



Battery Management Systems, like EBatt from MTC, can help reduce the number of batteries needed in a warehouse. The result is substantial savings and a drastic reduction in the amount of acid and lead in the workplace environment.

# Report Card Helps Plant Managers Avoid Costly Human Error in Forklift Battery Maintenance

*Smart data collection and recycling saves big money and makes work environments safer*

The facts are undeniable. Facilities that rely on fleets of lift trucks will save thousands of dollars each month and significantly clean up the work environment – if a smart battery management system is implemented. Reducing the number of batteries needed from 600 to 500, for example can save \$20,000 per month while decreasing the amounts of acid and lead (a battery’s makeup) in the warehouse. According to OSHA, “implementing a proper battery maintenance program can increase the life of batteries and help protect employees. Battery failure could lead to mechanical breakdowns and possible accidents involving forklift operators and/or other personnel.”

It is difficult and incredibly time consuming for human beings to keep accurate data and properly assess a forklift battery’s performance or maintenance requirements. Some batteries perform better than others and batteries are not used in exactly the same way from one day to the next. For example, the truck may carry a heavier load, or be loaded differently. The variables are endless, which is why many companies are finding that battery management systems like EBatt from MTC of Temple, Texas are an absolute necessity.

Using the EBatt battery management system, the operator scans the barcode from each battery and truck, collects the hour

meter reading off the vehicle and enters this information into a relational database. Analysis is compiled and report wizards allow for immediate access to the information that can be displayed as an executive summary and/or saved into excel or a pdf. This detailed report card helps floor managers quickly make informed decisions and guarantees that profits won’t be squandered due to human error during battery replacement cycles. What’s more, the data lives on the company’s server – so history and reports are always available.

## Smart Battery Monitoring

On average, a smart battery monitoring system can reduce the three batteries needed per forklift to less than two (1.4 to 1.8). Also, since batteries have a high content of lead and acid, the fewer the better. A 2,000 lb battery consists of about 1,300 lbs of lead; the rest is acid. Forklifts require batteries ranging in size, from 2,000 to 6,000 lbs. That’s a lot of toxic material in the warehouse. Firms can significantly improve their environments when they reduce on-site lead and acid.



Management of the thousands of data points for a large organization is facilitated by funneling them into a relational database and then compiling them for analysis. Report wizards allow immediate access to the information in executive-summary fashion. In complete systems, reports can be viewed on-screen, printed out, exported to Excel or stored in PDF format.

## Tell it to the Man

A young engineer at a medical supply firm discovered he could save the company \$30,000 a month by squeezing one extra hour of service out of each battery used to power the forklift fleet. He also discovered that, due to management changes, the company wasn't utilizing the very battery management system his company had purchased the year before. Before the engineer pitched his solution to retain this system, he called for help. Randy Arnold, sales manager for MTC's EBatt division, was not surprised that an eager employee had discovered the crucial need to utilize the intelligent monitoring system.

"Many people are too busy to do the math. I'm dealing with someone who is young and enthusiastic and looking in new places, where others wouldn't," Arnold says.

Arnold says it is often difficult for workers on the floor to deliver important details to the corporate level of the company. It is better if upper management is able to see the benefits in the broader text of plant performance, then hand down the order. But it doesn't always work that way; and the battery itself is partly responsible.

"Batteries are a modern necessity. People have a broad understanding of them, but don't want to pay close attention to them," says Arnold.

Usage cycles for forklift batteries range from 4.5 hours to 15 hours, depending on truck type and what kind of load they're carrying. Without an intelligent battery monitoring system, the battery transaction process – pulling one battery and replacing it with a re-charged unit – can take 5 to 8 minutes and it is anybody's guess if the replacement is fully recharged.

The EBatt system handles the whole transaction so that bat-

tery changes are fast and reliable. It chooses the battery most ready to go into the truck, since it has monitored the recharge process, and it will give the operator the one that is most ready. It has captured the performance of the battery and enables the user to properly evaluate how a battery is being used in the truck.

It has also monitored the use in each truck, how much work the battery did in a given cycle and what charger was used. Data is collected in a printed report that becomes tangible evidence of the efficiency of the system.

Although Arnold concedes that some industries have difficulty quantifying the so-called "green benefit," he points out that, lead in batteries is 100 percent recyclable and that the law requires that these batteries are recycled and accounted for.

"When a company can eliminate between 15-20 batteries, they remove approximately 25,000 lbs of lead out of a building – and it's not coming back. If you can reduce the number of batteries, you reduce the overall electric consumption – and the amount of lead and acid in the facility. What's more, you can reduce your overall operating costs with less labor devoted to monitoring batteries and less batteries to purchase."

Arnold adds, "We'll give you the tools to improve what you're doing right and fix what you're doing wrong so you can have a safer and more efficient working environment."

For more information about motive power management, contact EBatt Systems at P.O. Box 1358; Temple, Texas 76503; 1 (254) 298-2900; toll free at (866) 953-2288 or visit <http://www.ebattsystems.com>.

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