



Deltran Battery Tender®
LITHIUM IRON PHOSPHATE
12Volt LiFePO4 BATTERY

IMPORTANT SAFETY INSTRUCTIONS

- 1) SAVE THESE INSTRUCTIONS
- 2) Do not throw away the box or any foam packing until after the installation is complete.

CAUTIONS

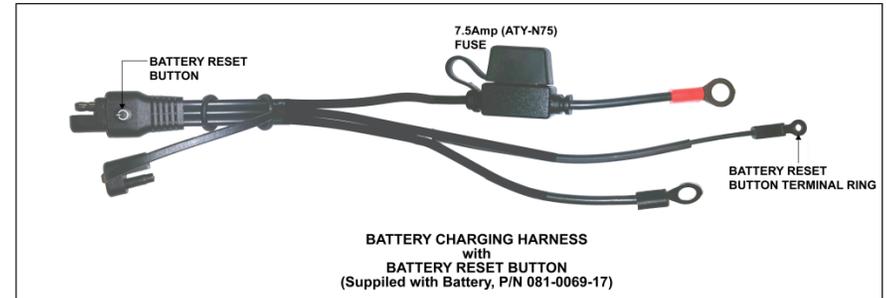
- a) Do not immerse in water.
- b) Do not short terminals together.
- c) Do not use or store the battery near sources of fire or heat.
- d) Do not reverse the positive (+) or negative (-) terminals.
- e) Do not put the battery into a fire or apply direct heat to it.
- f) Do not pierce the battery casing.
- g) Do not strike, throw, or subject the battery to severe physical shock.
- h) Do not solder directly to the battery terminals.
- i) Do not attempt to modify the battery in any way.
- j) Do not place the battery in a microwave oven or pressurized container.
- k) Do not use the battery if it gives off an odor or generates heat.
- l) Do not allow charge voltage in excess of 14.8Volts.
- m) The batteries optimal operating range is 0°C (32°F) to 45 °C (113°F). (See Usage section, paragraph (f) for cold weather use.
- n) Do NOT use lead-acid chargers which employ a high-voltage “anti-sulfation” routine.
- o) Keep batteries away from pets and children.
- p) Fully discharge before disposal.

WARNING

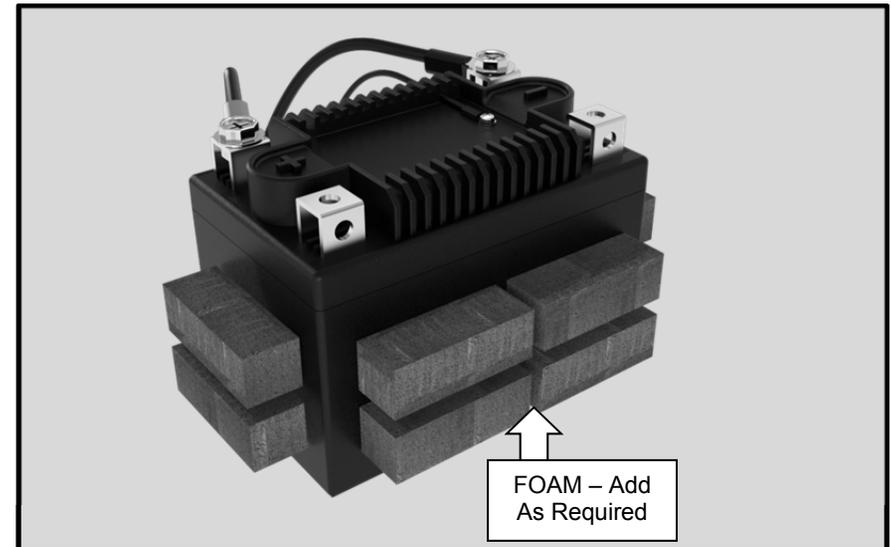
- a) Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short-circuit battery or other electrical parts that may cause explosion.
- b) Remove personal metal items such as rings, bracelets, necklaces, and watches when working with any battery. A battery can produce a short-circuit current high enough to weld a ring or the like to metal, causing a severe burn.
- c) To reduce risk of battery explosion, follow these instructions and those published by the manufacturer of any equipment you intend to use in vicinity of this battery. Review cautionary markings on these products and on engine.

