

Packard SERVICE TECHNICAL Bulletin

55T-3
Dealer 3
January 19, 1955

To: ZONES AND DEALERS

Subject: 12 VOLT BATTERY CHARACTERISTICS

With all 55th Series Clippers and Packards being equipped with 12 volt batteries, it might be well to call attention to certain characteristics of this system which are important to service personnel.

1. Current leakage from the terminals to ground will be much greater on a 12 volt battery than on a 6 volt battery should spilled electrolyte bridge the battery top from terminal to ground, as the higher voltage pushes more current through the same leakage path.

Since high voltage causes more amperes to leak, all other things equal, the lower ampere-hour rating of the battery makes fewer amperes available. It might be said that a given leakage path across the top of a 12 volt battery is four times as likely to run the battery down as the same leak would be to discharge a 6 volt battery.

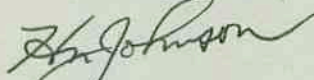
Remedy: Thoroughly clean and dry the top of the battery to end the leakage. Then find out why the battery is wet with electrolyte. Most common causes: (a) Overfilling the cells .. Adjust to proper level. (b) Overcharging .. Adjust the voltage regulator setting as required. (c) Cracked case or leaky sealing compound .. Reseal or replace battery.

To minimize corrosion damage, the usual procedure of an ammonia or baking soda-water bath on all parts touched by acid, followed by vasoline on the battery and cable terminals is still sound service practice . . . more important today than ever.

2. Another 12 volt characteristic which bears comparison to the more familiar 6 volt installation is this: Often in cold weather car owners crank until the battery is dead, still failing to get a start, whereupon they leave the car for other transportation. A good 6 volt battery will cease cranking while there is still enough "anti-freeze value" to the electrolyte to prevent freeze of the battery, but under similar conditions, the higher voltage and lower amperage requirements of the 12 volt system result in nearly complete battery discharge before cranking ceases. This leaves the electrolyte so nearly pure water that it will freeze at temperatures just under 32° F., probably destroying the battery by bursting the case.

3. Greater caution than ever must be taken to avoid shorting terminals, leads, etc., to ground in 12 volt systems. First, the lighter gauge wire used with 12 volts, having less current capacity, is more easily overheated. Secondly, 12 volts forces much more current through a "short" than 6 volts often causing serious damage before the mechanic can remedy the trouble, be it a wrench dropped on a battery or whatever the cause may be.

Very truly yours,



H. N. Johnson
Assistant Service Manager

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