Myth about Batteries

1. **Driving a car will fully recharge a battery?**
   Some of factors affecting a car charging system's ability to charge a battery are: how much current from the alternator is diverted to the battery to charge it, how long the current is available and the temperature. Generally, idling the engine or on short stop-and-go trips during bad or hot weather or at night will not recharge a battery. A long daytime trip in warm weather should recharge a battery.

2. **Testing of the alternator by disconnecting the battery while the engine is running.**

   A battery acts like a voltage stabilizer or filter to the pulsating DC produced by the charging system.

   Disconnecting a battery while the engine is running can destroy sensitive electronic components, for example, emission computer, audio system, cell phone, alarm system, etc., or even the charging system itself.

   These damages can occur because the voltage can rise to 40 volts or more.

   In the 1970s, removing a battery terminal was an accepted practice to test charging systems of that era. That is not the case today. Just say **NO** if anyone suggests this.

3. **Maintenance Free (MF) batteries never require maintenance?**

   In hot climates, water in the electrolyte is decomposed due to the high temperatures and normal charging of a wet maintenance free battery. Water can also be lost due to excessive charging voltage or charging currents.

   Non-sealed batteries are recommended in hot climates so they can be refilled with distilled water when this occurs.

4. **A battery will not lose its charge while kept in storage.**

   Depending on the type of battery, it has natural self-discharge or internal electrochemical leakage at a 1% to 15% rate per month that will cause it to become sulfated and fully discharged over time.

   Higher temperatures accelerate this process. A battery stored at 95° F (35° C) will self discharge twice as fast than one at 75° F (23.9° C).

5. **A battery will not explode.**

   Recharging a wet lead-acid battery normally produces hydrogen and oxygen gasses. While spark retarding vent caps help prevent battery explosions, they do occur when jumping, connecting or disconnecting charger or battery cables, and starting the engine. While not fatal, battery explosions cause thousands of eye and burn injuries each year.

   When battery explosions occur when starting an engine, here is the usual sequence of events:

   - One or more cells had a high concentration of hydrogen gas *(above 4.1%)* because the vent cap was clogged or a defective valve did not release the gas.
   - The electrolyte levels fell below the top of the plates due to high under hood temperatures, overcharging, or poor maintenance.
   - A low resistive bridge or treeing formed between the top of the plates such that when the current started to flow, it caused an arc or spark in one of the cells.

   That combination of events ignites the gas, blows the battery case cover off and spatters electrolyte all over the engine compartment. The largest number of battery explosions while starting an engine occurs in hot climates.

   When an explosion happens, thoroughly rinse the engine compartment with water, and then wash it with a solution of one-pound baking soda to one gallon of warm water to neutralize the residual battery acid. Then thoroughly rewash the engine compartment with water.

   Working on well ventilated areas or using Valve Regulated Lead Acid (AGM or gel cell) type batteries can significantly reduce the possibility of battery explosions.

6. **Batteries last longer in hot climates than in cold ones.**

   Not really, in hot climates batteries only last approximately two thirds as long compared to cold ones. Heat kills batteries, especially sealed wet lead acid batteries.

7. **Pulse chargers, aspirins or additives will revive sulfated batteries.**

   Using pulse chargers or additives is a very controversial subject. Most battery experts agree that there is no conclusive proof that more expensive pulse charges work any better than constant voltage chargers to remove sulfation. They also agree that there is no evidence that additives or even aspirins provide any long-term benefits.

8. **Deep cycle batteries have a memory effect.**

   Lead acid deep cycle batteries do not have the so called memory effect that first generation Ni-Cad batteries have.

9. **On really cold days turn your headlights on to warm up the battery up before starting your engine.**

   While there is no doubt that turning on your headlights will increase the current flow in a car battery; it also consumes valuable capacity that could be used to start the engine. Therefore, this is not recommended.

   For extremely cold temperatures, externally powered battery warmers, battery blankets, or engine block heaters are highly recommended.

   AGM and Ni-Cad batteries perform better in extremely cold temperatures than wet cell batteries.