

1. YES! It is possible to triple the life span of your batteries and reduce maintenance costs.

DUO-REGEN

Yes! You can now dramatically extend the life span of new forklift-truck batteries, as well as older, worn-out batteries that now hold a charge for only 2-3 hours instead of 6-7 hours. After a DUO-REGEN treatment, they will consistently keep productivity and capacity to a maximum level. For battery maintenance, use our preventative distilled water replacement “WaterX” on your scheduled maintenance program. This usually takes 1 hour per month. The combined use of Duo-Regen and WaterX will reward you with:

- ▶ Faster Charging
- ▶ Decreased Electricity Costs
- ▶ Less Downtime

DUO-REGEN process and products not only allow your batteries to operate at their optimal capacity year after year but also help reduce equipment maintenance costs. Cells that have weakened due to sulfation deliver lower voltage and higher current to the vehicle electrical system. This combination has been scientifically proven to cause premature failure of electrical system components.

Thanks to our innovative process and products, DUO-REGEN can restore both chemical and electrical failures in batteries. Your motive power batteries and batteries in trucks, buses, golf carts, boats, industrial floor cleaning machines will keep working efficiently, smoothly, faster and thus last longer – all this, in direct result of the DUO-REGEN process.

Graphic 1

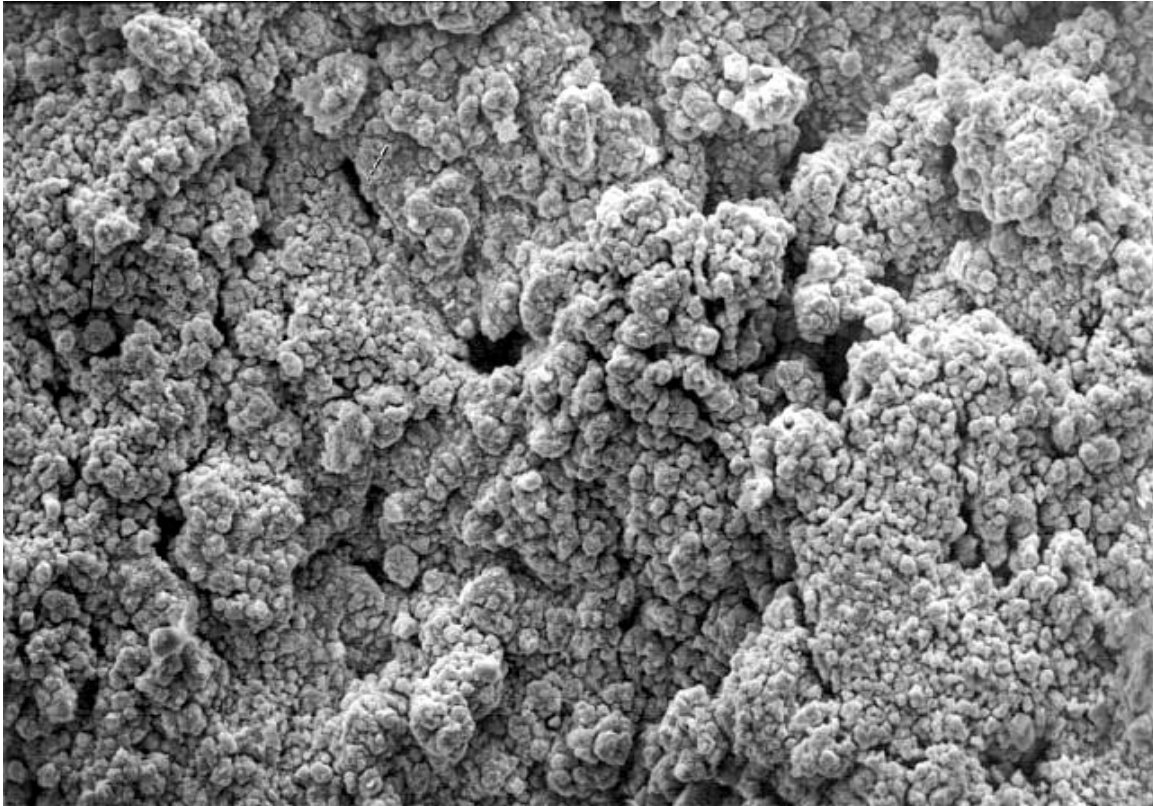
Treatment of a New Battery

Graphic2

Reconditioning of a worn
or dead battery

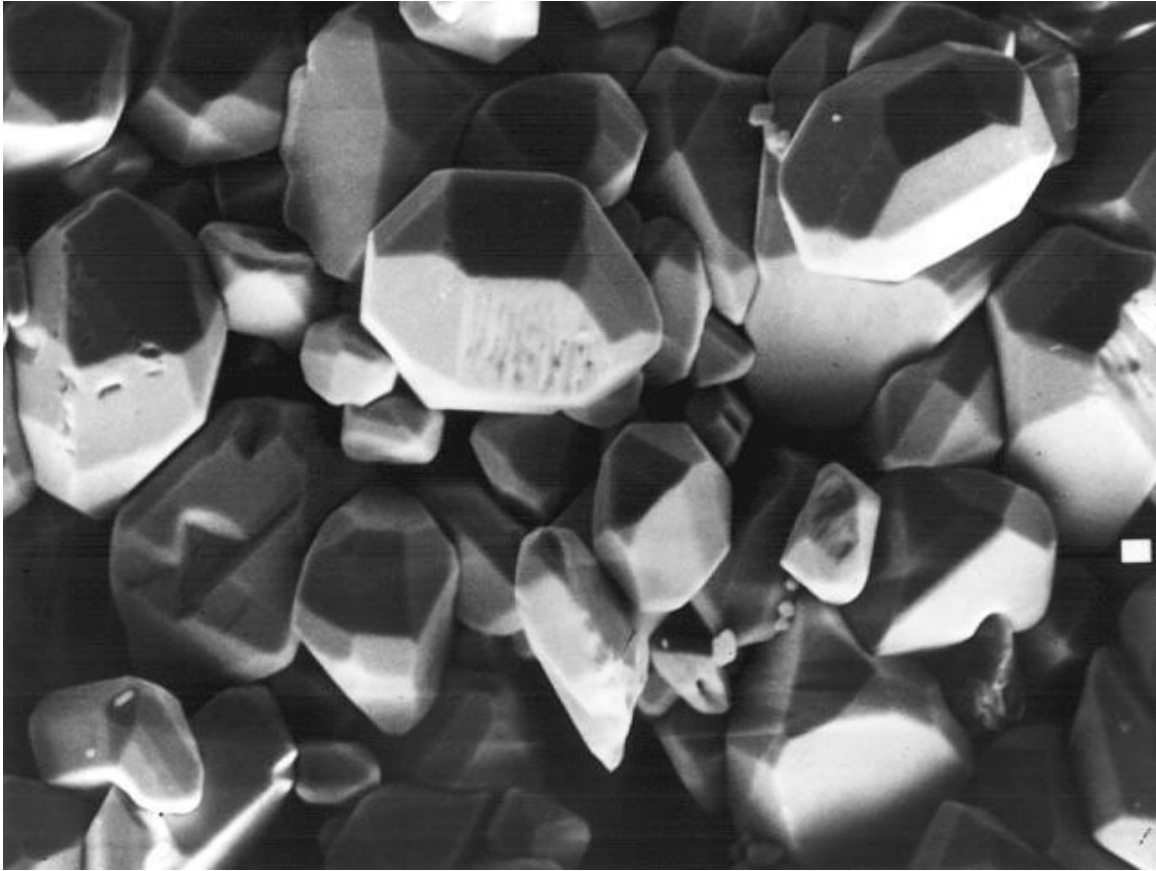
II. How Sulfates Choke the Life Out of Your Batteries.

A new battery starts out with clean lead plates in a solution of water and sulfuric acid, called “electrolyte”. Chemical reactions between the plates and electrolyte produce electric voltage and current at the battery’s terminals. Here is a microscopic view of a new battery plate-



The lead plate has a lot of surface material available to react with electrolyte and produce current.

A Simple Sulfate Explanation – Sulfate crystals form on a battery’s lead plates whenever it discharges. This happens when the battery supplies current for its application and also when it discharges during periods of non-use. The sulfate is a normal product of the chemical reaction between lead plates and electrolyte. Most of the sulfate dissolves back into electrolyte when the battery is recharged. Over time and with many charging cycles, sulfate residue coats the plates with hard and dense layers. This residue suffocates batteries and makes them hard to charge and unable to supply their rated current.



