

440W SOLAR KIT



P/N 2881507

APPLICATION

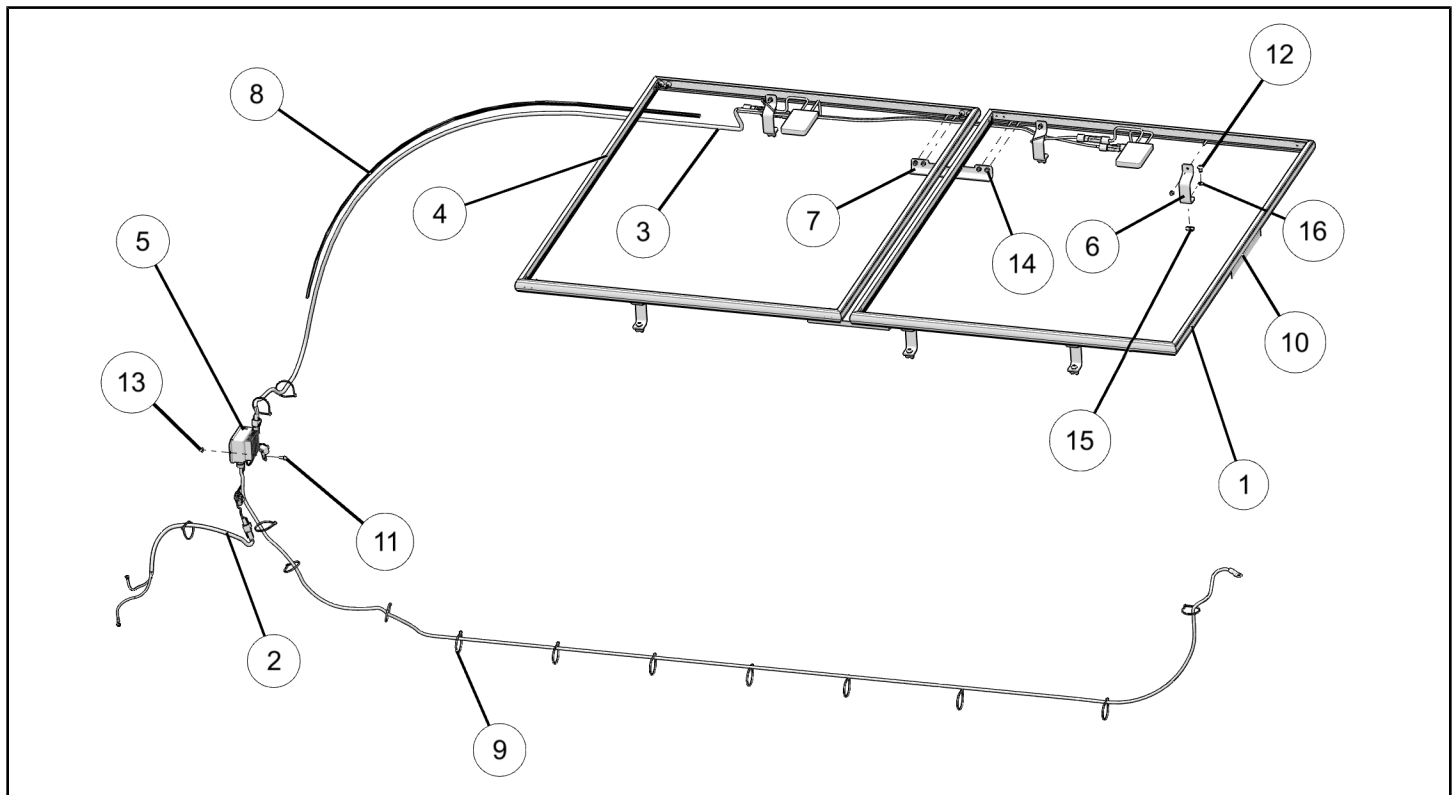
2016 GEM e6 and eL XD

BEFORE YOU BEGIN

Read these instructions and check to be sure all parts and tools are accounted for. Please retain these installation instructions for future reference and parts ordering information.

