JCC
Fuzhou, China

QAD
Our Passion. Your Advantage.

Performance Made Lean: Automotive Supplier Fulfills MMOG/LE Requirements and Achieves Ford Q1 Status Using QAD Technology

The Company: A Piston Manufacturer with a World-Class Roster of Customers

Located in Fuzhou, China, JCC manufactures pistons and other aluminum-cast parts for cars, motorcycles, air compressors and diesel and outboard engines. Its products can be found in cars and motorcycles produced by some of the world's largest manufacturers, including Ford Motor Company, DaimlerChrysler, Mitsubishi Motors, Citroen, Yamaha, Kawasaki, Suzuki and Honda. JCC is both an OEM and an aftermarket supplier.

Even as the company has grown, it has always remained focused on product quality. In 1996, JCC obtained an ISO 9001 quality system certification, and, in 1999, became the first Chinese piston manufacturer to receive a QS9000 quality system certification. In 2002, the company became the first automobile parts manufacturer in China to be granted certification to ISO/TS 16949; then, in 2004, it was certified to ISO/TS 16949:2002, which has been accepted as the equivalent of existing American, German, French and Italian automotive quality systems standards. The company was also certified to ISO 14001:1996 in 2005.

The Challenge: Winning Recognition as a Top-Tier Supplier

While JCC had been recognized for its focus on manufacturing quality in a number of ways, its customers were increasingly requiring more direct, automated communications between their production systems and those owned by JCC. In addition, the company had its eye on another target: Ford Q1 status. Recognized throughout the automotive industry as a standard of excellence, the Ford Q1 program has stringent requirements that Ford's suppliers must prove they can live up to. While challenging to achieve, Q1 status means a company has demonstrated excellence in its operations and is focused on continuous quality and delivery improvements. It also elevates the company to the status of a Ford preferred supplier and can be used as a promotional tool with which the company can market itself to other automobile manufacturers, who find Q1 status to be a sign of a qualified supplier.

"As a long-distance supplier, we understood that this meant they were asking for us to perform as flawlessly as possible," says Paul Cai, supervisor of management department, JCC.

However, as part of achieving Q1 status, JCC needed to implement the global Materials Management Operations Guideline/Logistics Evaluation (MMOG/LE). Introduced in 2004 by the Automotive Industry Action Group (AIAG) and its European counterpart, Odette International Limited, MMOG/LE is a self-assessment process designed to help automotive suppliers continually improve their material planning and logistics processes. It contains recommended business practices for materials management, a self-assessment tool to identify the strengths and weaknesses of materials management systems, and a weighted score sheet to assist in prioritizing improvement efforts within an organization. While not all JCC customers require MMOG/LE compliance, many were asking for very similar requirements; therefore, the process of implementing MMOG/LE would help JCC become a better supplier to a number of its customers.

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Even though JCC had already put in place a number of processes to improve its performance, implementing MMOG/LE would require the company to further improve its enterprise resource planning (ERP) systems. In particular, JCC wanted to automate its production planning and logistics processes.

The company also needed to improve its electronic data interchange (EDI) capabilities. Like many of JCC's other automotive customers, Ford requires its Tier 1 suppliers to use EDI to exchange production information.

Since QAD Enterprise Applications supported each point of the MMOG/LE assessment, it could help JCC with the assessment process.

Unfortunately, because JCC did not have an EDI solution that was integrated with its ERP system, the company instead had to manually input data. In order to meet the assessment's requirements—and Ford's—it would need to implement an EDI solution that was integrated with its ERP system in order to minimize the need for human interaction and improve efficiencies.

The Solution: Unity between Customer Requirements and Production Planning

Even before starting the MMOG/LE assessment process, JCC had realized it needed to upgrade its ERP systems. At that point, the company had already implemented two different software solutions. Although both of these systems represented a vast improvement over the days in which JCC would rely on e-mail, phone calls and video conferences to exchange information with customers and then enter data manually, neither of them delivered what JCC was looking for—a fully automated solution that would integrate its customers' requirements with internal production planning.

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In February 2004, JCC implemented QAD Enterprise Applications (version MFG/PRO eB2). The company's initial focus was on improving certain processes, such as those associated with procurement. But as JCC began using the software, it realized that since QAD Enterprise Applications supported each point of the MMOG/LE assessment, it also could help JCC with the assessment process, which the company had kicked off in the second half of 2005.

