



Case Study: Mercury Marine - Propelling Solutions in Asset Management

.....user case study



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Think about it. How did marine propulsion evolve? Thousands of years ago, the most efficient way for humans to move a vessel through the water was simply to push it or pull it. Next came the oar. Although the oar provided better control, the propulsion depended solely on the strength of the operator with some help, of course, from Mother Nature. Not until the late 1800's was the first motor boat made. All of these methods of propulsion shared one common thread. Preventive maintenance fuels peak performance results. Humans had to eat nutritional foods to stay strong and healthy; the oar had to be checked for splits and cracks to determine repair or replacement; and the motor...well, there are the usual oil changes and tune-ups that are necessary for top-notch performance.

Mercury Marine, a leading provider of marine propulsion systems, for years has taken pride in offering their customers exciting and fulfilling power boat experiences on the water. Since the company was founded in 1939, Mercury has consistently emphasized quality, performance, innovation and reliability. In the world of manufacturing in order to maintain these levels of excellence, machines and production lines must run at peak performance. But, the fact is that any die cast, machining and assembly manufacturer experiences downtime. Downtime costs can be significant. In fact, production downtime directly affects the bottom line, but how much?

Interrupted production at Mercury Marine's Stillwater, OK plant "rocked the boat" and caused waves of concern from the Facility Maintenance Manager, Bart Foster, and Maintenance Planner/Scheduler, Willis Moore. With over 50 years combined experience in facilities maintenance at Mercury, Foster and Moore were well aware of the challenges faced in a manufacturing envi-



Mercury Marine
Stillwater, OK

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ronment. In 2005, Foster began to strategically analyze the production process. "How do we reduce downtime, keep producing product, and manage our assets?" asked Foster. "How do we know the true cost of labor and parts against each asset?"

It all started with a system to track work order data on assets or anything used for production purposes such as CNC and die cast machines, conveyor systems, and even welders. Mercury's current business management system integrated with their internal "homegrown" system provided a method to track work orders and crib withdrawals. With this "homegrown" system, any employee could enter a work order against a 10-digit asset number. The system would accept any combination of numbers or characters that that person would choose to enter. It would even accept "sjf%&awjfq" as an asset number. To create an accurate report, one would have to review any and all combinations of an asset number. While this system provided a process to manage the crib data on the maintenance side of production, there were other challenges that made the system incomplete. Challenges such as:

- o Time wasted deciphering reports rather than repairing the equipment
- o Downtime as a result of unrepaired equipment
- o Not user-friendly
- o Reacting rather than being proactive

Not only did Mercury experience downtime on the maintenance side of production, but they also experienced downtime in the operations side of production. A scenario like this was not uncommon. An employee needs a pair of gloves and some shop supplies. He/she goes to the main tool crib,

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gets at the end of a lengthy line of employees, and waits until it's his turn at the window. It's the second time during his shift that he has made this 10-minute trip for the some of the same identical items. In a manufacturing facility, it's not uncommon for these types of supplies to go missing or just get lost. All the while this takes place production is interrupted due to inefficient workflow processes.

Being the forward-thinking company that they are, Mercury soon discovered that this inventory tracking method affected their production level. They needed an inventory management solution that would have a dual purpose. One is to accurately track tools, MRO, and indirect materials, and secondly have a preventive maintenance module to work seamlessly with the inventory management of parts and supplies. They looked to WinWare Inc, the makers of CribMaster for a solution. Through the use of bar codes and scanners, this indirect material tracking software can help to optimize work flow to keep production running at peak efficiency. This robust and feature-rich software drives a full suite of point-of-use tool dispensing devices. "Point-of-use" simply means the devices are placed in proximity to the production area to allow easy and immediate access to tools and other items.



Mercury started out with several unique point-of-use devices including carousels, electronic lockers, and electronic MRO storage cabinets. These software-driven devices are used in combination with other point-of-use solutions which links directly back to the software database. Each one is simple to operate. An authorized employee walks up to the device and scans his/her ID badge which gives access to dispense the approved quantity. The soft-

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ware tracks usage and automates replenishment therefore eliminating stock-outs. With inventory available in convenient locations, there is less time spent waiting in line at the tool crib. By improving the work flow process, downtime was drastically reduced.

The second part of the dual purpose solution was the implementation of the CribMaster Preventive Maintenance (PM) add-on module. This module provided an enhanced user-friendly method to accurately track historical data on all labor and repair costs against each asset. "We now have an easy tool to run reports on asset maintenance data," boasts Moore. Usage, labor, and tracking reports give the engineers data to evaluate and determine the feasibility of replacement versus continued repair. With some equipment costing up to a million dollars each, having accurate maintenance histories supports the appropriation decisions on these assets. These solid decisions are backed by real time, accurate, and predictable data.

Point-of-use devices, inventory management software, and preventive maintenance software all ties together for one powerful system for asset and inventory management. A system that provides proven results such as greater cost savings, reduced downtime, and improved work flow processes. These results keep Mercury Marine producing quality marine propulsion systems.

The evolution of marine propulsion has come a long way from humans pushing and pulling a vessel, to paddling with an oar, and on to the 1800's motor boat. Likewise, the evolution of the technology in managing indirect materials and asset management has made huge advancements through the years. Think about it. Where would propulsion be without the oar, and where would preventive maintenance be without CribMaster? Just ask Mercury Marine.