

## CASE STUDY

# Service Shop Optimization Drives 21 Basis Points of Profitability Improvement

## Client

Regional heavy equipment dealer, with seven satellite facilities that support sales and service.

## Challenge

Although the equipment dealer's revenues were growing, the service department was losing money. Customers were dissatisfied with long turnaround times, poor communication, and inaccurate quotes.

## Solution

The company embraced a service excellence program that included standardized repair and quotation processes, revamped work bays, SQDC boards, a daily management system and a detailed playbook to sustain forward progress. An embedded interim project manager helped to ensure success and sustainment.

## Results

- Trailing 12-month profit before tax percentage improved from negative double-digit performance to +8.2% in just seven months.
- Rework fell from 5.1% to 1.2% of sales in the component rebuild center
- Profit jumps \$24K per employee in one year

**Service shop network shifts from negative double-digit profitability to +8% in just seven months thanks to strong leadership engagement, employee participation, lean best practices, and management system.**

Surviving and thriving over the long haul doesn't happen by chance. To keep growing and maintain profitability companies have to change and adapt many times over the years in response to shifting market dynamics and internal business challenges.

Our client is a regional dealer of heavy equipment with a headquarters and seven satellite facilities that support sales and service. In 2018 revenues were growing and the company was profitable. But some key metrics were trending in the wrong direction. Profitability in the service department—typically a significant driver of earnings for any equipment dealer—had fallen into negative territory. Company leaders knew they had to act, and act quickly with TBM's support, to turn things around.

## Finally in the Black

Within seven months the company's main shop went from the negative profit situation to post an 8%-plus operating margin. Gains in a number of performance areas contributed to the financial improvement.

- Goodwill, the variance between required work inputs and the job quotes including parts and labor, declined from 2.3% to 0.2% of sales
- Rework as a percent of sales declined from 5.1% to 1.2%. The service department's effective billing rate, a measure of labor efficiency not previously tracked, improved dramatically as well

- Service turnaround times were reduced from 5 to 2.1 days, as measured by last labor to close (LLC), improving both cash flow and customer service levels.
- More accurate quoting also improved customer satisfaction.

The updated work procedures and management process changes were captured in a playbook that TBM helped disseminate to the service departments at the company's other locations.

### Prioritizing Pain Points

The turnaround effort began with a multi-week diagnostic (See Fig. 1) that included data collection and consultant site visits. Service team members and managers at all levels participated. The main facility has 25 technicians, and 10 in the rebuild shop, who are certified to perform the work by the equipment manufacturer.

The primary targets for improvement were service margins and equipment turnaround times. Long lead times were undercutting customers' equipment utilization levels and satisfaction. Business leaders asked TBM to evaluate potential solutions and lay out a holistic improvement plan.

TBM's work with clients typically begins with identifying and eliminating wasteful activity on the shop floor. In this case the first kaizen event focused upstream on the job quoting process. Goodwill, having to honor inaccurate quotes, was costing thousands of dollars on too many jobs.

Related to the need for a more accurate quoting process, there was an absence of defined work standards, including prescribed steps for repetitive tasks and time allotments based on past experience. A database of work standards—which the service team began to compile—would serve as a reference point when building quotes and repair plans for complex jobs as well as measuring how efficiently repairs were made.

For example, every year the service team might perform 30 transmission rebuilds. With that level of repetition, it's a fairly straightforward process develop a detailed plan for the work content and sequence, and the tools and parts that will be required.

Productivity was another issue, in part because of a high number of new service techs that the company had hired. Lead technicians' time was not being captured accurately, which meant it wasn't billed at the appropriate rates. New productivity expectations included 50% billable hours for leads and 85% for technicians, with the remainder of the time allocated for training and development.

