

For the solar-powered SPEEDCHECK-12



90065_REPLACEMENT-GUIDE_SPEEDCHECK-12-CC_RevA

Table of Contents

1.0 Warnings and Precautions	3
1.1 Warranty Disclaimer	3
1.2 Standards	3
1.3 Safety and Usage Precautions	3
2.0 System Components	5
3.0 Tools and Materials Required	5
4.0 Installation	6
4.1 Opening Rear Enclosure	6
4.2 Removing Solar Panel	7
4.3 Removing Solar Charge Controller	8
4.4 Installing Solar Charge Controller	9
4.5 Reinstalling Solar Panel	10
4.6 System Reassembly	11

1.0 Warnings and Precautions

The following symbols indicate important safety warnings and precautions throughout this guide:



WARNING indicates that serious bodily harm or death may result from failure to adhere to the precautions.



CAUTION indicates that damage to equipment may result if the instructions are not followed.



NOTE suggests optimal conditions and provides additional information.

1.1 Warranty Disclaimer

This manual will familiarize you with the features, operation standards and installation of Carmanah's SPEEDCHECK-12 solar charge controller. Failure to comply with the use, storage, maintenance, installation or placement instructions detailed in this manual could void the warranty.

1.2 Standards

Perform all installation, wiring, grounding and maintenance in conformance with local building and electrical codes. Adherence to the National Electrical Code (NEC) is mandatory to comply with any certification markings. Non-adherence to code may void the warranty.

1.3 Safety and Usage Precautions



Batteries are shipped fully charged. Use extreme caution when handling the batteries as they can generate hazardous short-circuit currents. Remove all jewelry (bracelets, metal-strap watches, etc.) before entering the cabinet.



Solar panels produce DC electricity when exposed to light and can therefore produce an electrical shock or burn. To render solar panels inoperative, remove them from sunlight or fully cover their front surface with an opaque material.



Before lifting any heavy or bulky equipment, ensure the load is secured so moving parts do not shift, and that it can be lifted as far as needed without back strain or loss of grip. Installation may require more than one person.



Ensure the equipment is not powered during installation and wiring of the system.



Recheck all completed wiring for proper polarity prior to energizing the system.



Changes or modifications to Carmanah equipment not expressly approved by Carmanah could void both the user's authority to operate the equipment and the warranty.



Product can have sharp edges. Accidental movement of hinged components can cause injury.



This guide is specific to the SPEEDCHECK-12 replacement solar charge controller installation and is not a replacement for the complete SPEEDCHECK-12 product user manual.

Visit support.carmanah.com to download the complete product user manual.

2.0 System Components

The SPEEDCHECK-12 replacement solar charge controller consists of the following items:

1. Solar charge controller, SPEEDCHECK-12 (1)
2. Rivet, 3/16", aluminum (2)

3.0 Tools and Materials Required

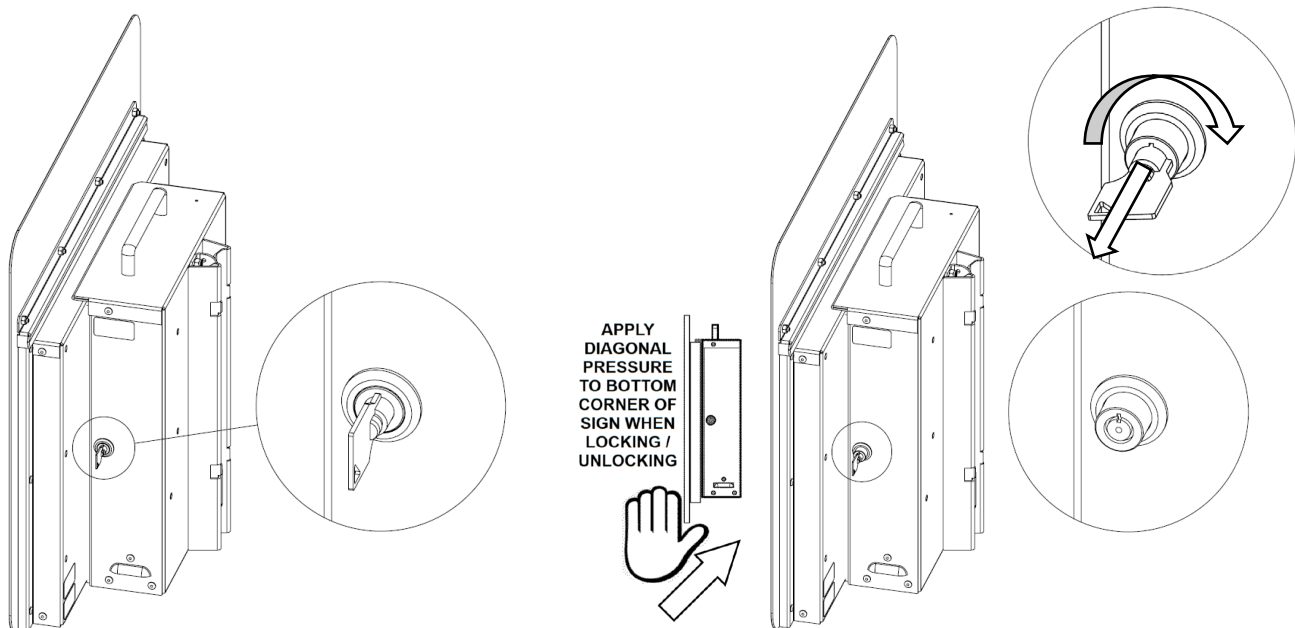
The following tools and materials may be required to install the solar charge controller into your SPEEDCHECK-12 system:

