Subaru Defies the Directed Parts Industry Status Quo

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At Subaru of New England, collaborative inventory management partnerships yield impressive inventory efficiency gains and suggest a new industry standard for automotive manufacturers.

Retail inventory management is what many automotive manufacturers call their attempt at vendor-managed inventory. As with all inventory-dependent industries, wrestling with inventories and balances is a huge battle with every original equipment manufacturer building and supporting multiple vehicle models, each with thousands of individual parts. Many automotive manufacturers have tried to control their dealers' replacement parts stock. While some have had limited success, we think Subaru of New England has built the better mousetrap. This cutting-edge business model for controlling dealer parts inventories has reinvented the way new-car dealers look at inventory and their supply chain.

Subaru of New England is an independent distributor solely responsible for supplying dealers in the six New England states with vehicles, accessories, replacement parts, sales and marketing support and training. There are 62 franchised dealers accounting for just over 10 percent of the total Subaru dealer body in the United States. Subaru operates a parts distribution center of about 60,000 square feet in Norwood, Mass.

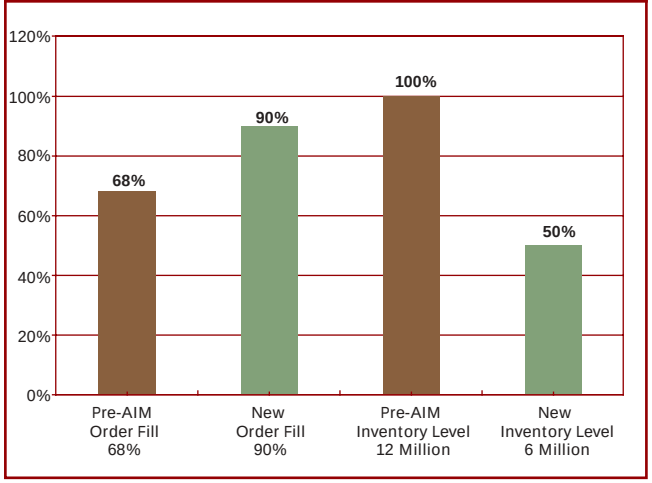
After 30 years in business, Subaru's outdated methods of inventory planning were creating tremendous problems. Inventory was growing at an uncomfortable pace to overcome a huge order fill problem. Inventory turns were at an all-time low of less than two times annually, and same-day order fill was less than 70 percent. The results of these poor service levels were felt both inside the company and out. Subaru's ownership and executive management replaced underperforming middle-level managers in an attempt to improve the situation. Retail dealers were unhappy and starting to look to other sources for service parts. Retail customers were upset over parts delays.

The primary cause of the inventory situation was initially determined to be the planning processes. Inventory planning was speculative at best, based on information provided to planners on nationwide purchases from Subaru of America. There was no visibility down the distribution chain, and actual sales demand was never offset by return history.

Subaru's upper management decided to investigate better planning processes and found an emerging industry with several software solutions available for planning replacement parts inventory. After reviewing many solutions such as Xelus, Baxter, Manugistics and others, Subaru partnered with Servigistics in 1999. Servigistics was a relatively new company whose flexibility and efforts to grow fit well with Subaru of New England.

Subaru also chose to upgrade its business software to more modern versions, first utilizing Solomon, then upgrading to Navision (now Great Plains/Microsoft). The upgrade to new software solutions allowed Subaru and its parts staff to implement changes in forecasting and ordering practices that yielded improvements in not only stock levels, but also in warehouse process improvements and efficiency.

Figure 1 Effects of Direct Parts Inventory on Central Location



The initial results of the changes at the central location were admirable. Inventory levels were cut by over 50 percent and order fill increased almost 20 points. Accordingly, service levels to dealers created more sales opportunity at the dealer level and added improved dealer and retail customer satisfaction.

The process changes and subsequent results were notable; however, there proved to be a deeper problem. Central inventory levels still did not meet expectations and order fill was better, but not a

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benchmark. After some research, the root causes blocking further gains were identified.

Many of the dealer inventory levels were a disaster. The average dealer had too many fast-moving parts because they feared running out. They also shied away from stocking slower movers for fear of building excess inventory obsolescence due to limited return policies. Subaru, like most of their peers in the industry, allowed only a small portion of purchases to be returned (4 percent).

Dealers also had a huge problem with respect to special orders or expedited parts. Since they did not stock the slow movers, they had to special order those parts, sometimes incurring extra cost and freight. This action added additional handling costs in ordering process, customer tracking and repeat visits by the service customer. In some cases parts obsolescence increased when special-ordered parts were either not needed or never installed.

