Deltran Battery Tender®
High Efficiency WP800
Designed for six cell lead-acid batteries

IMPORTANT SAFETY INSTRUCTIONS

1) SAVE THESE INSTRUCTIONS
2) Do not expose charger to rain or snow..
3) Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
4) To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting charger.
5) An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure:
   a) That pins on plug of extension cord are the same number, size, and shape as those of plug on charger;
   b) That extension cord is properly wired and in good electrical condition; and
   c) That wire size is large enough for ac ampere rating of charger as specified in Table 1

TABLE 1

Length of Cord, Feet	**25**	**50**	**100**	**150**
AWG Size of Cord	**18**	**18**	**18**	**16**

6) Do not operate charger with damaged cord or plug – replace the cord or plug immediately.
7) Do not operate charger if it has received a sharp blow, or otherwise damaged in any way; take it to a qualified serviceman.
8) Do not disassemble charger; take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
9) To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.
10) **WARNING – RISK OF EXPLOSIVE GASES.**
   a) WORKING IN VICINITY OF A LEAD-ACID BATTERY IS DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS OF UTMOST IMPORTANCE THAT YOU FOLLOW THE INSTRUCTIONS EACH TIME YOU USE THE CHARGER.
   b) To reduce risk of battery explosion, follow these instructions and those published by battery manufacturer and manufacturer of any equipment you intend to use in vicinity of battery. Review cautionary marking on these products and on engine.
11) **PERSONAL PRECAUTIONS**
   a) Consider having someone close enough by to come to your aid when you work near a lead-acid battery.
   b) Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
   c) Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
   d) If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
   e) NEVER smoke or allow a spark or flame in vicinity of battery or engine.

   f) Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short-circuit battery or other electrical part that may cause explosion.
   g) Remove 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-circuit current high enough to weld a ring or the like to metal, causing a severe burn.
   h) Use charger for charging a LEAD-ACID battery only. It is not intended to supply power to a low voltage electrical system other than in a starter-motor application. Do not use battery charger for charging dry-cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and damage to property.
   i) NEVER charge a frozen battery.
12) **PREPARING TO CHARGE**
   a) If necessary to remove battery from vehicle to charge, always remove grounded terminal from battery first. Make sure all accessories in the vehicle are off, so as not to cause an arc.
   b) Be sure area around battery is well ventilated while battery is being charged.
   c) Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.
   d) Add distilled water in each cell until battery acid reaches level specified by battery manufacturer. Do not overfill. For a battery without removable cell caps, such as valve regulated lead acid batteries, carefully follow manufacturer's recharging instructions.
   e) Study all battery manufacturer's specific precautions such as removing or not removing cell caps while charging and recommended rates of charge.
   f) Determine voltage of battery by referring to car owner's manual. Do not use the battery charger unless battery voltage matches the output voltage rating of the charger.
13) **CHARGER LOCATION**
   a) Locate charger as far away from battery as dc cables permit.
   b) Never place charger directly above battery being charged; gases from battery will corrode and damage charger.
   c) Never allow battery acid to drip on charger when reading electrolyte specific gravity or filling battery.
   d) Do not operate charger in a closed-in area or restrict ventilation in any way.
   e) Do not set a battery on top of charger.
14) **DC CONNECTION PRECAUTIONS**
   a) Connect and disconnect dc output clips only after setting any charger switches to ″off″ position and removing ac cord from electric outlet. Never allow clips to touch each other.
   b) Attach clips to battery and chassis as indicated in 15(e), 15(f), and 16(b) through 16(d).
15) **FOLLOW THESE STEPS WHEN BATTERY IS INSTALLED IN VEHICLE. A SPARK NEAR BATTERY MAY CAUSE BATTERY EXPLOSION. TO REDUCE RISK OF A SPARK NEAR BATTERY:**
   a) Position ac and dc cords to reduce risk of damage by hood, door, or moving engine part.
   b) Stay clear of fan blades, belts, pulleys, and other parts that can cause injury to persons.
   c) Check polarity of battery posts. POSITIVE (POS, P, +) battery post usually has larger diameter than NEGATIVE (NEG, N,–) post.
   d) Determine which post of battery is grounded (connected) to the chassis. If negative post is grounded to chassis (as in most vehicles), see (e). If positive post is grounded to the chassis, see (f).
   e) For negative-grounded vehicle, connect POSITIVE (RED) clip from battery charger to POSITIVE (POS, P, +) ungrounded post of battery. Connect NEGATIVE (BLACK) clip to vehicle chassis or engine block away from battery. Do not connect clip to carburetor, fuel lines, or sheet-metal body parts. Connect to a heavy gage metal part of the frame or engine block.

f) For positive-grounded vehicle, connect NEGATIVE (BLACK) clip from battery charger to NEGATIVE (NEG, N, –) ungrounded post of battery. Connect POSITIVE (RED) clip to vehicle chassis or engine block away from battery. Do not connect clip to carburetor, fuel lines, or sheet-metal body parts. Connect to a heavy gage metal part of the frame or engine block.
g) When disconnecting charger, turn switches to off, disconnect AC cord, remove clip from vehicle chassis, and then remove clip from battery terminal.
h) See operating instructions for length of charge information.