This photograph clearly shows lead sulfate crystals that have almost completely covered the lead plate surface. This battery would perform at only a fraction of its rated power and would have to be replaced.

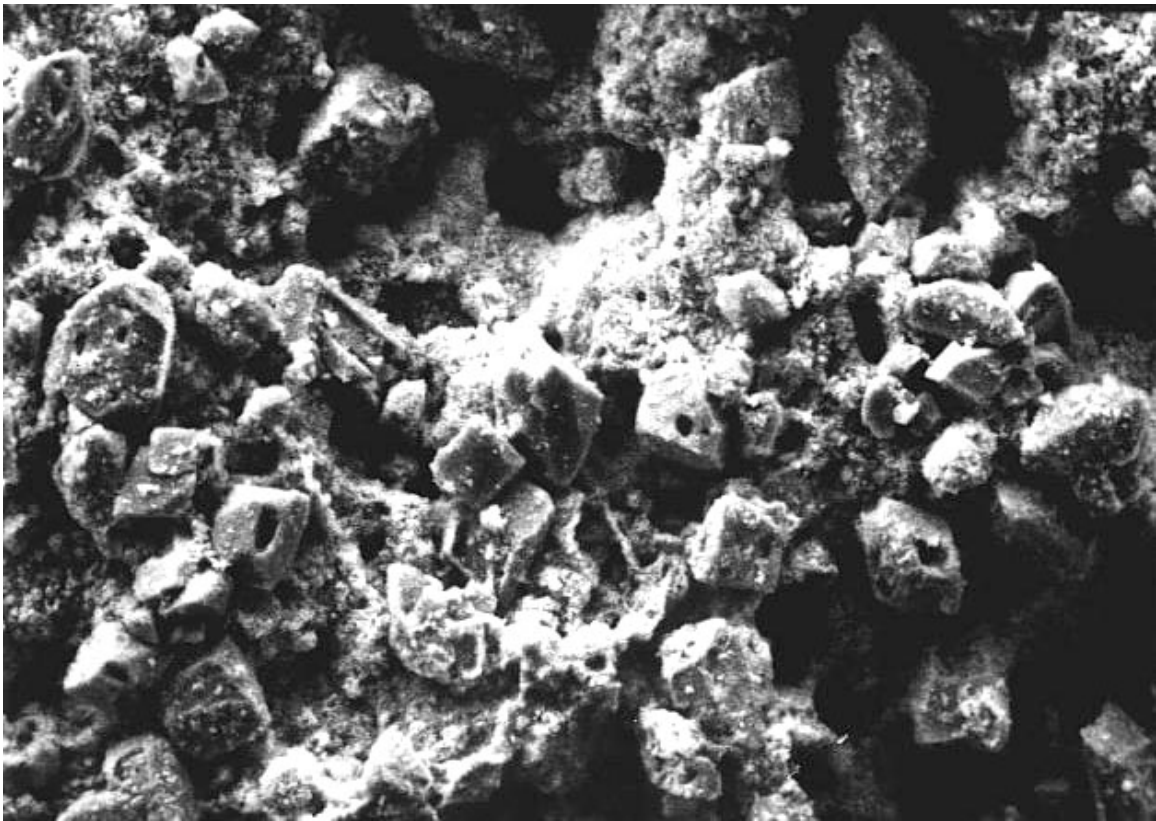
Standard charging methods contribute to premature battery failure. Sulfation inhibits the battery's ability to receive and deliver power. When a sulfated battery is charged, it becomes hot, causing increased water loss. Lost water causes the lead sulfate to deposit back on the plates as hard and brittle particles. This results in cell distortion, short circuits and eventually mechanical damage. Charging problems are especially apparent in electric forklift trucks due to their frequent daily charging cycles.

Many charging systems have their limitations. Their charge algorithms are fixed in advance and do not address the problem of sulfation. Even the intelligent, tapered-current chargers work in such a way that the batteries are prematurely worn out due gradual accumulation of sulfate deposits.