1. Drill and drill bit set
2. Socket set
3. Crescent wrench
4. Multi-bit screwdriver
5. Rivet installation tool with nosepiece for 3/16" diameter rivet

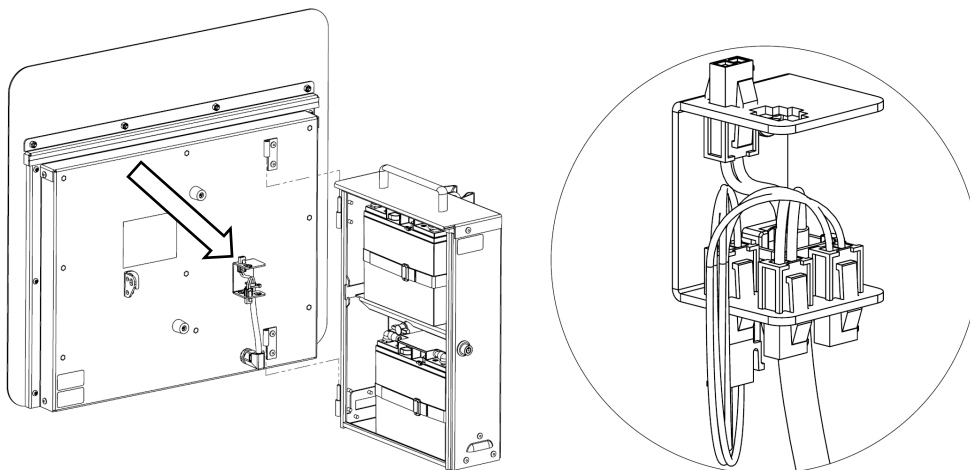
4.0 Installation

4.1 Opening Rear Enclosure

1. To open SPEEDCHECK-12, insert included key into lock and rotate clockwise.
2. Apply diagonal pressure to the bottom right corner of the sign face then PULL on the key.
3. Once unlocked, the key can be removed.



4. Swing the display enclosure away from the rear enclosure.
5. Disconnect all 2-pin connections at the display enclosure bracket.
6. Temporarily lock the SPEEDCHECK-12 by pushing the display enclosure against the rear enclosure then PUSH the lock to secure in place. This will secure the system while working on the solar kit.