FIGURE 1

Key Elements of Service Shop Network Optimization Engagement			
 Diagnostic	 Organization Structure & Metrics	 Quotation Process	 Quality Repairs
Shift profitability to the black	Improve main shop billable rates	Improve quote compliance and quote accuracy	Reduce rework and goodwill
<ul style="list-style-type: none"> <li>• Main shop</li> <li>• Component rebuild center                             <ul style="list-style-type: none"> <li>• Organizational Structure</li> <li>• Shop floor metrics</li> </ul> </li> <li>• High cost of quality: parts and warranty costs</li> <li>• Labor productivity                             <ul style="list-style-type: none"> <li>• Shop layout</li> <li>• Parts layout</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Tech-to-supervisor ratio too high</li> <li>• Roles &amp; responsibilities not defined</li> <li>• Many junior techs without proper oversight</li> <li>• Shop floor metrics neither defined nor measured</li> </ul>	<ul style="list-style-type: none"> <li>• Working on jobs without a quote leading to disputes</li> <li>• Not using standard quotes</li> <li>• Multiple people quoting with a lot of variation</li> <li>• Overruns in labor and parts</li> </ul>	<ul style="list-style-type: none"> <li>• Warranty cost out of line</li> <li>• Component repair center assembly done in a disassembly area</li> <li>• Junior techs doing complex repairs without technical skill</li> <li>• No checks in place to make sure that repair was proceeding with quality</li> </ul>



## Service Optimization Solutions

The service business performs some preventive maintenance work but mostly focuses on significant repairs and rebuilds. For those familiar with the principles, deploying lean in a heavy equipment service operation is similar to any maintenance application. Key metrics include time to repair, meantime to repair, accuracy of repairs, and so on. Waste elimination opportunities fall into the familiar eight categories.

Performance boards displaying current work status similar to hour-by-hour charts and key performance metrics—safety, quality, delivery and cost—are useful in this type of operation as well. In this instance implementing the boards improved transparency and accelerated the escalation process.

When a major piece of equipment came in for a complete rebuild, what had been happening, particularly with less experienced technicians, is that they'd get approval on the initial quote and get to work. Then, two or three days into the job, they would encounter additional issues and soon be in over their heads, but the situation wasn't being communicated up the organization, let alone to the customer.

In conjunction with the repair standards, posting regular updates against key milestones on the performance boards presents a visual indicator of whether or not technicians are on track with a job, or falling behind. Managers and supervisors check in regularly, which reinforces compliance and escalates problems when they arise.

The daily reporting and check-ins are part of a new management system that follows a preset daily rhythm, speeding up problem solving and holding people accountable.

One of the key factors that made this engagement so effective and successful was leadership's involvement. Company leaders participated in the initial diagnostic and subsequent kaizen events. They continually asked questions to understand the proposed changes, and fully supported the necessary staff training and development, which required a significant amount of time.

## Dispersing Best Practices

In addition to establishing work standards for repairs, TBM helped build a service excellence playbook. Based on the company's specific needs and workflows, it details how work processes should be organized and managed for maximum efficiency.

The service excellence digital playbook covers everything from creating accurate quotes and performance board setup to how the work bays should be setup and organized, including specific tools so technicians don't have to run around looking for them. It defines key metrics and a performance dashboard.

A perpetual work in process as needs change and ideas arise, the playbook serves several purposes. It helps sustain performance gains by serving as a future reference point should setup or workflows begin to deviate from the prescribed practices and perform less efficiently. It offers guidelines for less experienced technicians.

And it has served as a foundation for rolling out the service process improvements at the company's seven other branch locations.

TBM performed diagnostics at four branch locations to establish a performance baseline and help prioritize opportunities. They used internal resources to roll out the service excellence practices piloted at the main facility. Personnel from those sites also participated in some of the kaizen events and were able to see the new processes in action.

To review progress and highlight opportunities, TBM performed quarterly audits of each branch for a year. This included one-on-one coaching of the branch managers and supervisors.

The process improvements and financial turnaround, coupled with the leadership engagement and ongoing forward progress, demonstrate why the company was recognized in 2021 by Deloitte as one of the best managed private companies that will thrive for many more decades to come.

## Speed wins every time.

TBM specializes in operations and supply chain consulting for manufacturers and distributors. We push the pedal down in your operations to make you more agile and help you accelerate business performance 3–5x faster than your peers.