III. DUO-REGEN Two-Part Process for Battery Health.

The DUO-REGEN process combines both chemical additives and scientific electrical high-frequency pulse charging to restore the health and extend the useful lifespan of lead-acid, flooded or gel-cell batteries.

ResureX is the first part of the DUO-REGEN process. ResureX is a proven chemical sulfate reversion system that dissolves sulfate crystals back into electrolyte. ResureX is a balanced blend of non-toxic chemicals that have been proven to be the best at removing sulfates. It cleans the lead plates and restores the battery to “new” condition. This photo shows a plate that has been treated with ResureX-

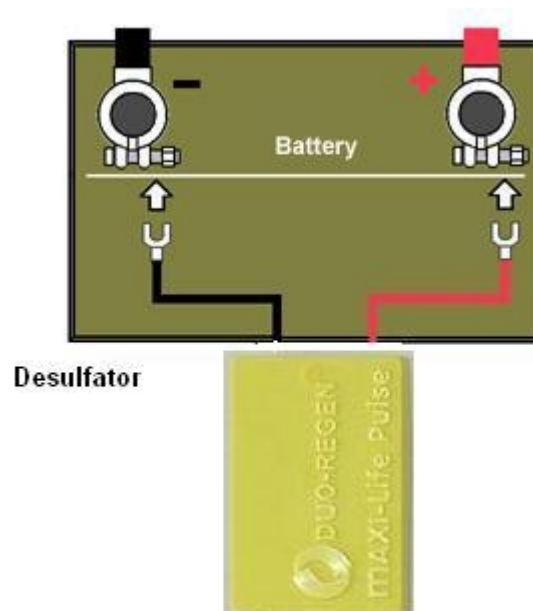


You can see that ResureX has substantially reduced the sulfate crystals and that much of the original lead plate surface is once again available to produce electricity.

DUO-REGEN adds a scientifically designed pulse generator as the second part of our battery health process. Pulse generators have a long history in battery maintenance, but their contribution has only recently been studied and understood. The first beneficial

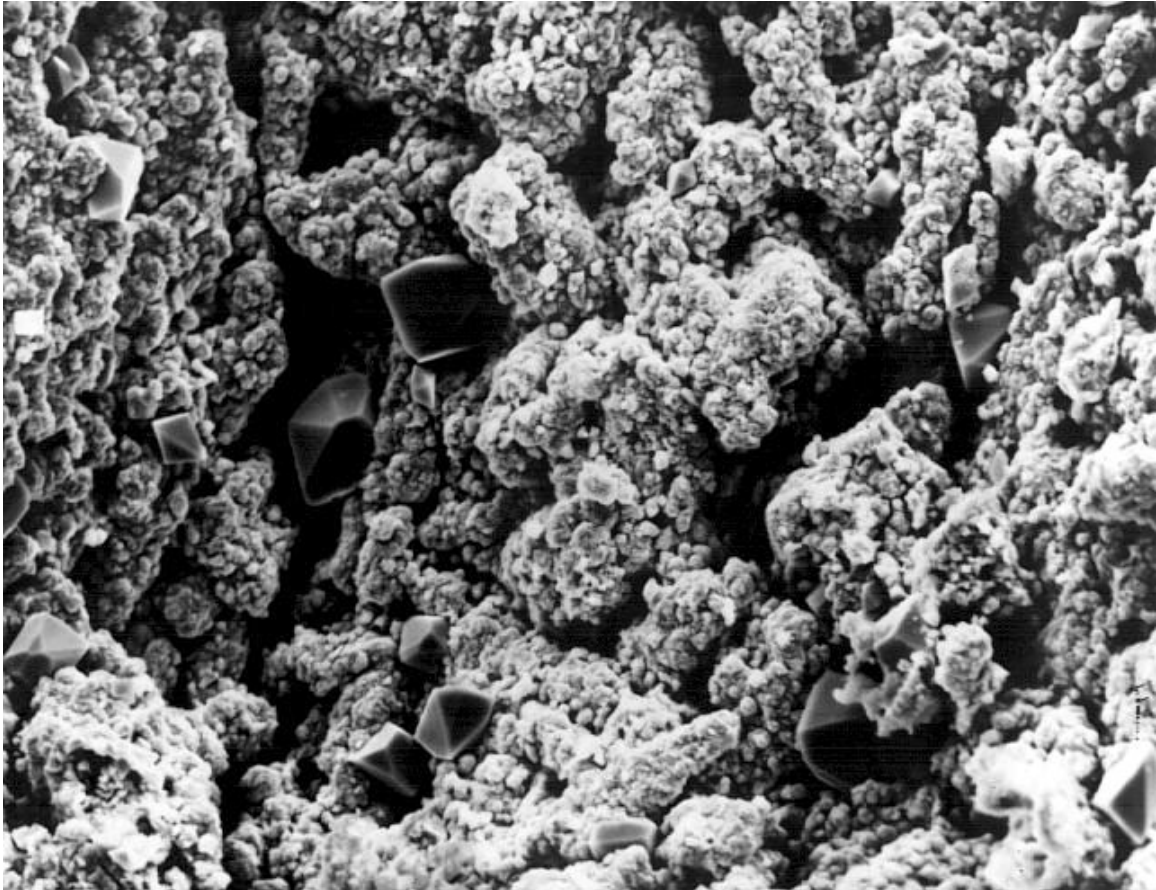
effect comes from the mechanical resonant energy that each pulse provides to the plates. The pulses dislodge sulfate crystals, creating more plate surface area. This added surface area makes the battery more able to generate power and makes it easier to recharge after use.