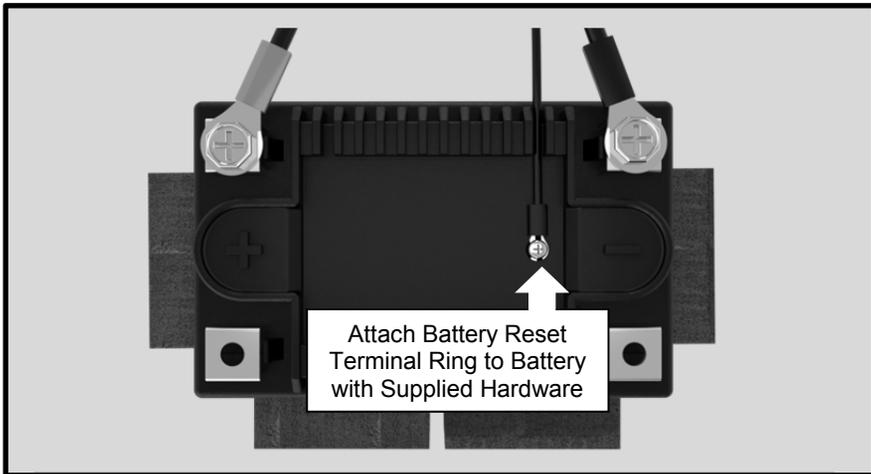
INSTALLATION INSTRUCTIONS

- a) Before installing your new battery there are first a couple of procedures to perform.
- b) The retail box contains a wire harness that will allow you to charge your battery when not in use and also reset the battery if it should go into one of the Battery Management System (BMS) fault modes.
- c) If you do not install this harness you will not be able to reset the battery.
- d) Use the supplied 3mm screw to attach the battery reset button terminal ring to the top of the battery. The harness can exit either side of the battery. Choose the side that best suits your configuration.



- e) Carefully remove the existing lead-acid battery from your vehicle following the manufacture's guidelines.
- f) Next place the original battery next to your Battery Tender® Lithium battery to compare the variation in size. The original battery may be the same width but is longer in length and taller in height. To make up the difference apply the appropriate amount of the adhesive foam to either the Lithium battery or the battery box.





Battery Management System (BMS)

All Battery Tender® Lithium batteries contain a BMS. A **Battery Management System (BMS)** is any electronic system inside the battery that manages a rechargeable battery (cell or battery pack), such as by protecting the battery from operating outside its Safe Operating Area, monitoring its state, calculating secondary data, reporting that data, controlling its environment, authenticating it and / or balancing it.

The BMS will monitor the following conditions:

- Over Charge protection.
- Over Discharge protection.
- Over Current protection.
- Short circuit protection.
- Temperature protection – High and Low.
- Self discharging/non active mode.

NOTE:

If any of the above conditions occur the BMS will automatically shut the battery down to prevent any damage to the battery.

- **To activate the battery simply press the BATTERY RESET BUTTON located at the end of the Quick Disconnect (QDC) charging harness for ONE second.**

USAGE

- a) There are a couple of damaging conditions for any Lithium starter battery; they include prolonged storage in high temperatures and allowing the battery to be deeply discharged.
- b) Compared to lead-acid batteries, the Battery Tender® Lithium battery has less than 5% of the average self-discharge rate and can be stored for much longer periods without maintenance.
- c) If there is no current draw from your vehicle when your ignition is off the Battery Tender® Lithium battery can be stored for one year without damage.
- d) For long term storage the ideal temperature is 15°C (59°F) 25°C (77°F).
- e) The battery should be stored in a minimum charge state of 70%.
- f) A lithium battery's cranking performance decreases as its temperature approaches freezing. Most vehicles will start normally on the first try in temperatures down to 40°F. The battery BMS will turn the battery off when temperatures approach freezing to protect the battery from damage. To activate the battery simply press the RESET button located at the end of the Quick Disconnect (QDC) charging harness for ONE second, then if the engine fails to start on the first try, a load such as the headlights can be used to warm the battery. The length of time it takes to warm the battery depends on its temperature. The colder the weather, the longer it will take to warm the battery sufficiently. Five minutes is a good rule of thumb when the temperature is below freezing. Keeping the battery fully charged will improve cold weather starting.

