

# All About Batteries LEAD - ACID

#### **BATTERY BREAK IN**

New batteries are initially about 75% of their full strength. The following procedure will ensure they reach their full potential. The first 10 to 20 complete charge/discharge cycles are critical to ensure they reach 100%.

#### New batteries should be charged before use and thereafter as follows:

- 1. Plug the vehicle in and leave until the charger shuts off by itself.
- 2. Drive to discharge the batteries Do not go lower than 50%.
- 3. Plug the vehicle back in and repeat the charge cycle. It is very important you let it charge until it is completely done.
- 4. Repeat this for the first 10 20 cycles. By the 12th cycle you will notice an increase in power, speed, and run-time.

#### Most importantly:

- NEVER run the battery pack down below 50% of capacity throughout their entire life.
- Never leave the batteries in a state of discharge for extended periods of time. Recharge the pack every 2 weeks if the car is sitting idle or in storage, and when in doubt, recharge it.

#### **HOW DO I CHARGE MY BATTERIES?**

Try to utilize an outlet that is on its own circuit or has extremely limited draw from other items on the same circuit. Do not use GFCI outlets, it often trips. (These outlets generally have a reset button, like what you may find in your bathroom.) For instance, you will not be able to charge your car on the same circuit as your refrigerator or other high amp appliances.

You can leave the charge cord plugged in at all times as MOST chargers has a built-in shut-off feature once it achieves a full state of charge. However, the charger does not act as a trickle charger and once it is off it will not turn back on unless it is unplugged from the car and plugged back into the car. DO NOT LET YOUR CART SITIN A PERIOD OF DISCHARGE LONGER THAN 2 WEEKS!

Batteries will naturally put out heat when charging, tie the seat up to allow heat to escape.

# CHECK WATER LEVEL AND TERMINALS EVERY 6 – 8 WEEKS THIS IS CRUCIAL!! CHECK THE FOLLOWING:

## 1. WATER LEVEL

Water level should be a half inch above the lead plates using <u>DISTILLED WATER ONLY!</u> Do not over fill the batteries as this will weaken your batteries. Charging "dry" batteries, or batteries that are too low on water will fry the batteries and result in battery failure. Again, top off your batteries using <u>DISTILLED WATTER ONLY!</u>

### 2. CHECK TERMINALS / BATTERY CONNECTIONS

Verify the cables every 6-8 weeks to avoid loosening. The vibrations that occur during normal use, loosen the battery connection over time. If these connections become too loose, they will generate heat which leads to a battery terminal melting and causing damage to the battery. Be sure not to OVER TIGHTEN the terminals. Use a torque wrench at <u>90 inch</u> pounds and avoid over tightening.

#### 3. CLEAN SURFACE OF THE BATTERIES

Clean terminals with your preferred battery terminal cleaner. Ensure all caps are tight and on properly. You can also mix 1/3 baking soda dissolved in one gallon of tap water. Pour onto the batteries and let sit for 10 minutes. Then rinse with low pressure. DO NOT USE A PRESSURE WASHER! After the battery pack is completely dry, reapply battery terminal protector. If corrosion continues to occur on a particular terminal, it is recommended to replace that cable.