

Heavy Handed Maintenance Reduces Life of Those Golf Car Batteries

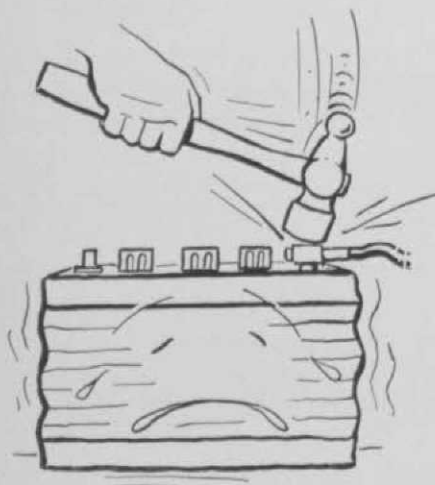
By **WILLIAM J. FREUND**

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Heavy-handed handling or over-maintenance probably is more responsible for battery failures in electric golf cars than anything else. There is a certain degree of ruggedness in any battery, but in my travels around the country I've seen a great deal of evidence where it is being tested to the breaking point. If you want to get more life out of your power units and better vehicle performance, then treat your batteries as the manufacturers recommend.

Here are some hints that I think will help you in your battery maintenance:

- Never use a hammer (even a soft rubber one) to pound battery connectors on to terminals. Spread the connectors so that they fit over the terminals easily with slight pressure, and then tighten them properly. Beating on terminals may get the



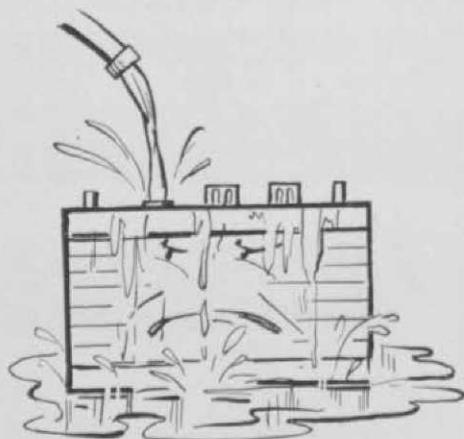
connector on tight but it will jar the plates inside the battery loose and ruin the cells.

- Never overfill batteries. I have seen fellows fill cells from a running hose until they were brimming over. This dilutes the electrolyte, causing the cells to become so full that the electrolyte bubbles over

when the battery is put on charge.

There's A Difference

- The correct electrolyte level is approximately $\frac{1}{4}$ to $\frac{1}{2}$ ins. above the plates in golf cars. (In automobiles it is okay to fill the battery to the manufacturer's recommended level). It must be remembered that



when the golf car is put on charge, heat is generated in the electrolyte and it expands to a much greater degree than when a similar battery is being recharged by the automobile generator in an automobile.

- More batteries are ruined by overcharging than by charging at a too rapid rate.

- Batteries and their connections should be kept clean and free of corrosion by washing when necessary with a mild solution of baking soda, and flushing with clear water. No baking soda solution should be permitted to enter the cells. The golf car mechanic who practices laboratory cleanliness in the "care and feeding" of batteries, and who follows carefully recharging instructions, can do much to extend the life of a set of batteries.

- Batteries should be replaced in sets. Putting a new battery in a car with several half-worn units is like hitching a trotter in the same team with a milk horse and expecting to win a race.

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Battery Maintenance

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- All connections and terminals in any electrical circuit should be kept clean and tight. Loose or corroded connections have the same effect on the flow of the electrical current through batteries and circuit that a stoppage in a waterpipe or a kink in a hose has on the flow of water. Loose connections and corroded battery terminals or cables that have been eaten away by acid build up resistance to the flow of electrical current and wastes it. Vehicle performance suffers accordingly.

- Golf car circuits are series circuits. One bad cell in the series will dissipate the capacity of the good cells and cause the vehicle to fail to "go the distance" or become inoperative. When this condition prevails, the battery with the bad cell should be replaced with a battery of similar age. If all of the batteries are "reasonably old," the entire set should be replaced and the batteries removed, but having some usable life left should be used to replace batteries one at a time in other cars in the fleet as other batteries in the fleet become worn out . . . cell by cell.

Don't Add Acid

- Never add acid to batteries. Fooling

with specific gravity by adding acid is a job for a battery expert only.

- Follow the manufacturer's instructions for charging the batteries. Do not try to "improve" upon them.

- When taking specific gravity readings be sure to correct or adjust the readings in relationship to the temp. of the electrolyte.

- Heat is one of the greatest enemies of batteries and tends to shorten their life.

- Check water level at least once each week. Use distilled water.

Belfore Addresses Michigan Publinx

Joe Belfore, pro at CC of Detroit and pres., Michigan PGA, put on a class lesson and clinic for 300 pay-play course golfers at the Michigan Publinx GA 10th annual spring meeting. The meeting was held at Detroit's Sunnybrook GC. Roy Iceberg was elected pres., of the organization for his fourth term. Tournament dir. Joe Peak announced Publinx's biggest tournament schedule. The association's 15-man board of directors began planning for the 1961 National Public Links tournament which will be played at Detroit's Rackham municipal course.



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