KIT CONTENTS

This Kit includes:



REF	QTY	PART DESCRIPTION	PART NUMBER
1	1	Framed Solar Assembly, 220W, E6	2635959
2	1	Solar Harness	2413186
3	1	Solar Panel Harness, 440W	2413672
4	1	Front Framed Solar Assembly, 220W, E6	2636111
5	1	Solar Charger, 440W	4015483
6	6	Solar Bracket Mount	5261057
7	2	Solar Panel Bracket	5261187
8	1	T-Slot Extrusion Cover	5522130-1610
9	16	Panduit Strap	7080138

REF	QTY	PART DESCRIPTION	PART NUMBER
10	1	Decal-Warning	7181565
11	2	Screw, M6 X 1.0 X 16.0 MM, HXFL	7518637
12	6	Screw, M8 X 1.25 X 15, TXTH	7520391
13	2	Flange Nut, M6 X 1.0	7547339
14	14	Hex Nut, .25–20	7547637
15	6	Roll-In Nut, M8 X 1.25	7547806
16	6	Washer	7556305
	1	Instructions	9926537

TOOLS REQUIRED

- Safety Glasses
- Torx® Set
- Metric Wrench Set
- Metric Socket Set
- Standard Socket Set and Ratchet

IMPORTANT

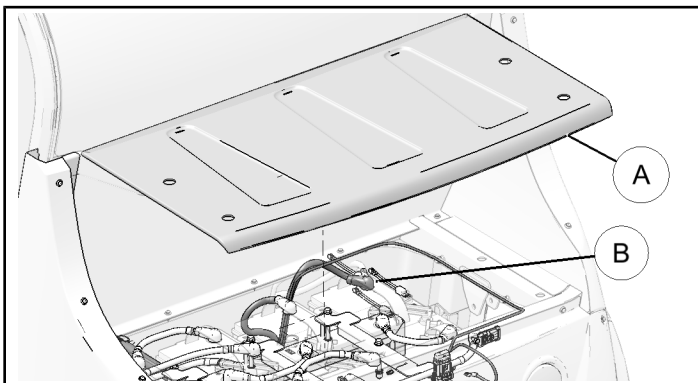
Your 440W SOLAR KIT is exclusively designed for your vehicle. Please read the installation instructions thoroughly before beginning. Installation is easier if the vehicle is clean and free of debris. For your safety, and to ensure a satisfactory installation, perform all installation steps correctly in the sequence shown.

ASSEMBLY TIME

Approximately 60 minutes

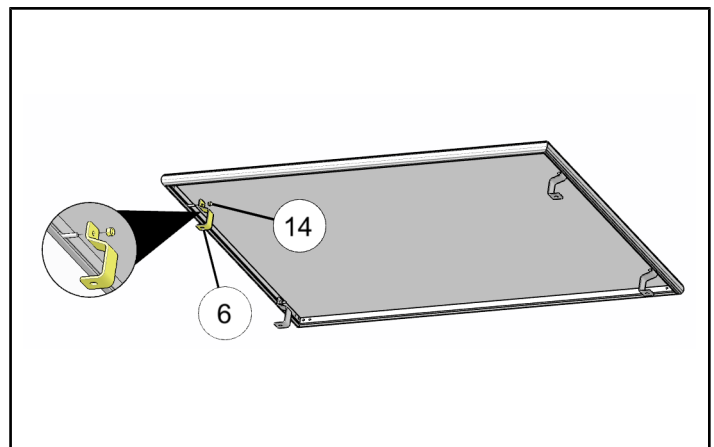
INSTALLATION INSTRUCTIONS

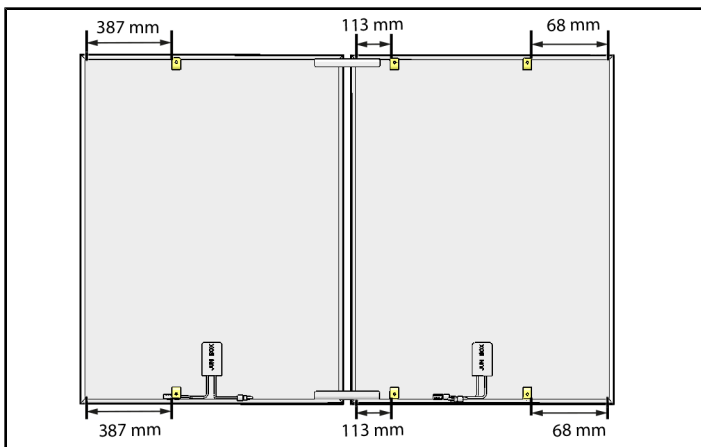
1. Place vehicle in "PARK". Turn key to "OFF" position and remove from vehicle.
2. Remove rear deck (A) of the vehicle. Disconnect negative cable (B) from front right battery.
3. Install mounting brackets ⑥ onto the solar panel extrusions as shown below. Torque nuts ⑭ to following specification.



