12 Volt Models: 800 Milliamp and 1.25 Amp

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS: This manual contains important safety and operating instructions for the WATERPROOF DELTRAN BATTERY TENDER®, 12 Volt 800 Milliamp and 12 Volt 1.25 Amp International Battery Chargers. CAREFULLY READ THESE INSTRUCTIONS BEFORE USING THE BATTERY CHARGER.

WARNING AND CAUTION LABEL DEFINITIONS:

⚠️ WARNING
WARNING indicates a potentially hazardous situation, which, if not avoided, could result in serious injury or death.

⚠️ CAUTION
CAUTION indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.

⚠️ CAUTION
CAUTION used without the safety alert symbol indicates a potentially hazardous situation that if not avoided, may result in property damage.

GENERAL PRECAUTIONS

⚠️ WARNING
Battery posts, terminals and related accessories contain lead and lead components, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Always wash your hands after handling these devices.

⚠️ WARNING
Do not operate the battery charger with damaged AC power cords or plugs or DC output cords or accessories - Replace accessories immediately. Since neither the AC power cord nor the DC output cord can be replaced, if either cord is damaged the battery charger should be scrapped.
**WARNING**

**ELECTRIC SPARK & OPEN FLAME:** NEVER smoke or allow a source of electric spark or open flame in the vicinity of the battery or engine. (For example: Don't charge the battery next to a gas water heater.)

**VENTILATION:** Do not operate the charger where ventilation is restricted. The intent here is to allow sufficient airflow to minimize and dissipate the heat generated by the charger and to diffuse the gasses that may be emitted by the battery.

**CHARGER MAINTENANCE:** NEVER disassemble the charger or attempt to do internal repairs. Take it to a qualified service technician. Assembling the charger incorrectly may result in the risk of electric shock or create a fire hazard.

**WARNING**

**EXTENSION CORDS:** An extension cord should not be used unless absolutely necessary. Using improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure that:

- The pins on the extension cord plug have the same number, size, and shape as those of the AC power cord plug on the charger;
- The extension cord is properly wired and is in good electrical condition; and
- The wire size is as specified in Table 1 below.

**TABLE 1: EXTENSION CORD LENGTH & MINIMUM SAFE CONDUCTOR SIZE**

<table>
<thead>
<tr>
<th>Length of Cord (feet)</th>
<th>6 to 100</th>
<th>101 to 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Cord (meters)</td>
<td>1.8 to 30.5</td>
<td>30.8 to 45.6</td>
</tr>
<tr>
<td>Size of Conductor (AWG)</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Conductor Diameter (mm)</td>
<td>1.25</td>
<td>1.5</td>
</tr>
</tbody>
</table>

**PERSONAL PRECAUTIONS**

**WARNING**

**WHEN YOU WORK NEAR LEAD-ACID BATTERIES:**

1. Someone should be within range of your voice or close enough to come to your aid if you have an accident;
2. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes;
3. Wear complete eye protection and protective clothing. Avoid touching your eyes while working near a battery. If battery acid contacts your skin or clothing, wash immediately with soap and water. If acid enters an eye, immediately flood the eye with running cold water for at least 10 minutes and get medical attention as soon as possible;
4. Be extra cautious when handling metal tools around a battery. If you drop a metal tool near a battery it might spark or create a short circuit between the battery terminals and some other metal part. Either event may cause a dangerous electrical shock hazard, a fire, or even an explosion;
5. Remove all personal metal items such as rings, bracelets, necklaces, and watches when working with a lead-acid battery. A lead-acid battery can produce a short-circuited current high enough to weld a metal ring or other piece of jewelry, causing a severe burn;
6. Use the Waterproof Deltran Battery Tender® International Battery Chargers for charging lead-acid batteries only. They are not intended to supply power to an extra low-voltage electrical system or to charge dry-cell batteries. Charging dry-cell batteries may cause them to burst and cause injury to persons and damage to property;

