



CASE

STUDY

Randy Taylor, Owner • Taylor's Forklift

"The amount of money I saved by regenerating batteries that were marked for the scrap pile paid for the Xtender in less than three months. My customers appreciate the capacity reports detailing the battery health down to the individual cell. I have yet to see any other machine on the market that can replicate the Xtender's capabilities and automation."

Randy Taylor, Owner

BACKGROUND

Taylor's Forklift Inc., located in Greenville, NC, provides top-level service to business owners and wholesalers across the nation. The experienced team of forklift repair technicians has worked on equipment of all shapes, sizes and brands. In 2017, Taylor's Forklift purchased the Xtender Battery Regenerator from Flight Systems Industrial Products with the intent to increase the longevity of its own batteries as well as create an additional revenue stream by providing a reconditioning battery service to their customers.

THE PROBLEM

The price of a forklift battery may range between \$4k-\$8k and can, often times, make up a large portion of the total cost of the piece of equipment. This can drastically affect margins when looking to sell a used piece of equipment or maintaining a rental fleet. While proper battery maintenance does play a role in the overall life of the battery, batteries inevitably become sulfated and begin to lose capacity. Taylor's Forklift was aware of this problem and sought an automated process to provide their customers that not only provided a detailed health analysis report but a truly effective solution for increasing capacity to extend battery life.



THE RESULTS

Thirty-three batteries were tracked to determine the effectiveness of increasing capacity using this streamlined process. It was guite evident that batteries with a starting capacity above 45% had an extremely high probability of achieving a final capacity above 80%. Batteries that did not achieve the 80% target capacity showed a significant issue with one or more cells within the battery. Recording cell voltages every three minutes, the BMS sensors allowed Taylor's Forklift to identify cell's that would need to be replaced. This created an opportunity to generate service revenue for this process with less than one man-hour per battery due to the automation of the Xtender. Batteries that previously would have been scrapped were now being regenerated and put back into service with the confidence of a battery meeting the customer's needs. The combination of service revenue and resale value of regenerated batteries allowed Taylor's Forklift to achieve a 100% ROI with the Xtender in less than three months.

Taylor's Forklift Capacity Gains



The starting capacity is a key factor in determining the probability of a final capacity exceeding the 80% target. Taylor's Forklift consistently saw substantial increases in capacity.



The MCS Report tracks battery voltage and current throughout discharge and charging phases.

Load Test Results (BMS)



The BMS report identifies individual cell voltage to pinpoint potential cell failures.