16) FOLLOW THESE STEPS WHEN BATTERY IS OUTSIDE VEHICLE. A SPARK NEAR THE BATTERY MAY CAUSE BATTERY EXPLOSION. TO REDUCE RISK OF A SPARK NEAR BATTERY:

a) Check polarity of battery posts. POSITIVE (POS, P, +) battery post usually has a larger diameter than NEGATIVE (NEG, N, –) post.
b) Attach at least a 24-inch-long 6-gauge (AWG) insulated battery cable to NEGATIVE (NEG, N, –) battery post.
c) Connect POSITIVE (RED) charger clip to POSITIVE (POS, P, +) post of battery.
d) Position yourself and free end of cable as far away from battery as possible – then connect NEGATIVE (BLACK) charger clip to free end of cable.
e) Do not face battery when making final connection.
f) When disconnecting charger, always do so in reverse sequence of connecting procedure and break first connection while as far away from battery as practical.
g) A marine (boat) battery must be removed and charged on shore. To charge it on board requires equipment specially designed for marine use.

USER INSTRUCTIONS

AUTOMATIC CHARGING AND BATTERY STATUS MONITORING:
Battery Tender® 800 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. The charger output power, voltage, and current depends on the condition of the battery it is charging. The Battery Tender® 800 charger has a two-color LED indicator light that provides a visual means to determine the operating mode of the charger and hence the condition of the battery connected to the charger.

The two-colored status indicator LED light is available to determine whether the charger is operating in one of the 4 primary charge modes: **Qualification/Initialization mode:** The Monitor Circuit verifies appropriate battery voltage levels and good electrical continuity between the battery and the charger DC output. The **bulk mode** (full charge, constant current, battery is 0% to 80% charged), the **absorption mode** (high constant voltage, battery is 80% to 100% charged), or the **storage/float maintenance mode** (low constant voltage, battery is 100% to 103% charged).

When the battery is fully charged, the LED will turn green and the charger will switch to a storage/maintenance charge mode. The Battery Tender® 800 charger will automatically monitor and maintain the battery at full charge.

ATTENTION: The Battery Tender® 800 CHARGER HAS A SPARK FREE CIRCUITRY. The output alligator clips or ring terminals will not spark when they are touched together. The Battery Tender® 800 charger will not produce an output voltage until it senses at least 3 volts from the battery. It must be connected to a battery with the correct polarity before it will start charging a battery.

NOTE:
THE OUTPUT CLIPS OR RING TERMINALS MUST BE CONNECTED TO A BATTERY BEFORE THE CHARGER CAN PRODUCE AN OUTPUT VOLTAGE.

TIME REQUIRED TO CHARGE A BATTERY:

BATTERY AMP HOUR SIZE/CAPACITY						
10 to 20 Ah	25 to 40 Ah	45 to 65 Ah	70 to 95 Ah	100 to 155 Ah	160 to 185 Ah	190 to 215 Ah
Motorcycle, Watercraft, ATV, etc	Wheelchair, Electric Motor Assisted	Automotive, Farm Equipment \SLI	Truck SLI, Marine Trolling Motor	Marine, RV or Industrial Vehicle	Marine, RV or Industrial Vehicle	Marine, RV or Industrial Vehicle
7 to 13 Hours	17 to 27 Hours	MAINTENANCE ONLY	MAINTENANCE ONLY	MAINTENANCE ONLY	MAINTENANCE ONLY	MAINTENANCE ONLY

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 Battery Tender® 800 charger will not start. An internal safety circuit prevents the charger from generating any output voltage unless it senses at least 3 Volts at the charger output. In this situation, the AMBER light will continue to flash, indicating that a charge has not been initiated.

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 %.

STATUS INDICATING LIGHT: If the light is not lit, then the battery is not properly connected and/or the charger is not plugged into AC power. The following describes light operation:

< **RED LIGHT FLASHING** – The RED light flashing indicates that the battery charger has AC power available and that the microprocessor is functioning properly. If the RED light continues to flash, then either the battery voltage is too low (less than 3 volts) or the output alligator clips or ring terminals are not connected correctly. The fuse in the output alligator clips or ring terminals may also be blown.

< **RED LIGHT ON STEADY** – Whenever the RED light is on steady, a battery is connected properly and the charger is charging the battery. The RED light will remain on until the charger completes the charging stage.

< **GREEN LIGHT FLASHING** –When the green light is flashing, 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** –When the green light burns steady, the charge is complete and the battery can be returned to service if necessary. It can also stay connected to maintain the battery for an indefinite period of time

TROUBLESHOOTING CHECK LIST:

1. CHARGER LIGHTS DO NOT TURN ON:
   a. Check to make sure AC outlet is supplying power by plugging in a lamp, an appliance, or a voltage meter.
2. THE GREEN LIGHT GOES ON IMMEDIATELY WHEN CHARGING A DISCHARGED BATTERY:
   a. The battery may be defective, take battery to the dealer to be tested.
3. CHARGER IS CHARGING BUT THE GREEN LIGHT DOES NOT GO ON:
   a. The battery may be defective, take battery to the dealer to be tested.
   b. The battery has an excessive current draw, remove battery from equipment.
4. THE RED LIGHT COMES ON WHEN STORAGE CHARGING BATTERIES:
   a. The battery may be defective, take battery to the dealer to be tested.
   b. The battery has an excessive current draw, remove battery from equipment.

FCC Warning

Title 47 Subpart, 15.105(b)
Note: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

ICES-001: Industrial, Scientific, and Medical (ISM) Radio Frequency Generators

This product has been tested with the listed standards and found to be compliant with the Code of Industry Canada ES-001 and the measurement Procedure according to CISPR 11.

CAN ICES-1/NMB-1