**INFORMATION NOTE ABOUT DRY-CELL BATTERIES:**

There are some wet, non-spillable, lead acid batteries on the market whose manufacturers’ make the claim that they are dry-cell batteries. These batteries are sealed, gas-recombinant, starved electrolyte, possibly with AGM (Absorbed Glass Mat) type construction. It is perfectly safe to use the WATERPROOF DELTRAN BATTERY TENDER® INTERNATIONAL BATTERY CHARGERS to charge these types of batteries. The dry-cell battery warning is intended for non-rechargeable, alkaline and other similar types of batteries. If you have any doubt about the type of battery that you have, please contact the battery manufacturer before attempting to charge the battery.

7. **NEVER** charge a visibly damaged or frozen battery.

**PREPARING TO CHARGE:** First, follow all General & Personal Precautions as previously explained, and then continue.

**WARNING**

**IF THE BATTERY MUST BE REMOVED FROM THE VEHICLE:**

1. To avoid an electric arc (or spark), turn off or disconnect all of the accessories in the vehicle. Then always remove the cable that is connected to grounded terminal from battery first;
2. If necessary, clean the battery terminals. Be careful to keep the corrosion and other debris from coming in contact with your eyes;
3. If the battery is not a sealed battery, then if necessary, add distilled water to each cell until the battery acid solution reaches the level specified by battery manufacturer. Do not overfill;
4. Before inserting the charger AC power plug into the electrical outlet, check the polarity of the battery posts, and attach at least a 24 inch long 6 (AWG) insulated, battery extension cable to the negative battery post. Then connect the appropriate charger DC output connectors to the battery and the extension cable, positive to positive and negative to negative. Never allow the alligator clips or terminal rings to touch each other after they are connected to the battery charger.
5. Connect the AC power plug to the electrical outlet.
WARNING

IF THE BATTERY REMAINS INSTALLED IN THE VEHICLE:

1. DO NOT CONNECT THE CHARGER AC POWER PLUG TO THE ELECTRICAL OUTLET UNTIL ALL OTHER CONNECTIONS ARE MADE!
2. Place both the AC and DC power cords in the best position to avoid accidental damage by movable vehicle parts, i.e. hoods, doors, or moving engine parts (fan blades, belts, or pulleys).
3. Check the polarity of the battery posts. If the positive (pos, p, +) post is connected to the vehicle chassis, then the vehicle has a positive ground system. If the negative (neg, n, -) post is connected to the vehicle chassis, then the vehicle has a negative ground system. Negative ground systems are the most common.
4. For negative ground systems, connect the positive (red) alligator clip, or ring terminal to the positive battery post. Then connect the negative (black) alligator clip, or ring terminal to the vehicle chassis. Do not make the negative charger clip or ring connection to the carburetor, fuel lines, or thin, sheet metal parts. Make that connection to the engine block or a heavy gauge metal part of the frame.
5. For positive ground systems, connect the negative (black) alligator clip, or ring terminal to the negative battery post. Then connect the positive (red) alligator clip, or ring terminal to the vehicle chassis. Do not make the positive charger clip or ring connection to the carburetor, fuel lines, or thin, sheet metal parts. Make that connection to the engine block or a heavy gauge metal part of the frame.
6. Connect the AC power plug to the electrical outlet.

SPECIAL FEATURES: The WATERPROOF DELTRAN BATTERY TENDER® International Battery Chargers have the following special features:

SPARKPROOF: The battery charger DC output leads, either ring terminals or alligator clips must be connected to a battery before an output voltage is developed by the battery charger.

SHORT CIRCUIT PROTECTION: The battery charger can sustain a short circuit connection directly across its DC output terminals indefinitely without any risk of either electric shock or excessive heat.

REVERSE POLARITY PROTECTION: The battery charger is protected internally against any damage due to the DC output leads being connected to the opposite polarity battery post. No damage will result to either the battery or the battery charger.

