



EARTH SMART LITHIUM BATTERY

Instruction Manual

Warranty:

Pleasure-Way Industries warrants each Eco-Ion Lithium battery installed by Pleasure-Way to be free of defects for a period of 1 year from the Pleasure-Way Motorhome warranty registration date. Within the warranty time frame, subject to the conditions listed below, Pleasure-Way will replace the battery if defective in materials or workmanship free of charge.

Not Covered by This Warranty

Pleasure-Way is not obligated to warrant the Eco-Ion battery in question, if defects are related to damages caused by abuse/neglect, or from the following:

- Tampering or removal of battery case lid.
- Failure to properly install the battery if removed, in addition to keeping the battery properly charged and maintained
- Breakage from collision, fire or freezing—which includes damage from extreme heat or cold, improper storage, water damage, or tampering

2016 Lithium Charging System and Battery Location

Battery Type: Lithium Ion (LiFePO₄ Lithium Iron Phosphate) 12 volt 100 Ah

Eco-Ion batteries use cells made of Lithium Iron Phosphate (LiFePO₄) technology. This chemistry is one of the safest on the market today. Lithium batteries are different than lead-acid batteries. A lithium batteries voltage remains relatively constant while discharging, while voltage for a lead-acid battery decreases. A lithium battery can use 100% of its storage capability (measured as Amp-Hour, Ah); while a lead-acid battery typically only uses 50%. Lithium battery's power level will not drop-off, and it will last longer. But when the lithium battery runs out of power it does so abruptly.

The Eco-Ion batteries feature a built in Battery Management System (BMS). The BMS automatically provides:

- Short circuit protection
- Low voltage protection
- Cell balancing
- Over charge protection
- Temperature protection

Charging:

Your batteries can be charged by four different sources:

- Chassis engine alternator
- Shore power
- Generator
- Solar Panel (optional)

The Progressive Dynamics converter has a built in charger designed to charge lithium batteries specifically with a higher charging amperage profile than a lead acid battery charger. When your batteries are fully charged the BMS will turn the battery off and not allow it to overcharge. Typically battery voltage displayed on the monitor panel with a voltage of 13.6 volts is considered fully charged. You may notice on your solar controller (if equipped) that the solar panel may show 0 amperage, if so this also will indicate the batteries are fully charged.

***Warning:**

Do not charge your batteries below 32 degrees F or 0 degrees C. Charging the batteries when below these conditions may cause damage to the cells and shorten the life span of the batteries. Your vehicle may also be equipped with a charging disconnect switch. This switch can be used to disconnect charging to the batteries from the engine alternator and solar panels if you are using your coach in freezing temperatures. Your batteries will continue to discharge and power your coach as normal in conditions up to -20 C or -4 F.

Storage:

When placing your vehicle into storage always ensure your batteries are fully charged and the battery disconnect switch (located on the multiplex wiring pad in the kitchen) is in the off position. To extend the life of your Lithium Ion batteries it is recommend that the batteries be fully charge and kept above freezing temperatures when in storage. This may involve removing the Lithium Ion batteries from the coach and moving the batteries to a warm location for winter storage.

Battery position will vary with the build and chassis or the vehicle.

For the Ascent and Plateau access to the batteries is through the rear doors. The batteries are located under the power sofa. (Lower the spare tire for full access the rear doors).

- 1) Remove the blue cover panel. (This panel is held by magnets)
- 2) Turn the thumb latches and fold down the battery door.



***Warning:** Do not work on the batteries with the vehicle running, generator running or the vehicle plugged into shore power. Ensure the solar panels are covered.

Plateau XL:

The batteries are located under the power sofa. Access to the batteries is by removing the drawers.

- 1) Remove the drawers by depressing the black levers on each side of the drawer track and slide the drawer out of the opening.
- 2) Turn the thumb latches and lower the door.



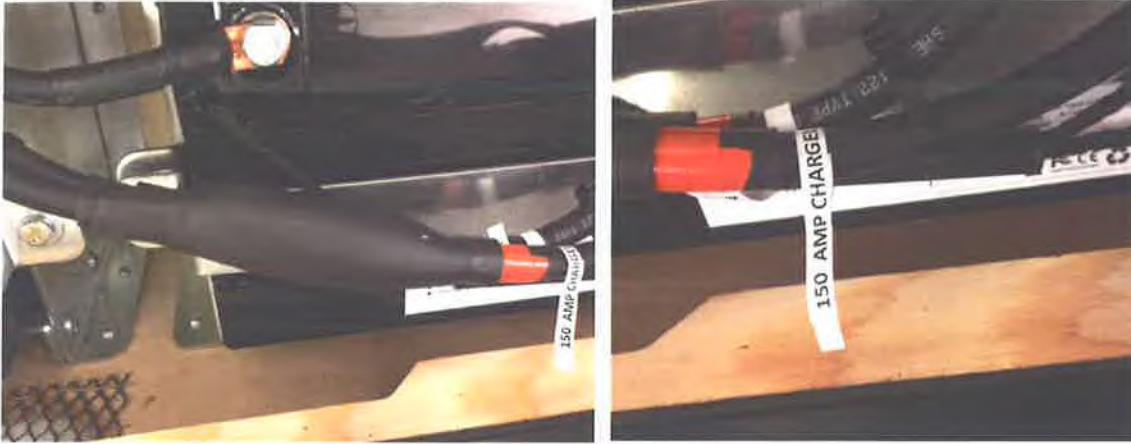
Promaster Lexor:

The batteries are located below the floor in the rear of the vehicle. To access the batteries open the rear doors of the vehicle and remove the spare tire.

- 1) Unscrew the battery cover panel from the floor area. Lift the lid up.



All coach batteries are fused with 150 amp fuses for the protection of your coach and the battery system. These fuses are located in the battery area and at the charging source.



***Warning:** Solar panels will have to be covered before working on and disconnecting the batteries. Keep the solar panels covered until the batteries are installed and connected to the coach system.

For all batteries note the warning symbols.



***WARNING:** The OEM batteries can only be replaced with identical Lithium Ion type batteries. The charging system is set up for Lithium Ion cells. Replacing the Lithium Ion batteries with a Lead Acid, Gel, AGM, Etc. battery may result in damage to the vehicle, coach, batteries and electrical system. These damages may result in a thermal incident such as fire, electrical short, melting, off gassing, Etc.

ECO-ION
EARTH SMART LITHIUM BATTERY
12V100Ah

Type: LiFePO₄ Battery Max. Output Current: 100A
Working Temperature: -20°C ~ 45°C Max. Charge Current: 100A

For warranty or replacement contact Pleasure-Way Ltd.

Caution

See user guide before using this battery. Burn hazard. Never charge the battery without charge protection circuitry.

Do Not

- Disassemble, crush, puncture, or incinerate
- Short circuit external contacts
- Expose to temperatures above 140°F (60°C)
- In series or parallel connections without permit
- Over-discharge the battery

Removal of cover plate by unauthorized personnel will void the warranty!

For more information please ask your suppliers or distributors.

12V100Ah LiFePO₄ Battery

1. Rating=12.8V,100Ah(5hr)
2. Max. Input voltage 14.6V
3. Max. charging current: 100A
4. Cut-off voltage:10V
5. Max. discharging current: 100A
6. Peak discharging current: 350A(8s)

MAINTENANCE FREE