

Your Obligation to Your Storage Battery



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NO matter how good mechanically your car may be, it will not continue to give satisfaction when subjected to abuse and neglect. You accept, as a matter of course, the fact that your automobile needs gasoline on which to run—that moving parts must be greased and oiled to prevent wear—that when you neglect one of these necessarily important precautions, injury to the car's mechanism can hardly be attributed to faulty construction.

If you **starve** your battery by using it constantly in an undercharged condition, or **overheat** it by continuous overcharging without giving it an occasional drink of pure distilled water, are you willing to place the responsibility where it belongs?

The storage battery is one of the most sensitive articles on your car. Given the same consideration in the way of periodical care and attention that you give other important parts of the car's mechanism, it will serve you long and faithfully.

Neglected, it will quickly become impaired and be a source of constant inconvenience and annoyance to you.

Some Things That May Happen to Your Storage Battery



THE starting and lighting system on your car is designed to operate under normal conditions. Abnormal driving conditions soon reflect themselves in the conditions of your storage battery. Even the slightest irregularities have their effect—sooner or later. Little irregularities rapidly accelerate toward serious troubles, and serious troubles invari-

bly mean expensive repairs—sometimes a new battery.

Undercharging: Frequent "starts" without running the car enough to recharge the battery create an abnormal condition under which the health of your battery is bound to suffer. It soon reaches an undercharged condition—lights go dim when the car is standing idle—and frequently you have to resort to the hand crank. The damage may be so great as to require a new battery.

Overheating: Running the car long distances at high speed, with little or no use of the starter or lights results in overcharging. Overcharging produces overheating, resulting in rapid evaporation of the water in the electrolyte and possible damage. Before very long the plates are uncovered and the battery is ruined.

Nine out of ten inoperative batteries are suffering from one of these ailments.

How to Insure Your Battery's Health



THE first thing to do when you buy an electrically equipped car is to consult the nearest Prest-O-Lite Battery Service Station. Buy a hydrometer syringe and learn how to use it. Find out how to make other simple tests that are necessary to protect the health of your storage battery.

These periodical tests are highly important. They enable you to tell in advance when your battery is in danger of being ruined through undercharging or overheating—when minor troubles in the electrical system are draining the strength and endurance of your battery—when an inexpensive freshening charge would

save expensive dismantling and rebuilding later.

Correct Level of Electrolyte: The electrolyte in each cell should be at least $\frac{1}{4}$ inch above the separators. To measure this, insert a clean glass tube through the vent until it rests on top of the separators. Place your finger firmly over the end of the tube and withdraw. Electrolyte remaining in the tube indicates the height of the electrolyte over the separators.

Adding Distilled Water: When the electrolyte is less than $\frac{1}{4}$ inch above the separators, pure distilled water should be added. Never use hydrant water or water which has been held in a metal receptacle. Keep a bottle or jar of pure distilled water on hand for battery use only. To put water in a cell in which the electrolyte is low, use your hydrometer syringe. Do not add acid of any kind.

How to Make Hydrometer Tests: Always make hydrometer tests **before** adding distilled water. First clean off the top of the battery and remove the vent cap of the cell to be tested. Squeeze the rubber bulb and insert the tip of the hydrometer syringe into the electrolyte as far as you can. Release the pressure on the rubber bulb. Enough electrolyte will be drawn up into the glass tube to raise the graduated float inside. The point on the graduated scale coinciding with the surface level of the liquid indicates the **specific gravity**.

The following table tells you the approximate condition of your battery, according to specific gravity readings:

- 1.150—battery discharged.
- 1.185—Battery $\frac{1}{4}$ discharged.
- 1.225—battery $\frac{1}{2}$ discharged.
- 1.260—battery $\frac{3}{4}$ discharged.
- 1.300—battery fully charged.

If the hydrometer shows specific gravity reading of 1.250, maybe the battery needs a freshening charge to build it up. If the spe-

cific gravity is over 1.300, and the battery shows signs of spraying and excessive heat, the battery probably is overcharging. If you find signs of acid around the bottom of the box, one of the cells probably is leaking electrolyte.

If you do not care to make hydrometer tests or add distilled water yourself, make arrangements with the nearest Prest-O-Lite Battery Service Station to do it for you regularly.

Many car owners, however, take a pride in doing this work themselves—just as they like to keep other parts of their car in first-class working order.

Prompt Action Necessary to Cure "Sick" Batteries



At the first sign of trouble, take your battery to a specialist for immediate diagnosis. Don't wait until the trouble becomes chronic. Whatever the symptoms may be, whether due to any of the causes outlined above, or to irregularities in the sensitive electrical chain in connection with which the battery must do its work, prompt action may prevent the battery from suddenly becoming inoperative.

Remember that a storage battery will struggle to do its work even though neglected and abused, until the last breath of life is gone. When it quits, it may quit suddenly—and that usually means an expensive repair bill.

Before the little troubles grow into serious ones, as quickly as possible let an expert battery man study the situation and suggest a remedy—either a freshening charge or internal repairs to restore normal conditions, an adjustment of the electrical system to remove the cause of irregularities, or, if the battery is beyond redemption, a new battery.

Expert tests will tell whether or not a recharge is necessary, examination of the plates and separators will indicate the advisability of going to any further expense to repair it.

Network of Service Stations at Your Disposal



No matter where you are or where you may be, you will find a Prest-O-Lite Battery Service Station within easy reach. At each of these stations you are assured expert battery work, honest advice and courteous treatment. Realizing the great need for a universal battery service of expert character, we have placed this service at the disposal of all car owners, no matter what car you drive or what battery you use.

Properly used, Prest-O-Lite Service will make your battery a better battery.

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Chippewa Falls, Wis.

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