TIME REQUIRED TO CHARGE A BATTERY:
The WATERPROOF DELTRAN BATTERY TENDER® International Battery Chargers charge at a rate of either 0.8 Amps (0.8 Amp-Hours per hour) or 1.25 Amps (1.25 Amp-Hours per hour). Therefore, a fully discharged 15 Amp-Hour battery will take approximately 15 hours or 9.6 hours respectively, to recharge to 80% capacity. Some large automotive or marine, deep cycle type batteries may take several days to fully recharge.

WORKING WITH A DEAD BATTERY OR A BATTERY WITH A VERY LOW VOLTAGE:
If you try to charge a dead battery having a voltage below 3 Volts, the WATERPROOF DELTRAN BATTERY TENDER® International Battery Chargers will not start to charge because an internal safety circuit prevents the battery chargers from generating any DC output voltage.

NOTE: If a 12 Volt, Lead-Acid battery has an output voltage of less than 9 volts when it is at rest, when it is neither being charged nor supplying electrical current to an external load, there is a good chance that the battery is defective. As a frame of reference, a fully charged 12-Volt, Lead-Acid battery will have a rest-state, no-load voltage of approximately 12.9 volts. A fully discharged 12-Volt, Lead-Acid battery will have a rest-state, no-load voltage of approximately 11.4 volts. That means that a voltage change of only 1.5 volts represents the full range of charge 0% to 100% on a 12-Volt, Lead-Acid battery. Depending on the manufacturer, and the age of the battery, the specific voltages will vary by a few tenths of a volt, but the 1.5-volt range will still be a good indicator of the battery charge %.

AUTOMATIC CHARGING AND BATTERY STATUS MONITORING: The WATERPROOF DELTRAN BATTERY TENDER® International Battery Chargers are completely automatic and may be left connected to both AC power and to the battery that it is charging for long periods of time. However, it is prudent to periodically check both the battery and the charger for normal operation during these extended charging periods.

The charger output power, voltage, and current all depend on the condition of the battery that is being charged. Both WATERPROOF DELTRAN BATTERY TENDER® International Battery Chargers have 2 status lights (one amber, and one green) that indicate the operating mode of the charger, and the condition of the battery that is connected to the charger.

The charger operates in one of the 3 primary charge modes: the bulk mode (full charge power, constant current, increasing battery voltage, battery is 0% to 75% or 80% charged), the absorption mode (high constant voltage, decreasing current, battery is 75% to 100% charged), or the storage/float maintenance mode (low constant voltage, minimal charge current, battery is 100% to 103% charged).

When the battery is fully charged, the green status indicator light will turn on and the charger will switch to a storage/maintenance charge mode. Both WATERPROOF DELTRAN BATTERY TENDER® International Battery Chargers will automatically monitor and maintain the battery at full charge.

STATUS INDICATOR LIGHTS: The following describes the indicator light operation:

- NEITHER THE AMBER OR GREEN LIGHT TURN ON (Both models) – This is an abnormal condition and most likely indicates that the charger is not properly connected to the AC power.
- AMBER LIGHT FLASHING (1.25A only) – The amber light flashing indicates that the battery charger has AC power available and that the microprocessor is functioning properly. If the amber light continues to flash, then either the battery voltage is too low (less than 3 volts) or the output alligator clips or accessory ring terminals are not connected correctly.
- **AMBER LIGHT ON STEADY (Both models)** – Whenever the amber light is on steady, a battery is connected properly and the charger is charging the battery. The amber light will remain on until the charger completes the charging stage.

- **GREEN LIGHT FLASHING (1.25A only)** - When the green light is flashing, and the amber light is on, the battery is greater than 80% charged and may be removed from the charger and used if necessary. Whenever possible, leave the battery on charge until the green light is solid.

- **GREEN LIGHT ON STEADY (Both models)** - When the green light stops flashing and burns steady, the charge is complete and the battery can be returned to service if necessary.

- **ALTERNATING AMBER & GREEN LIGHTS FLASHING (Both models)** – This is abnormal and most likely indicates that the battery is sulfated.