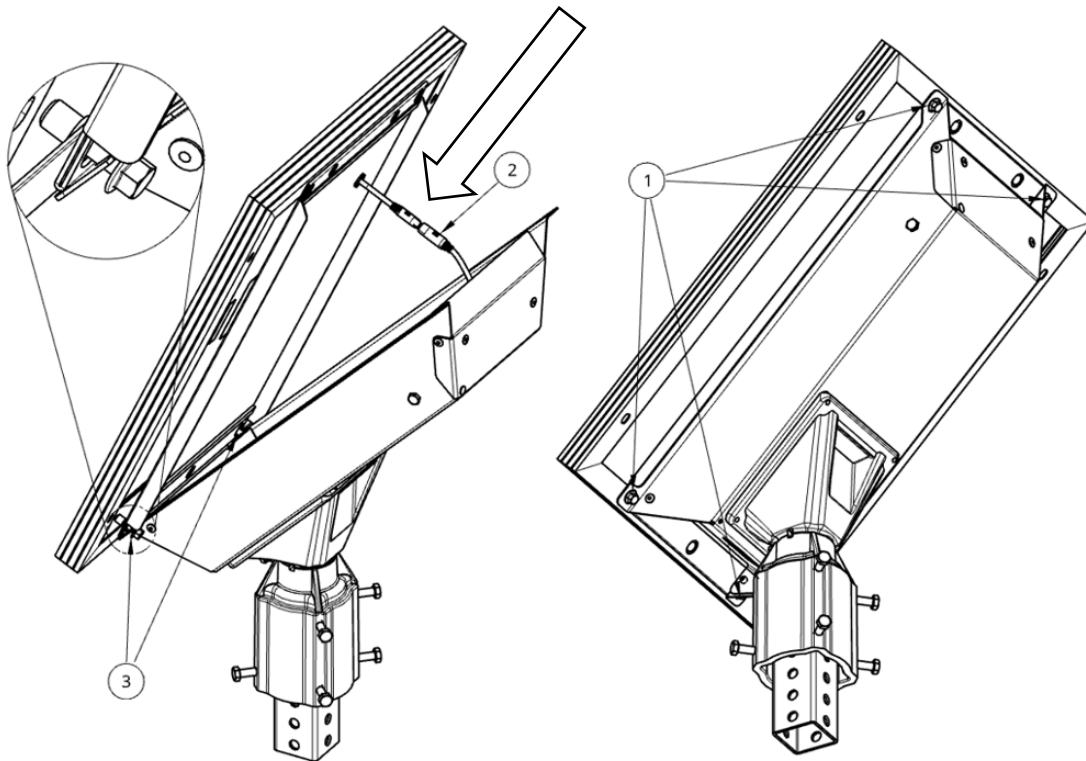


4.2 Removing Solar Panel

NOTE

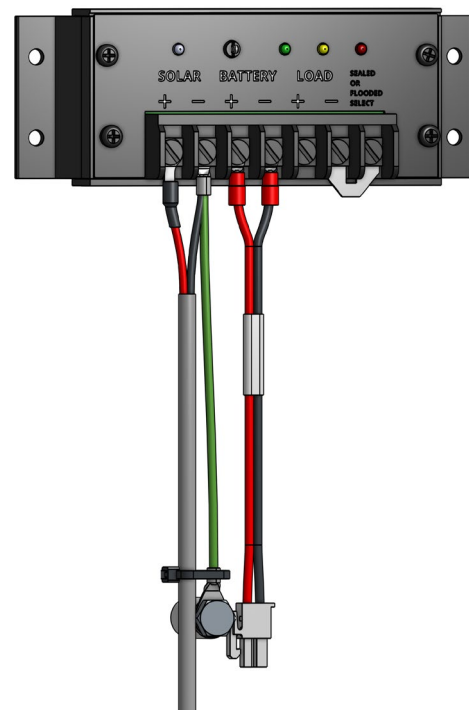
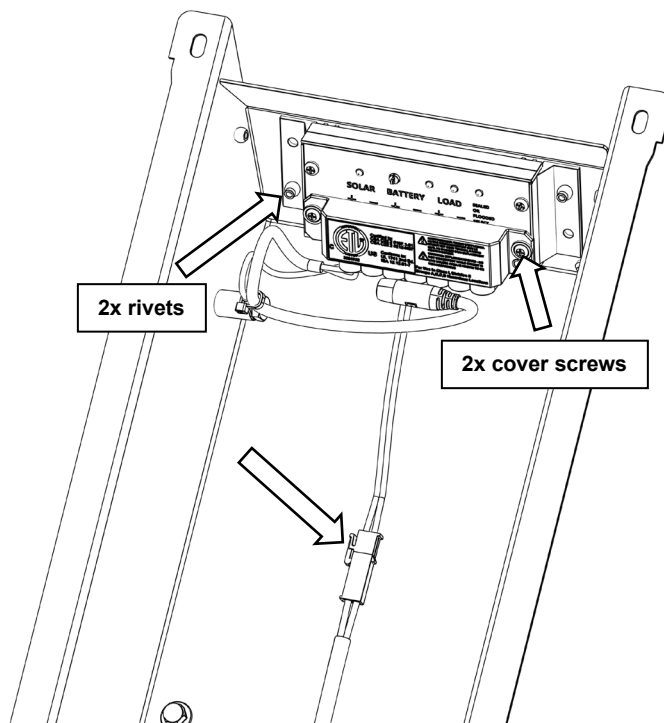
These instructions will cover leaving the solar kit attached to the pole while removing and replacing the solar charge controller. If required, you may also remove the entire solar kit from the pole to work on the ground instead. For more information on how the solar kits are installed, see the SPEEDCHECK-12 manual at support.carmanah.com.