TORQUE

8 ft. lbs. (11 Nm)





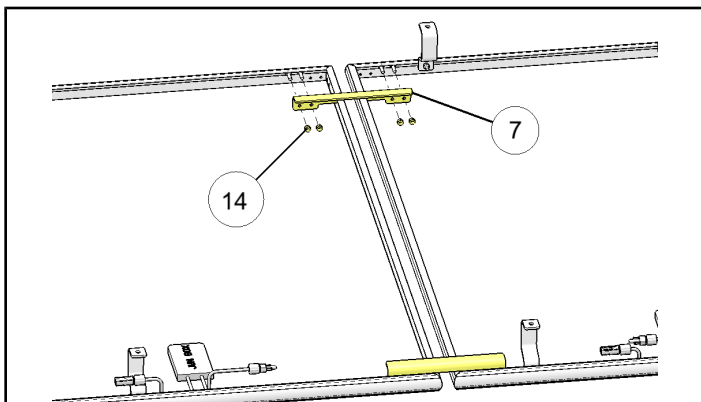
NOTE

Measurements are to the inside surface of extrusion.

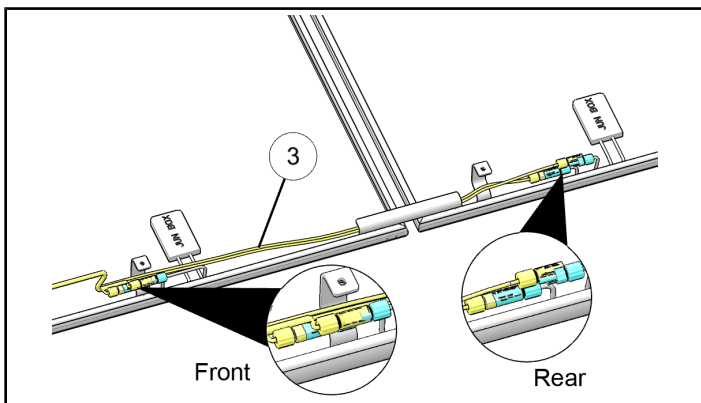
4. Connect solar panels with brackets ⑦. Torque nuts ⑭ to following specification.

TORQUE

8 ft. lbs. (11 Nm)



5. Connect solar panel harness ③ to solar panel connector as shown.



NOTE

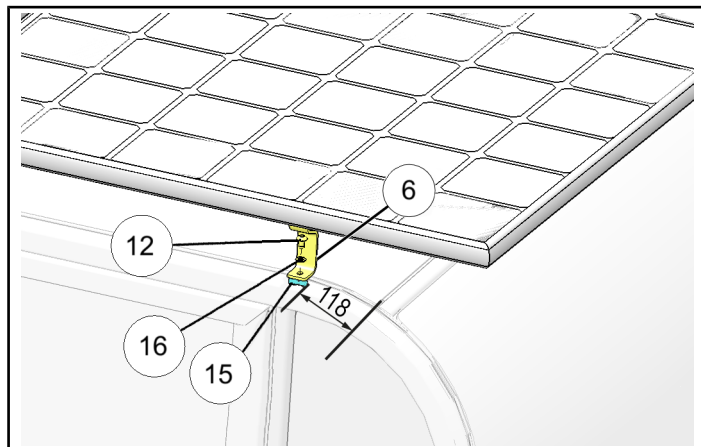
220W and junction boxes to be toward right side of vehicle.

6. Solar Assembly Mounting:

- a. **For mounting on e6:** Place solar panel assembly with brackets ⑥ resting on OPS. Align rear bracket to be 118mm from rear cross brace. Drop roll-in nuts ⑮ into OPS T-slot to align with brackets and mount using bolts ⑫ and washers ⑯. Torque to below specification.

