving AC 100.100-24 12V Supply Wire from C2 (A2) to C1 (A2)

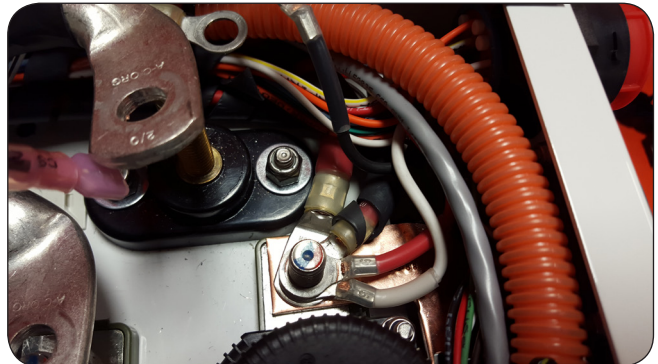
- Route the 12V supply wire behind the ground stud and under the 4ga cable that you just removed from the ground stud.



- Connect the 4ga charger cable to C1 (A2), then the 12V supply wire, then the 12ga red wire, then the 12ga white wire. Clock the wires as follows: 4ga charger at 1 o'clock, 12V supply at 2 o'clock, red 12ga at 3 o'clock, white 12ga at 4 o'clock.
- Torque the factory C1 (A2) nut to 167 in-lbs. Place a white paint mark on the nut to indicate that it has been re-torqued.

CAUTION: Ensure that the 4ga wire does not rub against the ground stud mounting hardware.

Requires: torque wrench
15mm socket
white paint marker



- Connect the black 2/0 current shunt cable to C5 (A1).
- Torque the factory C5 (A1) nut to 167 in-lbs. Place a white paint mark on the nut to indicate that it has been re-torqued.

Requires: torque wrench
15mm socket
white paint marker



Moving AC 100.100-24 12V Supply Wire from C2 (A2) to C1 (A2)

- Reinstall the factory nut on C2 (A2).
- Torque the nut on 167 in-lbs.
- Mark the nut white to indicate that it has been re-torqued.

Requires: torque wrench
15mm socket
white paint marker



- Reinstall the connections on the ground stud in the following order: 2/0 cable with 90-degree lug, Battery A ground (invert the lug), Rebling ground, 6ga ground, 12ga ground, and 18ga white/black striped ground.
- Torque the factory ground stud nut to 180 in-lbs. Mark the nut white to indicate that it has been re-torqued.

Requires: torque wrench
9/16" socket
white paint marker



- Replace the cable ties you removed earlier in the procedure. Ensure that the cables are secured in a manner that will minimize movement.

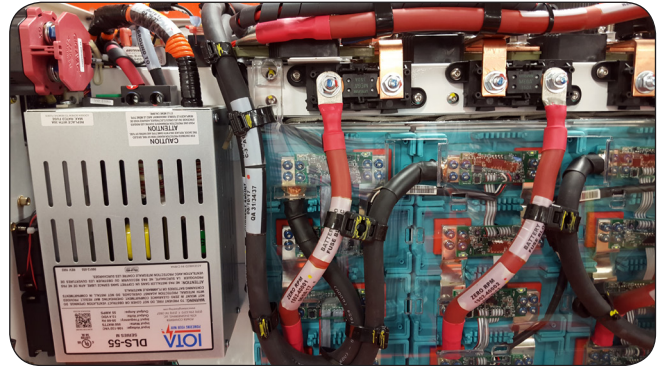
Requires: flush cutters



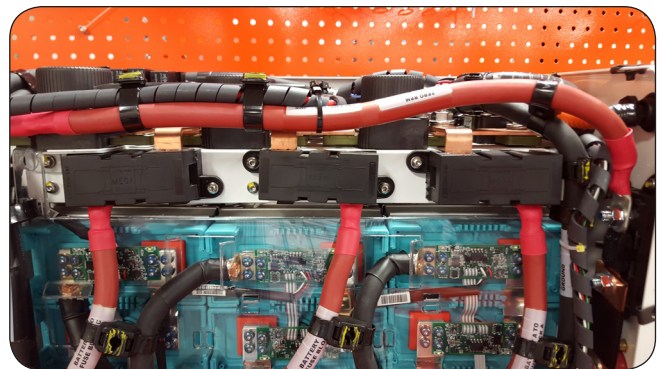
Moving AC 100.100-24 12V Supply Wire from C2 (A2) to C1 (A2)

- Remove the lock-out/tag-out protectors.
- Reinstall the battery power cables from left to right. Torque the nuts to to 145 in-lbs and mark them white as you go to indicate that they have been re-torqued.

Requires: torque wrench
13mm socket
white paint marker



- Reinstall the fuse holder covers.



- Reinstall the lid.
- Reference the figures below for lid fastener rundown comparisons.

Requires: 12V to 20V battery-powered driver
T25 Torx bit

Properly Torqued



Properly Torqued



Under-torqued



Under-torqued



Over-torqued



Over-torqued



Moving AC 100.100-24 12V Supply Wire from C2 (A2) to C1 (A2)

- Reinstall the primary Rebling connector, the auxiliary Rebling connector, and the 12-pin and 21-pin Deutsch connectors from the unit.



- Disengage the hybrid disconnect.



- After the procedure is complete, reset the BMS according to work instruction 4807-00135.