

I consider this FRINGE information.

I have not tested this, but I saw a few convincing youtube videos, so, I'm throwing this in for fun...

Walt

How to convert a Lead Acid Battery into an Alkaline Battery

Battery technology is one of the stumbling blocks on the way to introduction of more efficient electric cars and trucks, not to talk about storage of home-produced electricity from sun, wind or other intermittent renewable sources. While there are new kinds of batteries being developed (see the Battery Directory on PES Wiki), no cheap and easy solutions have entered the mainstream yet. Most cars are still using the type of battery developed by Frenchman Raymond Gaston Plante' about one-and-a-half centuries ago.

Leadacid.jpg

Plante's lead-acid battery (circa 1860) Image source: USA Today

There seems to be a way to convert an old, almost exhausted lead-acid battery into a functioning alkaline battery that is not widely known. The information was posted to the watercar yahoo group and through an unlikely chain of forwards reached me by email. Since this information is not widely known, I would like to make it available here.

If you decide to experiment with this, know that you alone are responsible for what you are doing. Don't do it unless you are technically savvy. Should you find it works and want to share your results, you can always comment at the end of this article, and if you feel like thanking the guy who put the information together, you can email him at tshell - at - mcdranch - dot - com.

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How to convert a Lead Acid Battery into an Alkaline Battery

Here is a free gift to all of you and all the world. Read carefully and follow up on all the links and you'll know as much as I do. Then go fool around with the stuff and see what happens. As a favor, please let me know what you discover.

As far as the lead acid batteries go, they can be a pain. But I am researching the possibility of converting lead acid batteries to alkaline batteries. I had a semi-genius friend once give me this information but have yet to see it anywhere else in public domain.

My friend claimed that you could take a weak lead acid battery, one that was still able to be charged but whose lifecycle was nearly finished and convert it to an alkaline battery by dumping out the battery fluid and replacing it with a mix of water and alum. Alum is sold in the super

market spice section for making homemade pickles, it makes them crisp. It is soooooo cheap. And soooooo safe, you can eat this stuff, okay? I don't recommend eating it because of the aluminum connection to Alzheimer's disease.

It is sodium aluminum silicate, chemically speaking. Also goes by sodium aluminosilicate, aluminium sodium silicate; sodium silicoaluminate; silicic acid, etc. For accuracy use the proper catalog numbers. CAS # 1344-00-9, GB 12493-90(02.002); INS 554; GRAS (GRAS means Generally Recognized As Safe) FDA 182.2727, (1994) If you want more complete chemical info, everything possible to know about this substance, you can download it here:

PDF: www.chem.unep.ch/irptc/sids/oeedsids/Silicates.pdf

I experimented with old batteries and had two successes and two failures. The successes were total successes and the failures total failures. I used 4oz of alum to 1/2gal of water. You just replace the fluid, recharge the battery and off you go. The successful batteries seemed to be more powerful than the original, however I have no data. The best one was destroyed in a vehicle fire. It has been over 10 years since I did those experiments and I am getting ready to try again.

The advantages of the alum battery are many.

- the battery fluid is non corrosive - the battery gas is not explosive - the battery can be discharged more deeply - the battery can be charged faster - the battery will last longer - there is not corrosion of the terminals - it is extremely cheap - more power in cold weather

I will be trying this experiment with some better measuring tools. I want to go to a battery shop and try this on numerous old junk batteries. My feeling is at this point, if the battery is too dead to take any charge at all, it is too far gone to recover with this method.

This process has never been commercialized that I know of except by one company in China. From what I can read, I think that their battery is pretty much the same as this homemade solution, but all worked out scientifically. It is extremely simple. I'd love to have some assistance from more knowledgeable folks on how and why it works to be able to perfect it.

When you realize how cheap this is to do, you'll really be doing some head scratching. You can have a renewed battery for the price of a few bottles of alum.

Another related bit of information is this. There was a company set up in China called Guineng who was manufacturing and selling a new type of battery. They indicated on their web site that it was a silicate salt battery. I'm pretty convinced it was of this type I am experimenting with. Well, they had a good site with lots of info. But there has been no success on my part in contacting them in any way. I've tried like the dickens to get ahold of this company but have never had an email response, cannot get through by phone, just impossible so far. They were reported to be selling their battery to E-Max scooters in Germany. The bikes are being sold down under and the first reports on performance are coming in. But here it is, take it and see what you can do with it.

I am going to try to be working out the correct ratio of alum to water myself in the future for my

new used battery bank.

Let me know what you find out.

Check this all out yourself at the following:

http://www.texaserider.com/escooters_emax.php

<http://freenergynews.com/Directory/Battery/index.html>

<http://www.zpenegy.com/modules.php?name=News&file=article&sid=1677>

<http://www.guineng.com/index0.htm>

<http://www.emax-ltd.com/>

<http://www.technologyreview.com/Nanotech/16278/>

<http://jcwinnie.biz/wordpress/?p=1563>

<http://www.technologyreview.com/Nanotech/16278/page2/>

This one is about the FireFly battery technology

<http://www.subcpower.com/>

http://www.subcpower.com/batcompare_chart.html

This is the best comparison chart to see it all at a glance

http://www.texaserider.com/escooters_emax.php

The proven, tough and rugged New e-Max with its 8 x 12V/20A Silicon battery system is unique in e-scooters. Silicone Battery Comparison. No more old style lead acid batteries to bog down performance and create havoc in the environment with its destructive pollutants during production, use and disposal. The new GUINENG Silicone power batteries in the e-Max break away from the old and embrace a breakthrough in an enviro-friendly tough and rugged package. An extremely long-life energy supply specifically designed for the e-Max, the new Silicone system offers a never-before seen performance standard... shelf life and power! You can store the batteries, unused for up to 1 1/2 years with voltage going down less than 1 volt! No memory loss! Constantly worrying about losing battery memory and battery damage is no longer wishful thinking! And power!

Jianmen Yu Yang Special Storage Battery Co.

Submitted by David Herron on August 4, 2006 - 3:20pm. Silicon Battery

This is a Chinese company who has developed a Silicon based battery chemistry that shows great promise. Completely breaking away from the technological limit of lead-acid batteries, GUINENG silicone power batteries embrace a breakthrough, where silicate salt is used as electrolyte. GUINENG batteries have enormous and durable power and are pollution free. GUINENG has a universally recognized edge over commonly used lead-acid batteries nowadays in the world, due to its high capacity, high current output, rapid recharge time, low temperature performance, long life span, and environment-friendliness.

Features include:

- Storage capacity as high as 1.75 times of international standards

- Recharge acceptance capacity as high as 2.68 times of international standards

- High current recharge. (0.8C---1.0C)

- High current discharge. The battery will not be damaged when discharging within 8 seconds at the temperature of 30°C. Deep discharge is allowed.

- Low self-discharge. After fully charged, the battery can be used within one year at a normal temperature.

- No memory effect for charging or discharging

- Functions normally between - 50°C---+70°C

- Sealed with a release valve. Maintenance free.

- No acid mist emission when charging or discharging. No pollution from the electrolyte.

- Long life span. Under normal circumstances, the cycling life is as long as 10 years for the GYM Series.

- Over 400 times of recharging.

- Functions normally under 6000 meters of the deep sea

See also related:

Nickel Iron battery in Home Power Systems

No battery has outlasted the Nickel Iron battery in daily use for Home Power Systems. This environmentally friendly battery has been in use for over 100 years. In many cases we have documentation that there are batteries still in use and still producing 100% of their battery capacity after 60 years in service.