



## **PRODUCT SERVICE BULLETIN NO. \_\_\_\_\_ 15**

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### CHARGING BATTERIES IN STORAGE

With the cold winter months rapidly approaching, dealers must prepare batteries in inventory by charging and adjusting cell electrolyte level (after charging) to prevent damage which may occur due to freezing. Groups of six batteries connected in series, may be charged at the same time with the auxiliary charging kit that utilizes the tractor charger through the small accessory outlet. No more or less than six batteries in series may be charged at a time and the tractor's power disconnect must be disengaged during the auxiliary charging to remove the tractor's own battery from the circuit.

Once the batteries are charged and stored in a cold area (under 40°F) they will retain their charge until warm weather.

### ELEC-TRAK TRACTOR TROUBLESHOOTING

A number of unsuccessful troubleshooting attempts have resulted because inexperienced Elec-Trak mechanics used the tractor frame as a negative pick-up point for voltage measurements.

All Elec-Trak tractors have actual wires running from point to point as opposed to the automotive style of attaching the negative to the chassis. The Elec-Trak tractor system requires selective placement of the negative as well as positive VOM probe. For example, on the E15, the shunt MS-1 or fuse FU3 provides excellent points from which to obtain negative voltage.

### CHARGER HEAT SINK REPLACEMENT

If the need arises to change wire connections to which the charger diodes are soldered, a low wattage soldering iron (40 watts or less) should be used along with some means of preventing the heat from reaching the body of the diode. This preventative measure (called "heat sinking") may be performed by grasping the diode lead with the tips of long nose pliers between the diode body and the solder joint. Holding the pliers in place until soldering is completed causes excess heat to dissipate into the pliers thus preventing diode damage.