- g) Be sure the battery now fits surely in the battery box and allows the battery cables to reach the battery terminals with no issues.
- h) The Battery Tender® Lithium battery allows the vehicle cable eyelets to be either connected from the top or front side of the terminals. Choose the side that matches your configuration the best.
- i) Use the supplied hardware to attach the vehicle terminal rings to your battery. Do not over-tighten the screws. (See diagram above)
- j) Once installed apply a good quality anti-corrosion spray to the terminals.
- k) Reinstall the vehicles protective battery caps, and cover the unused terminals with the supplied caps to ensure the battery cannot short against any part of the vehicle.
- l) Battery Tender® Lithium batteries are pre-charged to 70% of capacity and must be charged before use.

CHARGING

- a) Do not use a desulphation or pulse charger, doing so will damage the battery and void the warranty.
- b) Standard lead-acid chargers may be used, as long as they do not exceed 14.8Volts during charging.
- c) The use of a lithium specific charger such as the units in the Battery Tender® Lithium Charger series is strongly recommended
- d) Do not charge the battery in temperatures below -0°C (32°F).

| BATTERY PART NUMBER | RECOMMENDED MAXIMUM CHARGE RATE (Amps) |
|---------------------|--|
| BTL09A150CW | 2.50 Amps |
| BTL12A270CW | 4.50 Amps |
| BTL14A300CW | 5.0 Amps |
| BTL20A360CW | 6.10 Amps |
| BTL24A480CW | 8.0 Amps |

WARRANTY (North America)

Warranty

- a) Deltran Battery Tender® offers a Limited Three-Year Warranty for its Lithium Batteries, for defects in material and or workmanship.
- b) Do NOT return any product without an RMA# (Return Merchandise Authorization) or before first contacting Deltran Battery Tender® to perform some simple diagnostics. In many cases issues can be resolved prior to return.
- c) Check our website www.batterytender.com for the latest updated warranty information.
- d) Warranty is not transferable from original purchaser.

Warranty Periods

- 1) 0-12 months: Replace free of charge with original receipt or product registration on our website.
- 2) 13-24 months: 50% off MSRP with original receipt or registered on website.
- 3) 25-36 months: 35% off MSRP with original receipt or registered on website.
- * Customers are responsible for paying the initial shipping charge to return the batteries. Deltran will pay shipping on replacement batteries returned to customers, except those without a copy of the receipt and/or RMA#.

Returns MUST be accompanied by:

- a) A copy of the Original Receipt unless the battery was registered on our website.
- b) Deltran Battery Tender® RMA#.

Returns without a receipt

- a) If there is no receipt but we can determine from the serial code that the battery is still in the warranty period, or within the first three years of Deltran selling the battery then the customer receives 35% off MSRP for that battery type.
- b) The customer is responsible for all shipping charges.

No Fault Found

- a) Any product found NOT defective after testing in house at Deltran will only be returned to customers at their expense for shipping.

Conditions Not Covered

- a) Any physical damage to the battery occurring after purchase.
- b) Any modifications to the battery, including but not limited to the terminals.
- c) Any corrosion including salt water.
- d) Purchased from an unauthorized source.

Shipping Damage

- a) Any item damaged in transit must be reported to the Shipper Immediately upon opening the package.
- b) Also notify Deltran of the situation.
- c) All original packing must be retained until further notice.
- d) Deltran will respond with further instructions.

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