1. Locate the top four mounting bolts for the solar panel and remove the top two while leaving the bottom two loose.
2. Disconnect solar panel power harness.
3. Remove the bottom two bolts and set hardware aside and solar panel aside.



4.3 Removing Solar Charge Controller

1. Remove the plastic cover plate on the front of the charge controller.
2. Remove the wiring on the Solar and Battery terminals connected to the charge controller. Take note of where the wiring was originally terminated.
3. Disconnect the power harness that goes down to the SPEEDCHECK-12 display.
4. Drill out the two rivets securing the charger controller and remove the controller from the system. Remove all metal chips from the solar housing.

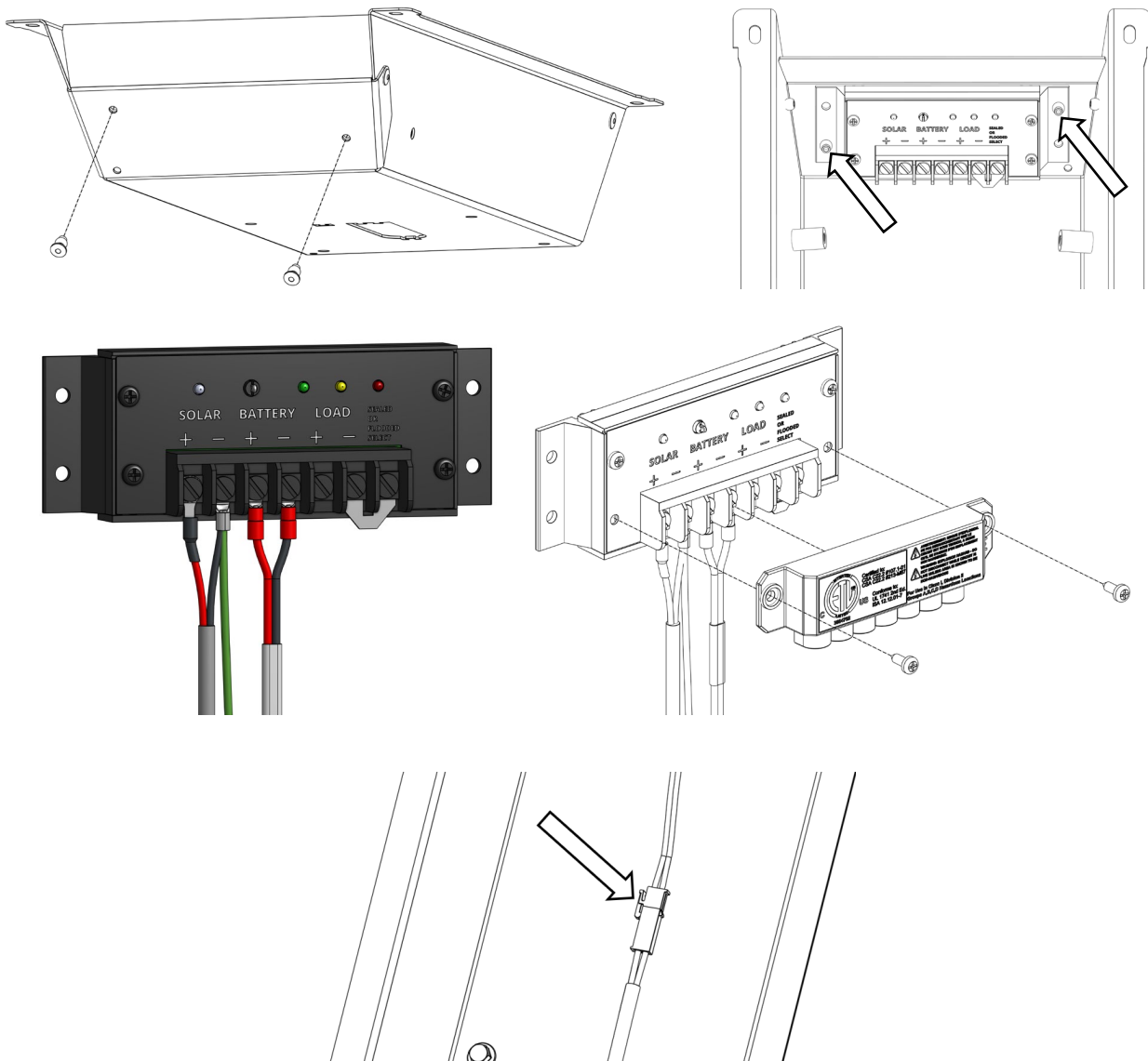


4.4 Installing Solar Charge Controller

1. Fit the new charge controller in the same location and orientation as previously installed.
2. Insert the two provided rivets from the rear of the solar housing and rivet the charge controller to the housing.
3. Reconnect the charge controller wiring from [Section 4.3](#).
4. Reinstall the plastic cover plate and secure with the two previously used screws.
5. Reconnect the power harness that goes down the pole to the SPEEDCHECK-12 display.

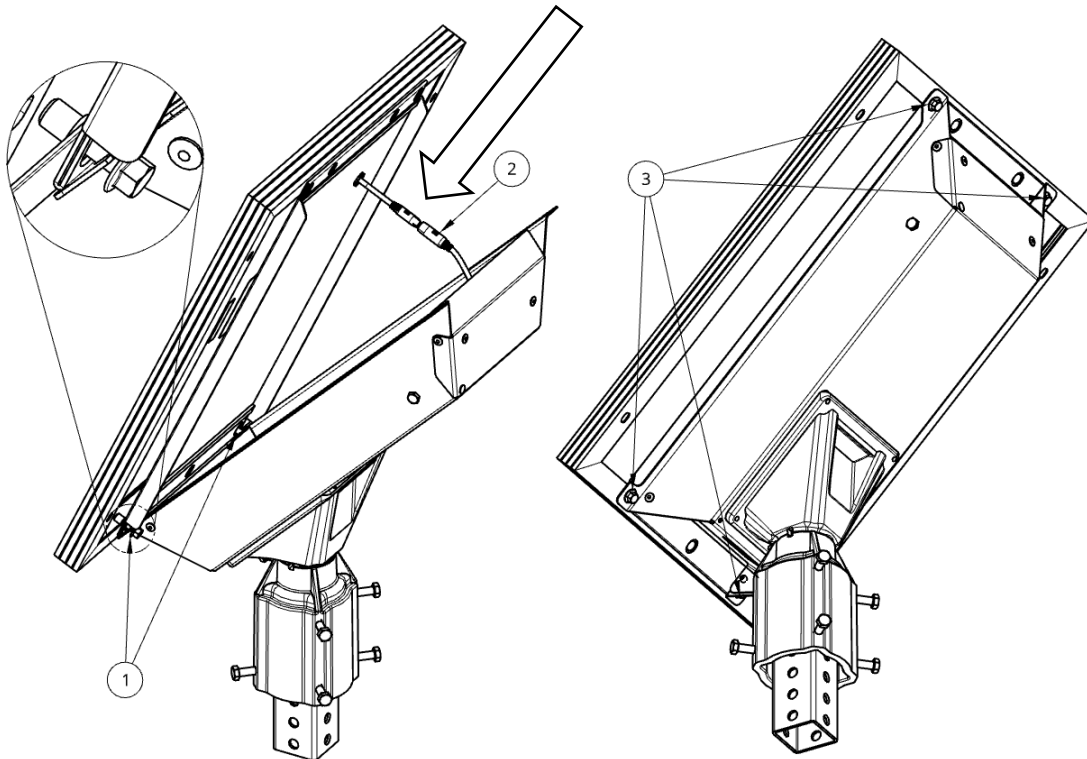
NOTE

For systems with StreetHub, you will have an extra yellow wire terminated to Solar+.



