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## ELECTRIC GOLF CARS AND LEAD-ACID BATTERY CARE

A short check-list of how to take care of your electric golf car and its batteries, prepared by Masek Golf Car Company of Gering, NE and Commerce City, CO.

### **Batteries: "Masek's Three Rules of Battery Maintenance"**

Rule #1: "Keep 'em Clean." (Keep the top of the battery cases clean and dry. Sprinkle some baking soda on the cases and rinse them off when dirty with hose water; clean the green corrosion off the battery posts and cables with a wire brush whenever corrosion starts to form. Treat the posts with spray terminal protector, not "axle grease.")

Rule #2: "Keep 'em Watered." (Check water once a month in each cell. DO NOT let the electrolyte level fall below the top of the "plates" inside the cell! Use distilled or reverse-osmosis filtered water if possible, to remove harmful minerals from the water you put into the batteries. Do your final water level check after the batteries are charged, and fill only to 1/8" below the bottom of the neck of the filler cap opening. Over-filling causes the electrolyte to be ejected through the battery caps on to the top of the battery case.)

Rule #3: "Don't let 'em Freeze." (This means keeping the batteries charged. A fully-charged set won't freeze until the temp falls to -92F. A discharged set will freeze at 19F above. The best care for an electric golf car is to play at least one round of golf every month. If you cannot take your golf car out in the winter, check your charger every 30 days for a "green light," and force a charge cycle by unplugging the charger from the car and plugging it back in. Make sure your "run-tow switch" is on tow whenever the car is not in use!

### **Charging Frequency: "Charge your car only Three Times!"**

With modern fully-automatic chargers, your batteries like to be charged, and there is little danger of over-charging your batteries. Charge your electric car three times: "SOON, OFTEN, .... and at EVERY OPPORTUNITY!" Lead-acid batteries do NOT have a "memory!" When you get a chance, "double charge" your batteries—run a second charge cycle before using your car. Manufacturers call it "equalization charging," and it forces a full charge on every cell. (Normally the charger shuts down when the battery pack meets specifications, and one or more cells are left under-charged). If you can "equalize" once every month, you are "getting it done!"

### **New Batteries: "Season" with care!**

New batteries like to be "seasoned" if possible. If you can, just play nine holes before charging. Repeat for several days. And then play no more than 18 before charging, for as many times as possible. Always charge your batteries after play. The batteries will get better and better "run time" capacity for the first 50-100 charge cycles. Finally, remember to bring your golf car in at least every two years for a "discharge test," which will often detect a faulty battery before you have to replace the full battery set.