In addition to these problems, the average Subaru dealer is like any other auto dealer: they employ parts managers who usually have no formal education or training because very little training exists.

In addition to undertrained personnel and poor process at the dealer level, Subaru contributed to the problem due to its own corporate culture and sales programs. The automotive industry is a business driven by production. The mentality is "if we build it, it will sell." And if it doesn't, we'll promote it and rebate it until it does. If we get the dealer to carry more cars, they will have to sell more cars. Similarly, if we get the dealer to carry more parts, they will have to sell more parts. This philosophy carries over into all departments, and sales programs, incentives, pay plans and bonuses are generally aimed at the manufacturer selling more to the dealer.

Dealers are often ranked not by their retail sales of parts, but rather by their purchases from the manufacturer. This process inspired programs that rewarded dealer parts managers for buying more parts. Rebates, discounts, prizes and awards all enticed the parts manager to buy extra inventory, even when it was not needed. Yet, once a dealer bought extra parts to hit its objective and earn its reward, excess inventory levels would cause the dealer to reduce purchases in subsequent months.

The problem escalated because when dealer principals reviewed their month-end financial statements and observed the parts inventory, they would tell their parts managers to cut down purchases, so slower-moving parts would end up in a stock-out situation. And as time went by, the shut-down time would come sooner and sooner each month because Subaru field staff and management were doing such a good job in creating and promoting programs that enticed dealers' parts managers to make poor purchasing decisions. These many problems were compounded by the fact that Subaru had parts competition from two sources. One source was gray-market importing of genuine Subaru parts by non-Subaru distribution companies. The other source was aftermarket parts availability by independent warehouse distributors and jobbers like NAPA, CARQUEST, AutoZone and others.

Other excess inventory problems at the dealer level came from what I termed the evil three: speculation, greed and emotion. The first evil, speculation, is when a parts manager sells two or three of a part number in a short time span and falsely assumes that part is now very popular, so he orders 10 or more. The trouble is, often the spike is incidental and the dealer may never sell all of the excess purchased. The second evil, greed, is when a parts manager sees what he feels is a quick opportunity. Sometimes a large demand can be predicted such as when a recall is announced. A specified number of units are required but are in limited availability. A parts manager may find out about this and order all the available supply, effectively hoarding the inventory, assuming that other dealers will then be forced to buy from this dealer at a premium. Problems for the hoarding dealer arise when the manufacturer is able to replenish its parts production before the dealer sells out or when the other dealers elect not to buy from the greedy dealer and instead wait for availability to increase. The third evil, emotion, arises due to internal dealer personnel conflicts. A service manager may demand the parts manager stock a particular part to save the service department from either lost sales or deferred repair jobs because the parts aren't in. Even if actual demand is less than perceived by the service department, to avoid the conflict, the parts manager may carry excess inventory and then get stuck with the extra as obsolescence approaches.

The best way to overcome these obstacles is to help control the dealers' inventory by use of some type of collaborative vendor-managed inventory program. This would require adapting parts-planning technology, as it was not originally intended, to plan for dissimilar locations. A major obstacle to this approach would be in getting dealers to accept the concept since most dealers have, at best, a tenuous level of trust with the manufacturer and many planned original equipment manufacturer inventories have been attempted unsuccessfully. There were several major roadblocks to be addressed:

- Design a system to integrate daily demand data from disparate dealer management systems in many different locations;
- Treat dealer inventory in a manner that both the dealer and Subaru could agree upon;
- Ensure data integrity: are the dealer personnel keeping up with inventory sales, ordering and receipt posting?
- Parts managers' trepidation and feelings of intrusion into what they considered to be their domain and the primary reason for their job security; and
- Design pay plans and incentives that would motivate both the dealers' and Subaru's staff to work toward the same goals.

Subaru implemented a collaborative effort, which included decision makers on both ends, not a traditional vendor-managed inventory system. Data was exchanged, and sales and promotions were geared toward efficient inventories and increasing retail sales. Moreover, central location jobs were changed or eliminated and consultants were hired to work with the dealers to better educate the managers on selling parts to the retail customer. Subaru staff pay plans were designed to promote partnership, and a system was implemented to work with the dealers to keep inventories broad and lean, providing maximum parts number coverage with the least dollar investment.

