

BORGWARNER TRANSMISSION SYSTEMS

STRATEGIC INSOURCING OF MAINTENANCE, REPAIR, AND OPERATIONS INVENTORY

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BorgWarner is a global leader in powertrain solutions, with an international presence of over 20,000 employees in 19 countries. *BorgWarner Transmission Systems* is a division of BorgWarner, specializing in OEM transmission components including friction plates, friction clutches, and transmission bands. At the Bellwood and Frankfort, IL and Juarez, Mexico plants, all maintenance, repair, and operations (MRO) materials were managed by a third-party who charged BorgWarner a markup on all purchases and a fee for labor. The combined inventory of the three plants is valued at between \$4-5 million. Because the third-party offered little reporting or analysis that could be used to drive down spending, BorgWarner decided to start insourcing and manage MRO inventory internally. Management believed that by eliminating the mark-ups and increasing visibility, up to \$350,000 of near-term annual savings was possible. However, for insourcing to occur, all MRO data and processes first had to be integrated into BorgWarner's SAP system, including procurement, stocking, receiving, requesting, and issuing. In addition, any current processes unable to be replicated in SAP had to be resolved. The Tauber team was enlisted to ensure that Bellwood, Frankfort, and Juarez were prepared to go live from an IT and procedural perspective by mid-August.

After initial investigation, the Tauber team discovered ineffective search features in SAP that could cause significant increases in MRO request processing time. In addition, the team discovered an ad-hoc approach to deciding minimum/maximum inventory levels, as well as poor visibility regarding maintenance costs of specific machines. Therefore, the team implemented an Excel VBA search tool to mitigate the SAP limitations, designed an Excel Min/Max inventory model to reduce MRO inventory costs, and created the business case for SAP development allowing visibility of machine-specific MRO spending. All of these deliverables were in addition to the necessary data cleansing, mapping, validation, and testing required to convert the MRO data into SAP. Lastly, a detailed usage analysis was provided to help the incoming sourcing specialist realize the expected mark-up savings.

The Tauber team left BorgWarner go-live ready in August and with the tools necessary to achieve procurement and inventory savings of about \$275,000 and \$265,000 per year, respectively. In addition, the search tool has the potential to save between 475-1430 hours per year of processing time for MRO requests. With the future development of machine-specific visibility included, the overall procurement, inventory, and visibility-related savings are expected to exceed initial expectations and reach over \$600,000 per year.