The second pulse benefit is to the battery's charge level and state-of-health. It's long been known that constant-current charging damages a battery by heating the cells. Pulse charging imparts a short, intense, charging current to the battery. The cells are able to use electrolyte close to the plates to store a portion of the pulsed energy. This recharges the battery without heating (and damaging) the cells.



The DUO-REGEN Pulse Generator is installed quickly and easily by connecting it across the battery's terminals.

This photo shows the combined effects of DUO-REGEN's ResureX and Pulse charging process-



The sulfate crystals have been all but eliminated and this battery's plates have maximum available surface area. This battery will perform in "like new" condition.

DUO-REGEN has been proven to restore heavily sulfated batteries to full capacity, making them work as well as new batteries. It will prevent lead sulfate crystal formation and will maintain maximum surface structure of the cell plates. DUO-REGEN can reduce sulfate crystals by up to 99.99% when applied early in a battery's life cycle. Cell distortion, short circuits and mechanical damage can be avoided, keeping your batteries in perfect shape year-after-year.

Before/After VOLTAGE Chart

Before/After SPECIFIC GRAVITY Chart

IV. DUO-REGEN Advantages

- ▶ Can triple service life of batteries.
- ▶ Restore capacity to old and discarded batteries.
- ▶ Improve battery performance and efficiency.
- ▶ Reduce and shorten charging cycle.
- ▶ Prolong working time between charging.
- ▶ Stop and prevent premature cell damage
- ▶ Reduce battery changes during operational shift.
- ▶ Extend service life and reduce damage to forklift electrical components.
- ▶ Reduce water topping and consumption.

V. Financial Savings – For small and large organizations

All battery professionals and users will benefit from-

- ▶ Reduced battery purchase expenditure
- ▶ Improved equipment productivity
- ▶ More flexible, efficient and productive battery management
- ▶ Improved equipment, lease, maintenance programs
- ▶ Reduce charging energy costs by 50%
- ▶ DUO-REGEN costs no more than 33% of a new battery

Cost of DUO-REGEN

Cost of a New Battery

These advantages and benefits can bring your electrical equipment overhead down to a level never previously attainable. DUO-REGEN is the process that goes further than any other in the search for maximum battery longevity and productivity.

The DUO-REGEN process is ideally suited to improve your current operations or can be seen as a business opportunity to create a battery regeneration and reconditioning center.

VI. DUO-REGEN Process ensures large environmental gains.

Lengthens the battery's operational lifespan considerably and reduction in the level of battery wastage has a positive effect on the environment and is an important step towards certification for ISO 14000 environmental standards.

Visit Green Pages: <http://www.eco-web.com>

Click on Canada and find "Battery RevivaPro International

Graphic of Web Page

Environmental advantages:

- ▶ Reduced lead-acid waste in the environment
- ▶ Avoid environmental penalties
- ▶ Reduced waste, handling costs
- ▶ Improved environmental life and image