

## Case Study: Hendrickson Axle

### Features

- Complete WIP and Lot Tracking
- Direct data feeds from Presses & Torque Guns
- Configurable Limits and Tolerance Checks
- Stack-Light Displays for In- or Out-of-Tolerance
- Card-Swipe Validation for Manager Overrides
- Fully Configurable via Database Fields
- Integration with Intermec Scanners

### OnSite™ for Assembly and Lot Tracking

#### *CRITICAL BUSINESS ISSUES*

As a manufacturer of heavy-duty truck axles, quality is a critical concern for Hendrickson. The company must be able to identify and isolate specific axles quickly and accurately when a quality issue is discovered.

To do this, the company was collecting component data manually via production cards and hand-written forms. However, given the large amount of effort required to record this information, the company limited its collection to once per shift. This meant that when an isolation event occurred, the company was potentially recalling more assemblies than necessary, inconveniencing clients and raising the total cost.

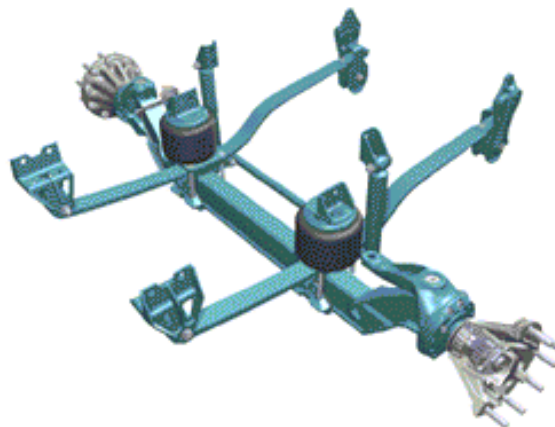
When the company designed its next-generation manufacturing line, it wanted to ensure that complete, accurate lot tracking was included as a core feature. Hendrickson's goal was to reduce lot sizes, ideally capturing all of the information it could and recording it against each axle individually: heat-treatment codes, torque and press values, and more.

#### *SOLUTION*

Hendrickson's new assembly line is designed as a series of stations, each with specific assembly steps and equipment. The company then worked with Cimulus and partner Integrated Barcode Systems (IBS) to integrate bar code scanners and tags into the entire process to monitor and record each step as the axles were assembled.



Cimulus used OnSite, a data collection platform designed for manufacturing, to provide the capabilities Hendrickson needed. As axles enter each station, they are read by fixed scanners and identified. OnSite verifies all prior assembly data, providing an "all clear" signal that allows axle to continue. All components have batch labels, which the operators scan as they are received. OnSite interfaces directly with the equipment controllers, capturing and recording torque and pressure values. Stack lights provide a quick status display at each workstation, with an Intermec terminal for manual data entry and validation.



#### *BENEFITS*

The highly automated collection process made it possible for Hendrickson to reduce its lot size to one, meaning the company can now identify and isolate specific axles which have components from a given batch. This dramatically reduces the number of parts affected in a quality check or recall.

Better WIP tracking also means that bad parts are identified and removed from the line earlier in the process, saving additional time and cost in unnecessary work. And finally, since this data is collected electronically, the need for manual data collection by operators has been greatly reduced.

*Brian Romer, Operations Manager at Hendrickson Axle in Kendallville, IN., said "Individual axle tracking was one of our highest priorities in the design of the new line. Cimulus' system gave us a simple, configurable platform that has done exactly what we needed."*