TORQUE

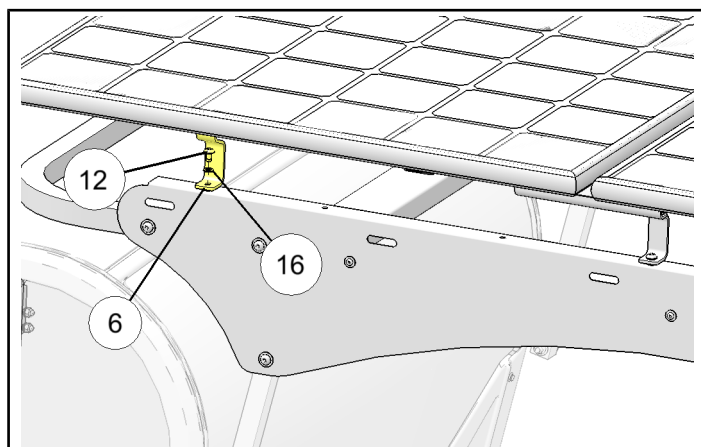
17 ft. lbs. (23 Nm)



- b. **For mounting on eL XD:** Place solar panel assembly on ladder rack aligning brackets with existing rivnuts. Mount with bolts ⑫ and washers ⑯. Torque to below specification.

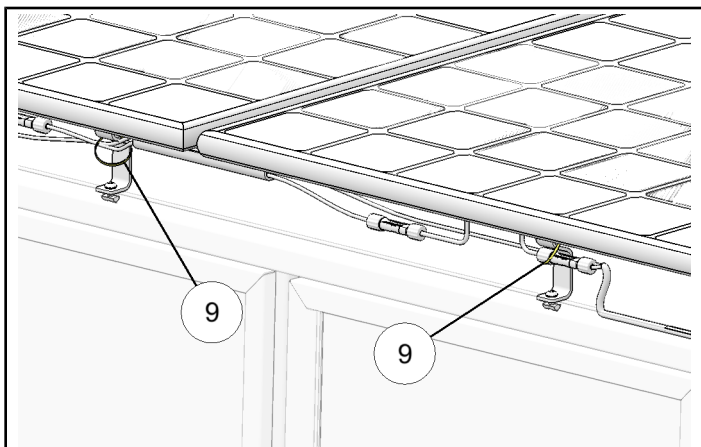
TORQUE

17 ft. lbs. (23 Nm)

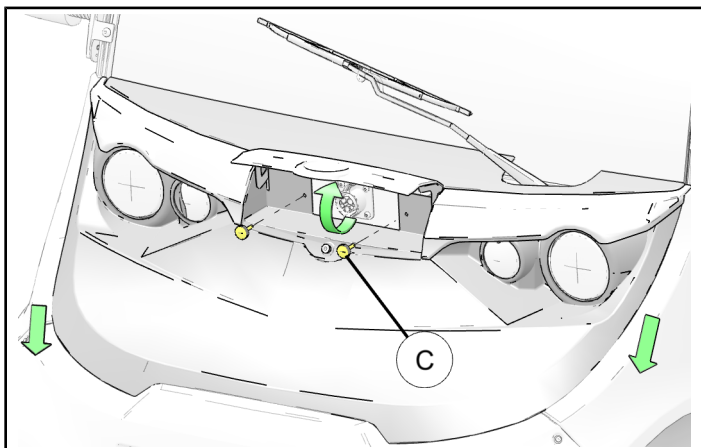


7. Cover solar panels with cardboard packaging from the kit.

8. Use Panduit strap ⑨ to fasten solar panel harness to brackets as shown.



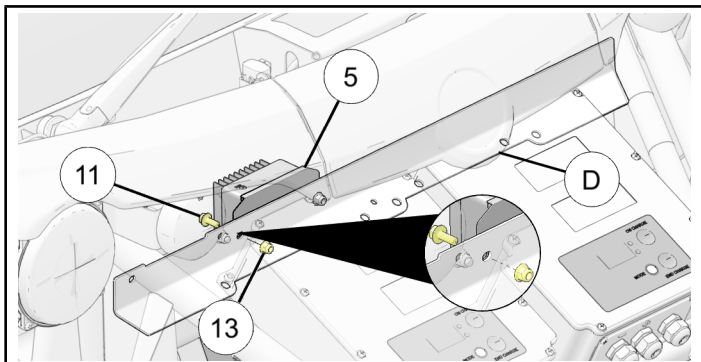
9. Remove the thumb screws (C) from hood under the charge port and pull the hood forward and away from the vehicle.



