



ZEBRA CASE STUDY

Bar Coding Ensures Accuracy for Automotive Supplier

Johnson Controls (JCI) speeds its aftermarket car parts to customers like Mopar, Toyota, and DaimlerChrysler in 48 hours or less. Recently, a new automated inventory management and shipping system installed at JCI has helped to improve service. For customers like Mopar, JCI keeps several years' worth of inventory on hand so it can offer that quick turnaround to its dealers for particular parts.

Plant Manager Tom Johnson oversees JCI's Winchester, KY, aftermarket service center. The center stores replacement automotive parts, including seat assemblies and other large automobile interior components. "We needed a system to ensure proper picking of on-hand inventory to meet our daily customer orders."

Today JCI ships service parts to nearly 8,500 automotive dealers in North America. It is expanding its automated system to handle parts for other automotive manufacturers. Johnson reports the new inventory management and shipping system has significantly improved Mopar's fill rate.

History

"Bringing on Mopar meant a tenfold increase in the amount of storage space required," Johnson says. SKU's jumped to 9,000. JCI began by evaluating a number of warehouse management systems (WMS) that were capable of handling its needs. JCI chose RT Systems, Inc. and worked together to develop the SMART system, which is based on the RT LOCATOR WMS product.

The System Flow

Incoming orders are received from Mopar's parts division via electronic data interchange (EDI) and ship orders are sent via the JCI system to SMART on a regular basis. Most incoming material is bar coded; if bar code labels are not present, JCI produces its own.

The system uses spread-spectrum RF terminals with tethered laser scanners to identify incoming products. After product is received, the system directs the operator to enter the part number and quantity, store the product in an empty storage area, and scan a location bar code to update the system on the product's location.

Ship orders are sent to the SMART Server, at an average of 350 orders per day, typically consisting of one part per order. The RT LOCATOR SMART system determines whether the order is for a finished good item or needs components picked for assembly. Finished goods are delivered directly to a packing station. For assembly items, components are picked in bar coded totes and the totes containing the component parts are sent to an assembly area. Assembled components are placed into the same component picking tote and sent to the packing station.

At the packing station, the shipper scans a tote, and the system displays the tote contents. The packer is directed to place the parts into the default carton size, unless the goods are prepackaged. Then, one of 10 UPS service codes is chosen or an "other" option is selected for alternative carriers.

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The RT LOCATOR SMART system then prints out a bar coded shipping label on a Zebra Technologies thermal transfer printer and a packing list on a laser printer. All UPS shipments include a bar code containing the container serial number and UPS service code used for determining shipping charges. The shipping information from the UPS system and the order information are then transferred to SMART for updating the JCI system.

Benefits

The RT LOCATOR SMART system has improved order accuracy and enabled JCI to achieve a 95% fill rate for its customers. Because JCI can conduct cycle counts throughout the 140,000 square-foot facility, inventory accuracy has increased to 99.999%. Order turnaround time has been reduced as well.

Originally, our goal was to fulfill dealer orders within 48 hours,” Johnson says. “Now, the system allows us to pull orders for same-day shipping, provided the needed materials are in stock.”

Improved response time in the warehouse allows JCI to use alternate shipping methods, which can save the customer substantial money.”We can use cost-effective UPS ground delivery, as opposed to second-day air or next-day air, and still get the product to the end user within 48 hours from receipt of the order,” Johnson says. The improved response time has saved Mopar \$114,000 in shipping costs.

GLOBAL/AMERICAS HEADQUARTERS

Zebra Technologies Corporation
333 Corporate Woods Parkway
Vernon Hills, IL 60061-3109 U.S.A.

T: +1 847 793 2600 or
+1 800 423 0442
F: +1 847 913 8766

EMEA HEADQUARTERS

Zebra Technologies Europe, Limited
Zebra House, Unit 14, The Valley Centre
Gordon Road, High Wycombe
Buckinghamshire HP13 6EQ, UK

T: +44 (0)1494 472872
F: +44 (0)1494 768251

ASIA-PACIFIC HEADQUARTERS

Zebra Technologies Asia Pacific, LLC
16 New Industrial Road
#05-03 Hudson TechnoCentre
Singapore 536204

T: +65 6858 0722
F: +65 6885 0838

Web: www.zebra.com

OTHER LOCATIONS

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California, Rhode Island, Texas, Wisconsin

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France, Germany, Italy, Netherlands,
Poland, Spain, Sweden

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