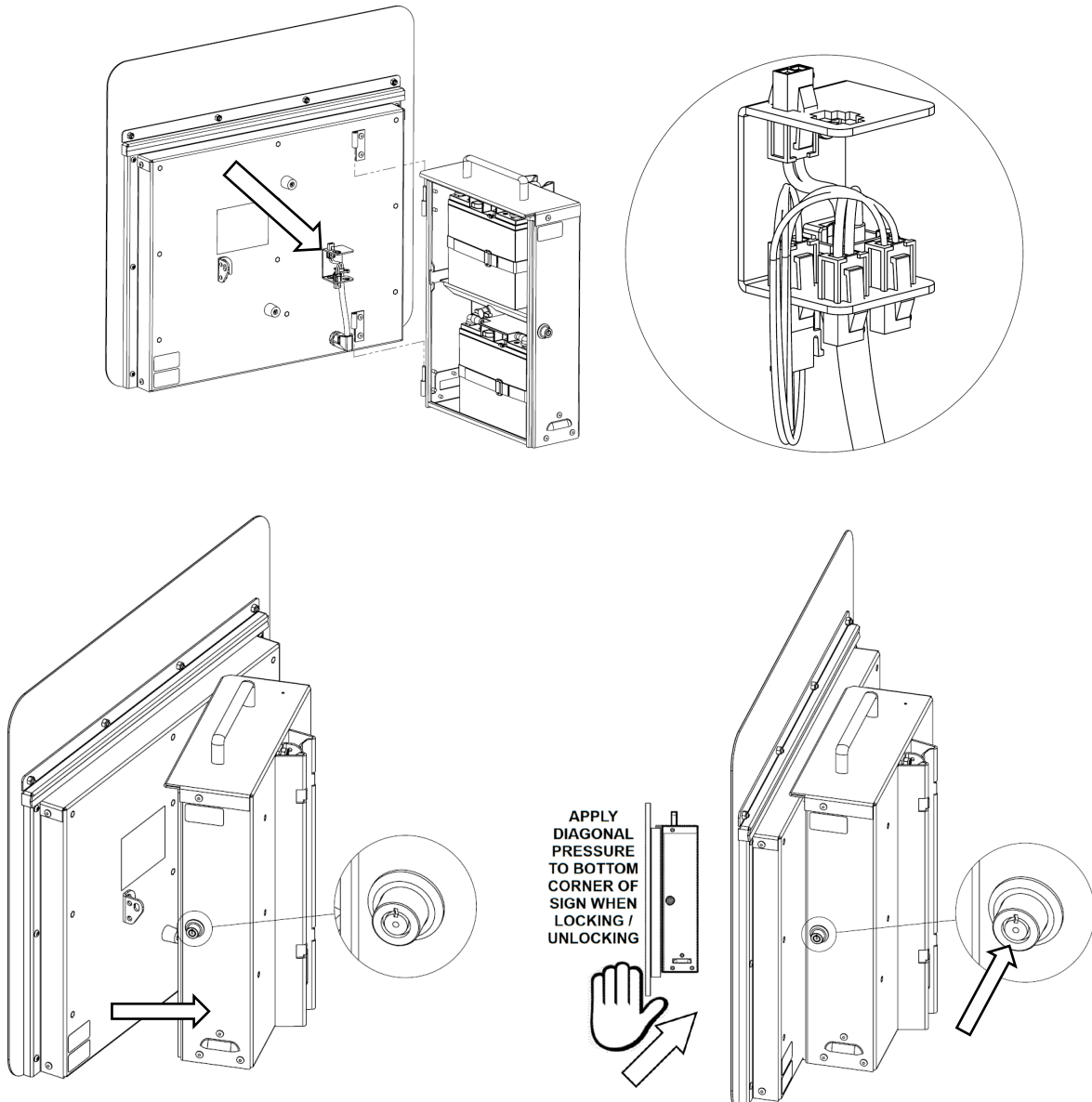
4.5 Reinstalling Solar Panel

1. Lower solar panel on housing and loosely install 2x bolts at mounted end of housing, noting location of power harness.
2. Lift other end of solar panel up and connect power harness, ensuring connector is fully engaged.
3. Lower solar panel, taking care not to pinch solar panel harness, and install remaining bolts. Tighten all 4 bolts.



4.6 System Reassembly

1. Reconnect all 2-pin connectors at the display enclosure bracket.
2. To close, push the display enclosure against the rear enclosure and then apply diagonal pressure in the bottom right corner of the sign face. Once fully closed then PUSH the lock to secure in place.





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