Subaru introduced an advanced inventory management program as a pilot in October 2001. Working first with just a few dealers, the system was built to extract data from dealers' individual management systems every day and to calculate and forecast ultimate stock levels at each separate location based on each individual dealership's actual sales demand and lost sales history. Once stocking levels are established, the system will determine needed replenishment orders on a daily basis, dealer by dealer. Those orders are posted for the individual dealership's parts manager to review on a daily basis, at

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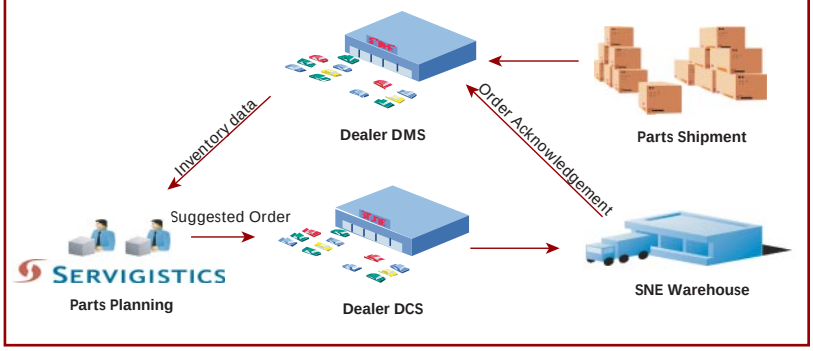
Figure 2 Example of AIM Parts System



which time the suggested order can be edited, deleted or have parts added before submission.

Instant message and email systems are utilized to allow real-time communication between the Subaru planner and the dealer parts manager. Adjustments are made on a daily basis based on dealer personnel input. The system is provided at no charge to the dealer in return for parts-purchase loyalty, meaning Subaru is the dealer's sole source for Subaru service parts.

What is most significant is that to improve dealer comfort level, any parts that are suggested by Subaru and accepted by the dealer are guaranteed to sell within six months. If accepted parts reach seven months without sales activity, a return list is generated by the system and the dealer need only pull the parts and set them out for the dedicated delivery service to return to Subaru, at which time the dealer is issued full return credit; no handling charges, no freight costs and no penalties to the dealer. In addition, there is no percent or dollar value limiting what may be returned; this is 100 percent protection.

As more dealers have been added to the system, other benefits have been realized. One example is a dealer-to-dealer part locator in which participating advanced inventory management dealers could locate emergency parts needs at other area dealers. Another example is when central-inventory-critical shortages are filled from dealer excess inventories.

After a successful pilot period, the program was rolled out and recommended for all dealers on a voluntary basis in 2003. No dealers were required to participate, but the response was so successful that to date over 95 percent of the region's dealers are active on the system.

The results on the dealer inventory levels were phenomenal. Average months' supply dropped by over 60 percent from three months to 1.1 months with many dealers operating at less than a one-month supply of parts. Even with inventory turns approaching 12 times annually, most dealers are still able to provide the requested part out of their own stock for an average first pass order fill in the mid-90 percent range at the dealer level.

Since the inception of the program, dealer retail parts sales levels have increased at rates greater than their units-in-operation counts have grown. As a result, dealers are experiencing higher levels of satisfaction both from retail customers and from dealer personnel.

In addition to the gains in sales, return on investment and productivity at the dealer level, Subaru was able to realize some amazing improvements. At the central location, same-day first-pass order fill rose to an industry-high benchmark of 97 percent. Due to increased efficiencies at dealer level and global visibility into total demand, inventory levels at the central location were fine-tuned and are now at all-time-low dollar investment to sales figures, resulting in a record 4.5 turns annually at the regional distribution center.

One surprising effect is that even though Subaru stopped incentivizing dealers to purchase parts, region sales to dealers have grown almost 70 percent since 2000, primarily because even though dealers have reduced their total inventory investment, they now have more of the right parts for their dealership in stock. What an interesting concept: stop promoting the sale of wholesale parts to sell more retail parts.

Subaru of New England, which has just over 10 percent of the national dealer body, is now doing over 17.5 percent of the national Subaru replacement parts business. Relationships between regional staff and dealer personnel have improved because all incentive and reward programs are based on the same realistic goals, namely retail sales at the dealer level, as well as on other performance factors.

Through this experiment, Subaru has learned that collaborative efforts to control inventories have yielded far more than inventory efficiencies. The relationship environment has changed, making a successful region into a benchmark in the industry. Eventually, all dealers are going to want this type of partnership with their suppliers. Subaru of New England is proud to be at the forefront of this evolution in service parts process. ■

Figure 3 Directed Parts Inventory = Higher Fill Rate and Lower Inventory Investment