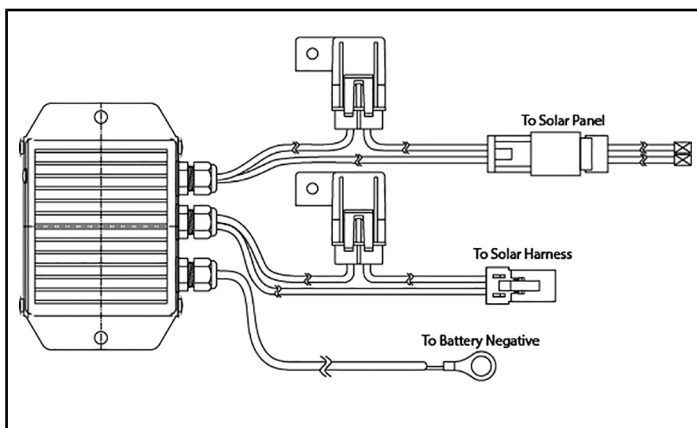
10. Mount solar charger ⑤ to chassis frame (D) using bolts ⑪ and nuts ⑬. Torque bolts ⑪ to following specification.

TORQUE

8 ft. lbs. (11 Nm)

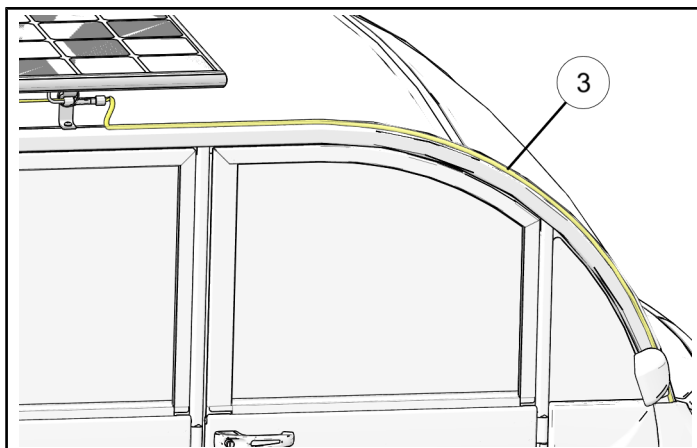


11. See the electrical connections of the solar charger for reference.

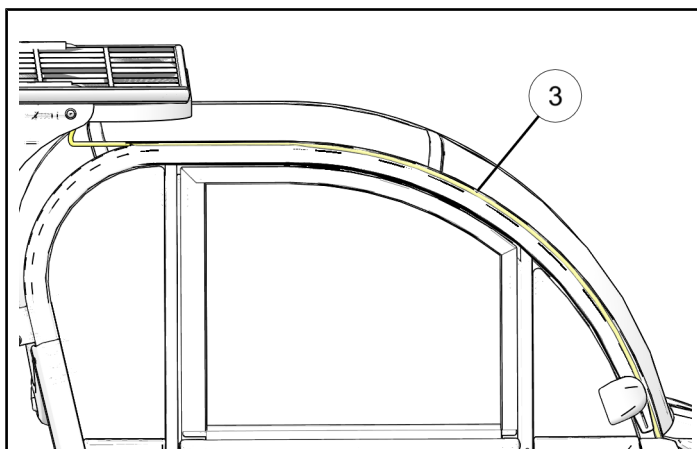


12. Route solar panel harness ③ into OPS T-slot channel.

For e6