**STATUS INDICATING SYMBOLS:** The following symbols are located next to the 2 status indicator lights, one amber, one green (1.25 A) or on each side of the single status indicator light that glows either amber or green (800 mA).

The symbol next to the AMBER light represents a partially charged battery. The solid band across the bottom is green in color. The background is yellow. The green area indicates the charged portion of the battery and the yellow area represents the uncharged portion.

The symbol next to the GREEN light represents a fully charged battery. The entire area inside the battery outline is green.

**TROUBLESHOOTING CHECK LIST:**

1. **NEITHER OF THE CHARGER LIGHTS TURN ON AFTER THE AC POWER PLUG IS CONNECTED TO THE AC ELECTRICAL OUTLET:** For the 1.25A model: Check the charger AC power plug connection at the AC electrical outlet. Verify that the AC electrical outlet is functioning properly by plugging in another appliance or a voltmeter. For the 0.8 A model, also make sure that the charger output is properly connected to the battery.

2. **THE CHARGER GREEN LIGHT GOES ON IMMEDIATELY WHEN AC POWER IS APPLIED TO THE CHARGER:** The charger connections at the battery may be intermittent, the battery may be defective, or the battery might already be fully charged.

3. **CHARGER IS CHARGING BUT THE GREEN LIGHT DOES NOT TURN ON IN A REASONABLE AMOUNT OF TIME:** The battery may be large and requires more time to fully charge than originally expected, there may be another appliance drawing electric power from the battery while it is charging, or the battery may be defective. Also, a newly purchased battery may not be fully charged and may take longer to charge initially.

4. **THE AMBER LIGHT COMES ON AGAIN AFTER THE GREEN LIGHT CAME ON.** There may be another appliance drawing electric power from the battery causing its voltage to drop below the reset level. The battery charger then goes back into full charge mode. Also, the charger connections at the battery may be intermittent or the battery may be defective.

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**SPECIFICATION SUMMARY:**

<table>
<thead>
<tr>
<th>Technical Specifications (0.8 Amp or 1.25 Amp Models)</th>
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<tbody>
<tr>
<td><strong>Input Voltage</strong></td>
</tr>
<tr>
<td><strong>Input Frequency</strong></td>
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<tr>
<td><strong>Input Current</strong></td>
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<td></td>
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<tr>
<td><strong>Output Current</strong></td>
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<tr>
<td><strong>Output Voltage</strong></td>
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<tr>
<td><strong>Electrical Isolation</strong></td>
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<tr>
<td><strong>Operating Temperature</strong></td>
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<tr>
<td><strong>Enclosure Protection Against Foreign Object &amp; Water Ingress</strong></td>
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<tr>
<td><strong>Charger Case Dimensions:</strong></td>
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<tr>
<td><strong>0.8 Amp</strong>: 4.25 in (108 mm) L x 2.75 in (70 mm) W x 1.5 in (38 mm) H.</td>
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<tr>
<td><strong>1.25 Amp</strong>: 5.4 in (137 mm) L x 2.9 in (74 mm) W x 1.6 in (41 mm) H.</td>
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<tr>
<td><strong>Note:</strong> For both models, allow an additional 1 in (25.4 mm) on each end of the length dimension for safe bend of AC and DC power cord strain relief.</td>
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<tr>
<td><strong>Shipping Weight:</strong></td>
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<tr>
<td><strong>0.8 Amp</strong>: Approx. 2.0 lbs (0.91 kg) WITH: Accessories &amp; Retail Packaging</td>
</tr>
<tr>
<td><strong>1.25 Amp</strong>: Approx. 2.5 lbs (1.2 kg)</td>
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<tr>
<td><strong>Acceptable Battery Cell Type, Number, and Ah Capacity</strong></td>
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<tr>
<td><strong>Charger Model</strong></td>
</tr>
<tr>
<td>12V, 0.8 Amp</td>
</tr>
<tr>
<td>12V, 1.25 Amp</td>
</tr>
</tbody>
</table>

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