Case Study: BorgWarner

BorgWarner has been an automotive pioneer since 1928 and is headquartered in Auburn Hills, Michigan. They employ 17,800 people in 17 countries. In 2004, they had $4 billion combined worldwide sales, with the largest sales market being the Americas. Their products are key technologies for engines and drivetrains.

Pictured here is the BorgWarner Torque Transfer Systems plant in Seneca, SC provides OEM plants with AWD (all-wheel-drive) and 4WD (4-wheel-drive) components.

The Move to iMaint

The BorgWarner Seneca plant began using PMC for maintenance in 1997. After using and enjoying this product, they decided to upgrade to iMaint in 2004 to get the benefits of the SQL Server database and the iMaint Mobile add-on for PDAs.

"We have self-directed work teams and no supervisors per se, so there was no resistance from management to the idea of using PDAs, and very little resistance from our staff," explains Mike Oakley, Maintenance Manager in Seneca, SC.

Now, the maintenance department relies on iMaint Mobile, with each staff member keeping a PDA close by during the day. The maintenance department accounts for 36 of the 225 employees at the Seneca Plant. They're responsible for maintenance of the building, grounds and all processing equipment in the 240,000 square foot plant, including capital projects and equipment installations. The maintenance department is staffed to cover the plant 24/7; however, the company's goal is to limit overtime as much as possible.

The Move to Maintenance Efficiency

Mike Oakley is a visionary. Once he saw how iMaint Mobile could function at his plant, he envisioned moving from "doing maintenance" to "performing maintenance excellently." With the support of his self-directed work teams, he needed to plan the best way to fully implement iMaint so that his staff could perform their individual craft to the best of their ability.

Oakley first looked at how to spread his limited resources to meet the maintenance demand. Each of Oakley's maintenance staff received his own PDA, 2-way radio and a 3-wheel bike to carry tools to various locations. "Using iMaint Mobile on our PDAs has not only increased our cost savings, but it has also added credibility to our maintenance work, increased our accuracy and improved efficiency."

"We use our PDAs for all iMaint functions."

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Not only was each craftsperson able to be dispatched to the correct location, with the necessary tools in his bike, but he knew what to expect on a daily basis. Oakley explained "Before we implemented a CMMS system, we had all of the typical problems – lost work orders, lost time while each tradesperson interpreted the handwriting of the person who did the previous step, incorrect interpretations could lead to missed steps in a procedure, and the missed steps meant an incomplete audit trail."

With the maintenance department handling 1500 to 1800 work orders a month, this process was unacceptable to Oakley. Implementing a CMMS was only the first step to efficiency. He quickly saw the value of the iMaint Mobile add-on module. "Using Mobile allows the maintenance staff to have the information needed to do the job, to have the needed information about the specific piece of equipment, and allows them to locate the necessary parts – all in the palm of their hand," explains Oakley.

"I would estimate that using PDAs for our staff saves five hours per person per week – and that's just in locating parts information!"

The Mobile Advantage

"We found that once our technicians had PDAs, they became valuable in many ways. Work orders are assigned to individuals, so they can view and complete their work orders on the PDA. Using this system, the PDA is also used for time reporting, saving the effort of repeated data entry.

"We have an integrated third party supplier for parts and have replicated their database. This database is accessed via the PDA to make the search for parts easier. If a part is not in stock, the part file includes the vendor, and the technician can then locate the vendor online to determine the part availability," explains Oakley.

Using the PDA, each technician knows what every other technician has done on a specific piece of equipment. When answering a maintenance call, the PDA shows procedures, parts, inventory, and reports that provide a full picture of the equipment in the palm of their hand.

"This investment in technology has meant less repetitive data entry for seven employees, while doubling the efficiency of those who use the Mobile system," explains Oakley. "I would estimate that using PDAs for our staff saves five hours per person per week – and that's just in locating parts information!"

The Move to Maintenance Excellence

"Once we got our PDAs, we began using them for all iMaint functions. Currently we are moving our ISO procedures from other systems to iMaint. Quality management systems like QS 9000/2002 and ISO 14001 require specific procedures and the associated documentation that you followed those procedures. This fits automatically with work orders in iMaint.

"If a work order is scheduled or recurring and all of the correct steps are included, then when the work order is completed, you have the documentation you need for ISO. For example, at our plant, we are required to watch and monitor the unloading of bulk oils. We have all of the needed steps and precautions listed on the work order. When the truck arrives, the assigned technician completes the steps, closes the work order and we have an audit trail.

"If it happens that the regular technician who handles this is out that day, another technician can step in and read the work order, follow the steps and complete the job without any additional supervision, because everything is clearly outlined and documented with iMaint," concludes Oakley.