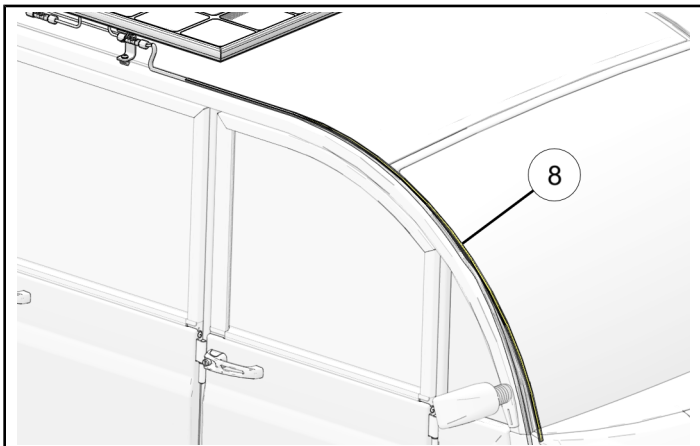


For eL XD

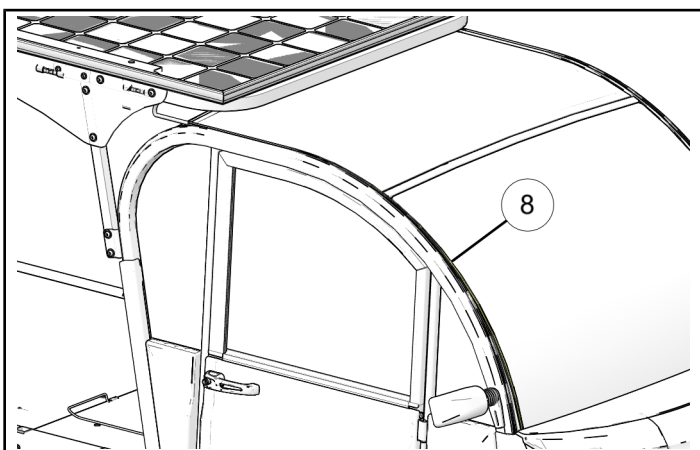


13. Cover solar panel harness with T-slot cover ⑧.

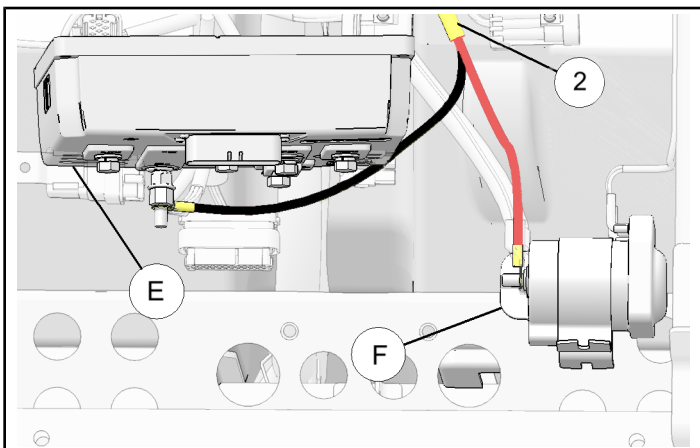
For e6



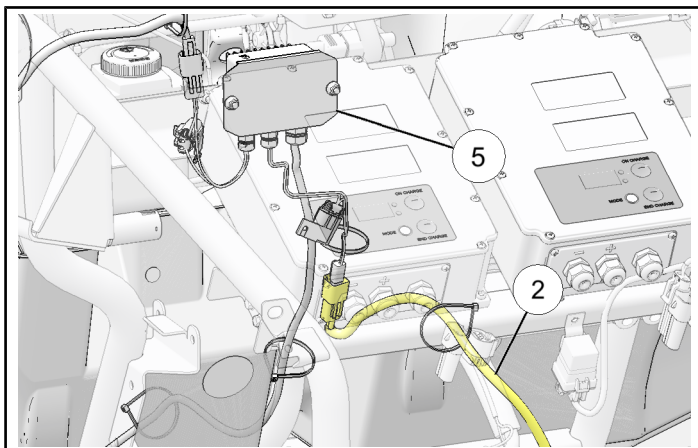
For eL XD



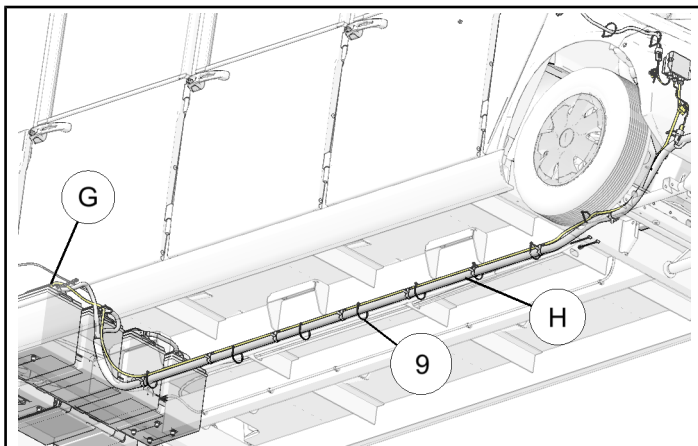
14. Connect solar harness ② to contactor assembly (PN 4012818) (F) with red wire and motor controller (PN 4015643) (E) with black wire.



