CASE STUDY | Aerospace Manufacturer Achieves Lean Production Goals

Summary

Customer
Large aerospace engine manufacturer

Business Need
• Reduce supplier management costs
• Eliminate nonessential production activities

Solution
Supply chain consolidation and integration

Results
• Local stocking facility, consignment program
• Dedicated sales, service, operations and quality teams
• Deferred asset ownership

Benefits
• Doubled the number of parts on contract with Anixter
• Reduced existing supplier base
• Implemented pull system, scheduling agreements and spare-part support

Customer Challenge
A leading aerospace engine manufacturer needed new ways to revitalize its growth while maintaining its commitment to quality. The strategy to eliminate nonessential activities by shifting design engineering costs to subcontractors and OEMs resulted in a supplier base that was larger than the industry average. As the manufacturer continued to shift its assembly operations further upstream, the corresponding supplier management costs also continued to rise. Instead of a streamlined supply chain that consolidated the OEM supplier base into a single-source channel of piece-parts, the manufacturer needed to deal with each supplier individually, creating a jumble of purchase orders, invoices, delivery schedules and product specifications.

Building on a long-standing relationship, the manufacturer turned to Anixter to help restructure and manage its supplier relationships. The manufacturer’s goals were to maximize delegated supplier services, maintain long-term cost controls and achieve the highest possible productivity while maintaining superior quality. Anixter conducted a full analysis of the company’s supply chain and found that there was a largely untapped opportunity to consolidate the supply of assembly hardware and components. Accomplishing these goals required a strong alignment between Anixter, the aerospace engine manufacturer and the supplier base to plan, execute and communicate critical information up and down the supply chain.

Program Scope
The manufacturer was sourcing more than 1,200 part numbers directly from the suppliers, many of which were proprietary fasteners. After conducting a thorough cost/benefit analysis, Anixter found that the manufacturer could narrow its supply chain by using only Tier 1 suppliers. The analysis also demonstrated that by shifting nonessential production activities up the supply chain, Anixter could oversee supplier quality and production capacity to maintain long-term controls and achieve the highest possible productivity.

On a yearly basis, Anixter sources more than 90,000 part numbers from 2,000 suppliers worldwide for its aerospace customers. With such an extensive product portfolio, Anixter understands the value that positive supplier management relationships can have on a manufacturer’s production schedule. Before the critical final negotiations with the aerospace engine manufacturer, Anixter established good working relationships with each new supplier.
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Supply Chain Integration Benefits:
Anixter’s Supply Chain Services help customers lower their total cost of ownership, improve productivity and scale to meet production demands. With a wide range of solutions, Anixter is the perfect supply chain partner. By working with Anixter, the customer was able to achieve the following goals:

- A consolidated supply channel that reduced the number and complexity of suppliers by establishing a single process
- Delegated supplier management, which transferred responsibility for quality, cost and performance for sub-tier suppliers
- Lower overhead costs when compared to multiple original equipment manufacturers
- Additional supplier tiering that leveraged the infrastructure already in place with a program that is scalable and where suppliers can be integrated one at a time or many at a time
- Quality system improvements that reduced cost of quality and consistency throughout a variety of product segments
- A forward stocking location that positioned inventory and support where needed
- Pipeline maintenance structures that fit to the customer’s needs
- A customized distribution plan to prevent inventory shortages
- Reduced shortages through the redeployment of resources

Anixter Solution
After demonstrating the value of restructuring the supply chain to the manufacturer, Anixter assumed control of the existing suppliers and their contracted items. As an industry-leading logistics and supply chain services provider, Anixter is an expert in bid-to-buy, kanban, JIT, VMI, lean and supply chain management concepts. Any current or projected shortfalls were identified, and each transition was mapped out in advance, starting with supplier approval and then part review and finally gap analysis, which matched available stock and current lead times with forecasted demands. Understanding the intricacies of integrating current and new suppliers or commodities was vital to the completion of customer requirements and an uninterrupted flow of necessary products.

To bring materials closer to the manufacturer’s location, Anixter established a local stocking facility, which provided an increased level of production support. With dedicated sales, service, operations and quality teams, Anixter maintained a fully stocked pipeline and oversaw supplier quality, production capacity and overall performance to anticipate the manufacturer’s needs. Anixter deferred asset ownership for the customer through a consignment program and provided assistance with product and process development through joint improvement activities.

Program Results
With the supply chain integration practices and local stocking facility provided by Anixter, the manufacturer successfully reduced its supplier base and supplier management costs while maintaining the same performance and quality. The consolidated supply chain reduced the number and complexity of suppliers and lowered overhead costs when compared to multiple original equipment manufacturers. The additional supplier tiering provided by Anixter leveraged the existing infrastructure with a scalable program that could easily add or subtract suppliers, which helped to prevent inventory shortages.

Throughout the process, Anixter managed inventory by sharing information through the customer’s online portal, which allowed Anixter to forecast deliveries and customize the scalable supply program based upon the customer’s replenishment requirements. This included a pull system that replenished materials when the inventory reached a minimum on-hand quantity, scheduling agreements released through MRP according to planned demands and spare-part support. Regardless of the replenishment, Anixter inventoried all parts with adequate safety stock to maintain supply at a moment’s notice. With a streamlined channel for the bulk of its piece-parts, the manufacturer could now focus more on its manufacturing activities rather than diverting energies to manage purchase orders, invoices and shipping schedules.

As the relationship has grown, so has Anixter’s investment and long-term commitment to the manufacturer, which has more than doubled the number of parts on contract. By assigning an on-site business representative, local quality staff and a dedicated corporate program manager, Anixter continues to support and assess the manufacturer’s business on a daily basis to ensure the program is running at its highest possible level. Anixter is also now implementing a DPU (defects per unit) system to send parts directly to the customer’s production line, saving additional time and costs. With a tightly integrated supply chain, the customer is looking to Anixter for other ways to further reduce costs and improve performance.