

Increasing Service Revenues with Battery Optimization Techniques

By: Bruce Zeier, President of Bravo Zulu International Ltd.

Service companies continually attempt to competitively differentiate their service offerings by the addition of new service based technologies. The quest to provide innovative and cost saving service offerings to existing and prospective clients, is never ending. The market for lift trucks sales have struggled this year and many lift truck dealers are searching for a new value added service to supplement sales revenues. Battery service providers have also experienced a similar reduction and now search to increase revenues, while reducing labor and other marginal costs. Many service companies are now offering Battery Optimization services to show clients how to lower their electric bill and extend battery runtimes, while creating a new revenues by optimizing the client's batteries on a preventive maintenance basis.

The end-user's current method of restorative battery maintenance begins by operating the battery until there is a noticeable loss of performance, before taking any action. Once the runtime is noticeably worse, the battery has already been consuming excess amounts of electricity trying to establish the same battery state of charge, compared to the battery with optimum performance. In addition, a battery that has been neglected is less likely to regain optimum performance, than a battery that has been maintained within a "Battery Optimization Program."

The "repair" of an individual motive battery cell is limited to the elimination of sulfation and acid adjustment. An approximate 40-minute process of sulfation elimination and the occasional acid adjustment, both of which can be performed on location, now easily performs the majority of cell maintenance. Therefore, the ability to provide a commercially viable and mobile, acid adjustment and sulfation elimination process at the client's location, will be the next paradigm shift in the motive battery service industry.

Current battery repairs are relatively expensive because of labor and transportation costs to pickup and deliver the batteries. In addition, the battery is out of service and the downtime related for this process is often one or more weeks. The end-user's opportunity costs associated with traditional facility based battery repairs may include: 1) the purchase and maintenance of spare batteries, 2) the rental of batteries, or 3) the inability to use the lift truck associated with the battery being repaired. In addition to opportunity costs, the hidden cost of wasting charger electricity and reduced battery longevity, add to the operating cost of battery operations.

We as battery service providers have failed to recognize the "hidden revenue stream" in optimizing batteries for the end-user. The reduction of the client's battery charging electricity costs and the improvement in battery runtime per charge, more than offset the battery or forklift service provider "Battery Optimization" service fees. In addition, optimized batteries last much longer, perhaps several years longer, adding value by the reduction in capitalization cost incurred by the premature replacement of batteries.

Most power grid companies are looking for ways to minimize the load on their grid. We have all seen rebate offers from the power company if we buy energy efficient appliances. Many companies fear the focus of looming "Cap and Trade" legislative attempts, as most proposals require excess carbon consumers to purchase "Carbon Credits" from those who are not. The Wall Street Journal recently reported that Congress was considering encouraging farmers to take millions of acres out of crop production and planting fast growing, carbon offsetting trees. These farmers, the article stated, would then be allowed to sell their carbon credits to excessive producers of carbon emissions, "...such as power companies." The excess electrical consumption from failing to implement battery optimization procedures may soon become a "taxable event" for your client, offsetting service provider fees are not!

What is Battery Optimization?

Battery Optimization is the: "Scientific measurement of battery cell performance with respect to sulfation elimination and the correction of acidity levels, within the individual battery cell." Battery Optimization is rated as an Electrical Efficiency Index (EEI), composed of numerous mathematical formulas adjusting the raw cell data for the environment the battery operates within. Some examples of EEI adjustment variables are, operating temperature, charging method, type of charger, the age of the battery, charger wattage consumed to provide the battery amp-hours accepted, and several others.

The process begins with several performance tests that are recorded in a computer-based spreadsheet as the "Before Data" of the battery, in a pre-optimized state. The Batt-Recon system is then used to scientifically measure sulfation and minimize it. Once the battery sulfation is minimized, the acid is adjusted to manufacturer's recommendations and the battery is tested again to determine the "Optimized State of the Battery's Cells." This "After" data is stored in the computer as an EEI and used for future preventive maintenance reviews. As a service provider, you will no longer guess as to the condition of a client's batteries, rather determine an Electrical Efficiency Index rating for each cell and prescribe a preventive maintenance procedure to maintain the optimum level. In fact, you will be able to ask the client, "How much electricity would you like to waste during each charging cycle of each battery?" The answer will dictate the service frequency of the optimization program.

"How does battery optimization increase service revenues."

Service revenues will increase by providing a semi-annual or annual preventive maintenance service to all of the client's batteries, not simply waiting for the batteries to noticeably diminish in capacity. The new Battery Optimization Service costs to the client are easily offset by electrical savings and extended runtimes, with the benefit of increased battery life as a bonus.

Unlike the proposed Carbon Credits, battery optimization would be welcomed by government and tax-free. Prior to Battery Optimization, the traditional service provider interval per battery was often measured in years. With Batt-Recon, you will receive continuous service revenues by providing a Battery Optimization maintenance program, while providing cost effective and provable benefits to the client.

We are working to provide the forklift and battery service professional with the tools and processes that allow them to fully maximize their service revenues, while providing maximum benefits to the clients. If you would like more information on Battery Optimization, please feel free to call 951-928-0595, email: sales@battrecon.com or visit us on the web at www.battrecon.com.

BATT-RECON: The Emerging Technology



The Model 4800 F System:

**Creates New Service Clients
Generates Cash Flow
Saves Electricity Costs
Extends Battery Life**

As lead-acid batteries cycle between charge and discharge, sulfates accumulate on the internal lead plates of the battery preventing the efficient flow of electricity. This results in longer charging times, fewer operating hours of use, 10-40% wasted charging electricity and premature replacement of the battery. The Batt-Recon Patent Pending Process of Sulfation Elimination restores most batteries to a serviceable condition saving you time and money!

ZULU one

The Battery Optimization Scanning System

“The Batt-Recon Sulfation Elimination System allows service providers such as Bugle Forklift Sales, Calgary, Canada, to provide Battery Optimization Services on location, without disrupting the client’s daily operation. Our clients love saving electricity and replacing fewer batteries! Bugle and CBH are providing “State of the Art” battery maintenance services to the Canadian Marketplace.” Join us by calling: Toronto 416-855-6683, Montreal 514-906-7783, or Vancouver 604-637-0483

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SAVE A BATTERY - SAVE THE PLANET - SAVE MONEY!

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