



CASE STUDY

GM 1724 Compliance Labeling Solution

Integrator provides solutions, vision and long-term success for automotive parts manufacturer

As a custom molder and extruder of rubber and plastic products for the OEM automotive market, Chardon, Ohio-based Carlisle Engineered Products was faced with meeting the stringent GM1724 labeling standard by December 1, 2000. Carlisle, a wholly-owned subsidiary of the \$1.8 billion Carlisle Companies Inc., Syracuse, NY (NYSE: CSL), was required to meet compliance labeling mandates in seven of their US manufacturing facilities.

Carlisle began its compliance project by clarifying specific goals:

1. Replace outdated printing systems to accommodate 2-D bar code technology
2. Generate proper GM1724-A compliance labels in each required manufacturing facility
3. Establish failsafe redundancies to allow label generation during network or host outages

In addition to these primary goals, Carlisle needed to combine its label printing systems with data from various software systems on an AS-400 host, including *Future Three*, a fully integrated EDI, release accounting, shipping control and invoicing system. Furthermore, Carlisle's centralized label design center was overloaded with requests for label format modifications and additions. Carlisle wanted to decentralize the label design process and empower each manufacturing location with administrative controls, while adhering to the critical format and design elements of GM1724-A and other labeling standards.

One Vendor — Complete Solutions

In bidding for the project, Atlanta-based BarCode ID Systems presented a "single vendor solution" for Carlisle, along with a long-term vision. According to BarCode ID Systems' President, Jack A. Tinsley, Jr., "Carlisle was initially looking for a hardware/software vendor to solve their immediate GM labeling problem. But with their wide area network, data distribution requirements and multiple manufacturing facilities, we knew that one resource and one point of project responsibility would ensure success, now and in the future." Tinsley continued, "We have witnessed projects where one vendor is used for hardware, one for software, and one for integration and support. These types of projects are typically filled with delays, costly obstacles and accountability issues."

Carlisle agreed. By selecting BarCode ID Systems as their complete solutions provider, they were able to initiate a corporate-wide plan of implementation, including equipment and media purchases, system integration and support. BarCode ID Systems' unified solution created and delivered value for Carlisle with the following design specifications:

- Integrate multiple label printing stations at seven manufacturing facilities with a central AS-400 network
- Expose file system data from two primary AS-400 applications (*BPCS* for release data and *Future Three* for shipping data) and convert to an NT server

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- Create a data distribution program on the NT server to identify facility-specific data, automatically filter to the appropriate facility, and feed the bar code labeling systems
- Establish one host workstation at each manufacturing facility to receive the distributed data from the NT server, which could then be shared by other printing workstations
- Using the three-tiered protection of *LabelVision* software, establish administrative, design and print-only workstations to generate label output for GM1724, free-form and other label formats while enforcing strict compliance labeling protocol
- Install *Zebra 170XiIII* thermal transfer printers with *ZebraLink*[™] connectivity for remote administration
- Establish the capability to print existing or generate new GM label templates during network or AS-400 outages
- Establish error logs and event histories to monitor error conditions, system functionality and configuration data

Remote Administration Key to Controlling Costs

With the installation of remote control and administration software throughout Carlisle's network, BarCode ID Systems installed and configured over 90% of the new systems remotely. This tremendous cost-saving step also allowed BarCode ID Systems to update Carlisle's software and databases, as well as perform remote updates and troubleshooting without the delay and expense of on-site visits. BarCode ID Systems could tap into all production PCs to check status, change settings and provide remote support, and with the capabilities of *ZebraLink* print server technology, could change printer settings and monitor progress remotely. Without remote administration capabilities, the costs for this project could have easily increased 50%.

Automating GM1724-A Label Printing

All GM suppliers were required to meet the GM1724 shipping label mandate by the extended deadline of December 1, 2000. Non-compliant suppliers could face fines, refused shipments, or loss of quality points. Compliant labels must have all the required information, use specified fonts and include bar codes that can be scanned successfully at all points in the supply chain. Key to the 1724-A label format is a PDF417 2-D bar code, which Carlisle's outdated printers could not print. BarCode ID Systems, a recipient of the GM Recognition Award for demonstrated ability to meet the GM1724 shipping label requirements, developed an application to print GM1724 compliant labels across Carlisle's manufacturing enterprise.

Using the ActiveX Automation features of *LabelVision*, the application developed by BarCode ID Systems provides three methods for generating GM 2-D labels. The first is an automated process that continuously searches the AS-400 for new or updated information. Upon finding appropriate data, the distribution software funnels the information to the proper manufacturing facility, where GM1724-A labels are generated automatically on *Zebra 170XiIII* printers. No user intervention is required. The second process allows manual selection based on batch release data, and manual data entry into the compliant label design format. The third process lets operators reprint a label based on the history of labels that have already been printed. This threefold architecture gives each location a failsafe backup to print timely, critical data, even if the network or AS-400 are down. Each facility can, if necessary, operate as a stand-alone printing operation.

Each of these methods is valuable at Carlisle's manufacturing facilities. Automated label printing allows immediate printing of timely information, thereby expediting the product shipping process. In the event of a Network or AS-400 outage, individual facilities can still accommodate timely shipping by manually retrieving and entering data into user-defined fields on the compliant GM1724 label format. BarCode ID Systems enabled a fully redundant system throughout Carlisle's manufacturing facilities.

Results

Carlisle and BarCode ID Systems have achieved successful results with the GM label compliance project. All required facilities met the GM mandated deadline and are printing compliant GM1724 and/or other standardized label formats easily and automatically. Through their custom-developed application, BarCode ID Systems brought accurate, timely, immediate information to Carlisle's manufacturing facilities and minimized user intervention. Resources throughout Carlisle's enterprise are now maximized and failsafe systems allow uninterrupted business flow, even during system downtime. Furthermore, by creating integrated data sources at each plant, BarCode ID Systems has established the foundation for the next step in Carlisle's project cycle—lot traceability and shipping verification via RF data collection and processing.

According to Carlisle's Director of Information Services Kathy Mitchell, "BarCode ID Systems went above and beyond to hit our project objectives as required within the time frame specified. Our system was running before deadline and we gained additional functionality across our manufacturing operation." Mitchell continued, "As Carlisle's applications expand, we feel confident that BarCode ID Systems will provide the solutions we require."

Carlisle Engineered Products, Inc., is headquartered in Chardon, Ohio, and has eleven manufacturing facilities in Ohio, Pennsylvania, Michigan, South Carolina, Alabama, and Mexico. Its custom manufactured products serve the transportation and general industries.

BarCode ID Systems, established in 1993 and headquartered in Atlanta, Georgia, is a complete solutions resource, offering integration services and data automation systems for any industry. With sales offices in Atlanta, Greenville, South Carolina, Chicago and Boston, BarCode ID Systems provides visionary solutions, leading edge products, technical ingenuity and industry expertise. BarCode ID Systems is a Symbol Business Partner, Zebra Solutions Provider and Microscan Preferred Partner.