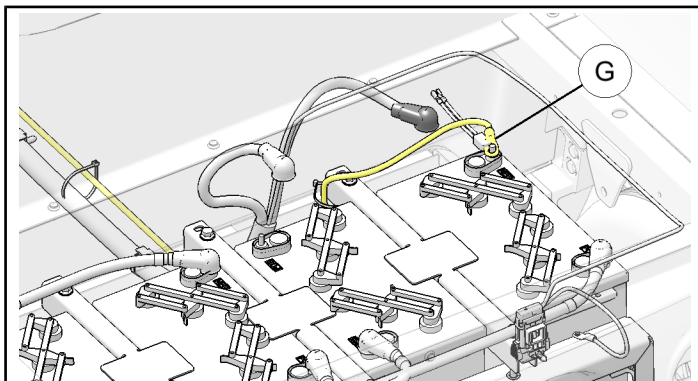
15. Connect solar harness ② to solar charger ⑤ use panduit straps to hold harness in place.



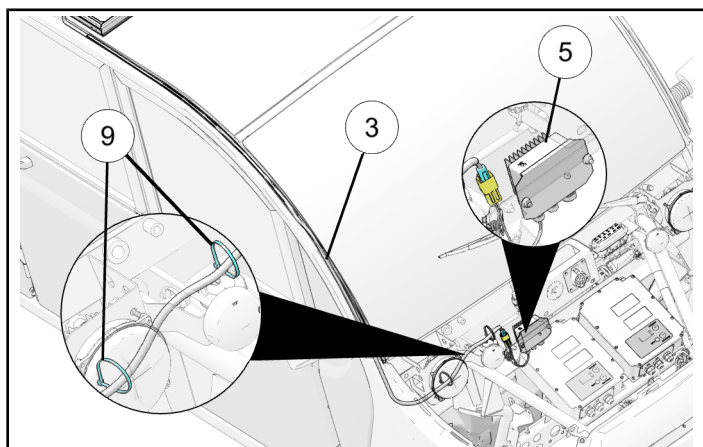
16. Route controller terminal ring (G) along main vehicle harness (H) and fasten using Panduit strap ⑩.



17. Reconnect battery connections disconnected in Step 2, connecting controller terminal ring (G) on top of the battery connection.



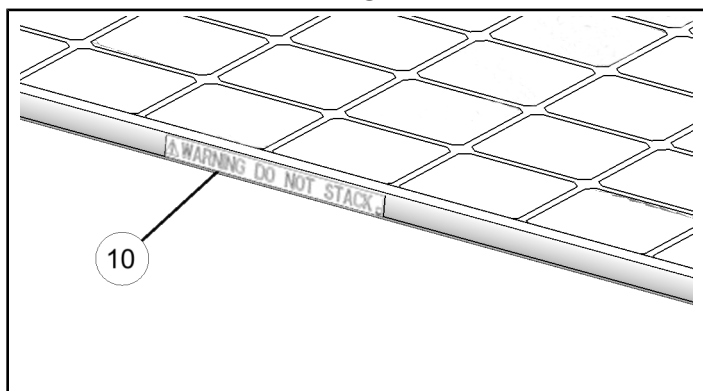
18. Connect solar panel harness ③ to solar charger ⑤ and fasten with Panduit straps ⑨.






20. Remove cardboard. Check LED to confirm functional operation. (Ensure solar panel is in direct sunlight).

21. Reinstall hood and rear deck.

19. Ensure rear extrusion is free of dust, dirt, and debris and install decal ⑩.



LED Information:

MODE	LED	LED INDICATOR	CONDITION
OFF		Blank	1) Disconnected from Batteries -or- 2) Input Low Voltage Shutdown
Bulk Charge		Blink Green 1 sec ON / 1 sec OFF	Maximum Charge Current 3ADC
Absorption Charge ²		Blink Green 1 sec ON / 1 sec OFF	Maximum Charge Voltage $=84 - ((T_{\text{BATTERY}} - 20) \times 0.14)$
Float Charge		Steady Green	Constant Float Voltage $= (V_{\text{ABSORPTION}} - 1.8V)$
Input Over Voltage Auto Shutdown ³		Steady Red	PV Voltage >36.5VDC
Output Over Voltage Auto Shutdown ³		Blink Red 0.5 sec ON / 0.5 sec OFF for 5 sec	Battery Voltage $> (V_{\text{ABSORPTION}} + 2V)$