

## RE-JUVENATING A BATTERY

Despite wide-held views to the contrary, it is possible to bring some failed lead-acid batteries back to life. I've had a pretty good success rate (~80%) with the methods below which are based on those in "EMERS". EMERS is the colloquial name given to the vast collection of general maintenance and servicing notes used by the Commonwealth Armies' Mechanical and Electrical Engineers units (e.g. RAEME in Australia).

The two major causes of battery failure are internal short circuits and sulphation.

Internal shorts cause "dead cells" and are due to conductive material flaking off the plates and building up in the sediment space below until it forms an electrical bridge between the positive and negative plates. Sometimes, evidence of this build-up can be seen as a rising of the plate separators.

Sulphation is due to the reaction of sulphate (from the acid) with the lead plates, producing lead sulphate which resists normal charging. It is caused by old age, insufficient fluid or standing in a discharged condition.

While these problems can be treated separately, both are age-related and likely to occur together. A combined treatment procedure is therefore advocated, as below.

1. Battery acid can be injurious. Protect your eyes, hands and clothes before you start.
2. Remove the battery caps, take up the battery, shake it to suspend any sediment, and tip out the acid into a suitable waste receiving area e.g. a distant corner of the garden (not onto your feet or the carpet).
3. Fill the battery with tap water carefully (not by hose), shake and empty as in 2.

4. Repeat 3 until there is no sign of sediment coming out.

5. Fill with good quality tap-water (Melbourne), distilled water, rainwater or refrigerator defrost water, and add two teaspoons of Glaubers salts (sodium sulphate from your pharmacist) to each cell.

6. Charge up the battery at 1-5 amps for 24 hours (for a car battery - motorcycle batteries should have about 1 amp max. put into them).

7. Flatten the battery by leaving a 15W globe (approx.) connected across it (5W max. for M/C battery).

8. Shake the battery to suspend any sediment present and pour out the Glaubers solution.

9. Repeat steps 5-8 until no more sediment appears in the drained water.

10. Flush once more as in 3, and fill the cells with new battery acid of 1.2 specific gravity (35%) from your service station, auto parts store or hardware shop.

11. Add  $\frac{1}{4}$ - $\frac{1}{2}$  teaspoon of Glaubers salts to each cell, charge the battery up again, and put it back into service.

12. 300-400g (say a pound) of Glaubers salts should be enough for a 12 volt car battery.

The most recent battery I "restored" with this method was an 11 year old motor bike type which had packed up and had stood for 2-3 years. Its revival was, I must admit, a great surprise!

Jack J. Weaver.

[A very similar method is described in Earth Garden No. 47, August 1985. The Citroenian (UK) of April 1986 has a method using EDTA instead of Glaubers salts, but there is no local experience with this method. - Ed.]

## MANUAL LABOURS

You may recall that almost two years ago (FD 9 (2)), the idea was tossed up to produce a manual of restoration and maintenance tips and related information for Traction Avants? The idea was to celebrate the tenth anniversary of the founding of CCOCA. 1988 is that year.

A small group of us (Peter Boyle, David Giddings and Bill Graham, with Robyn Couche shouting encouraging comments from the sidelines) is determined that this project should go ahead. We expect it to be a great success, meeting a need here and overseas. We are approaching other clubs for approval to reproduce tech. stuff, and of course, you will have noticed the extra technical info in Front Drive in recent times as part of our efforts to get more ideas into print form. The manual will aim to collect all the available tips and restoration experiences into one handy reference book, which as well as being a valuable reference and reading matter for "old-time" Tractionists, would also be virtually indispensable

for those just entering the Traction ranks, especially if they intend to restore and maintain their car.

We aim to keep the cost of the publication down by obtaining commercial backing and selling advertising space in it.

So how about swinging in behind us to help realise another CCOCA activity that you can be proud of. The main thing you can do is to jot down any restoration/maintenance tips you know of/have invented /have tried, in brief notes with a sketch if appropriate for clarity, and send them to The Editor. The ideas could be purely Traction, or could be general but applicable to Tractionists.

And if you can think of possible advertising or other support, leap in, twist some arms, and put us in touch. We haff vays of making them touch their kick!

Bill Graham.