Then, in November 2005, JCC took the next step by integrating EDI functionality with its new ERP system. This helped the company meet the assessment's requirement to be able to communicate with Ford without human intervention.

"We integrated our EDI and ERP capabilities in order to execute global MMOG/LE best practices for tasks such as material release, shipping schedule and advance ship notice," Cai says.

The Benefits: Meeting MMOG/LE Requirements and Achieving Ford Q1 Status

For 10 months, a team of seven JCC employees worked through the MMOG/LE assessment process. After completing the internal assessment, the team then collaborated with Ford logistics engineers, who visited the company three times over a period of four months. Using information generated from the self assessment and feedback from Ford, JCC was able to make the necessary improvements that led it to achieve Ford Q1 status in 2006.

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The improvements JCC made during the process were easily seen in the customer satisfaction scores Ford regularly gives to its suppliers. After implementing MMOG/LE, JCC raised its Ford Supplier Improvement Metrics (SIM) rating by 20 percent. The company also improved

its delivery performance. Before starting the assessment, JCC received an average of 91 points according to Ford's delivery ratings. Since then, the company has been able to achieve a score of 100—and continues to do so.

Becoming a Ford Tier 1 supplier has a number of benefits, says Cai. "As a result of achieving Ford's Q1 status, we have won new business. We now have a competitive advantage."

In addition, JCC now no longer has to ship to distributors who would then check product quality and send the company's products to Ford. As a Tier 1 supplier, JCC ships its products directly to Ford facilities in China, North America and South America.

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Achieving Ford Q1 status and implementing the MMOG/LE assessment was not only the result of JCC's hard work, but also its investment in an end-to-end integrated ERP system. With the QAD solution, JCC has automated how customer demand is translated into production planning and even supplier requirements.

In the past, JCC would estimate demand based on past experiences. Now the company not only knows exactly what its customers need, but also can use its QAD software to automatically create scheduling plans based on its customers' EDI transmissions.

"By calculating demand accurately, we've been able to reduce our raw materials inventory by 50 percent and our finished goods inventory by nearly 50 percent. We've also lowered our shipping costs by cutting back on the amount of rush shipments we have to make by air in order to meet unexpected demand. We can now allocate materials and ship products in a timely fashion," says Cai.

JCC has also leveraged the QAD system to automate processes that were not covered by the MMOG/LE assessment. For example, instead of manually updating work orders as it used to do when a customer's requirements changed, JCC now enters the changes into the QAD system, which then cascades the updated data throughout all the related applications.

The use of technology and compliance with the MMOG/LE assessment has helped JCC improve ordering and production efficiencies in other ways as well.

"For example, quotations used to take three days to prepare by hand. Now quotes are completed in half a day with customer data from our ERP system," says Cai.

Highlights

Company

Company Name	JCC
Industry	**Automotive**
Products	Aluminum alloy pistons and casting parts for automobiles, motor air compressors, diesel and outboard engines

Solutions

QAD Solutions	QAD Enterprise Applications (version MFG/PRO eB2)
Hardware	IBM eServer xSeries 366
Languages	Chinese and English
Number of Sites	1
Time to Benefit	**Immediate**
Environment	**QAD ERP (not including HR)**

Results

- Achieved Ford Q1 status and became a Ford Tier 1 supplier
- Met MMOG/LE requirements
- Reduced inventory by 50 percent
- Lowered shipping costs
- Increased Ford SIM rating for quality and delivery by 20%
- Improved Ford delivery rating from an average of 91 to 100
- Implemented EDI system that eliminates manual intervention
- Attracted new customers interested in working with a Tier 1 supplier

The Future: Improving Visibility into Production and Performance

Now that JCC has used the QAD software to achieve Ford Q1 status, it is looking at other standards it can obtain. It also plans on extending its investment in its ERP systems by implementing other integrated functionality to support human resources, customer relationship management, manufacturing execution, product lifecycle management and additional supply chain management activities.

The reason why JCC wants to continue improving its systems is simple, says Cai. "Information is important to the future. Technology investments are important, and they pay off. QAD has helped us improve efficiencies and productivity and we've seen firsthand how it can help users attract new customers and improve how they manage their businesses."

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