Complete Traceability Ensures an Easy Ride for Major Car Manufacturer - Datalogic

Delphi is a leading supplier in automotive products. They are required to trace all of their auto parts to the specific manufacturer. Using Datalogic's PowerScan readers.

Delphi Selects a Fully Traceable Document and Scanning Audit Trail Provided by Datalogic Products and TPL Labels Ltd.

Overview

Delphi is a leading global supplier for the automotive, computing, communications, energy, and consumer accessories markets.Although Delphi is engineered to meet and exceed the rigorous standards of the automotive industry, their products can be found in a wide variety of applications, such as healthcare. Headquartered in Troy, Michigan, USA, Delphi has over 100,000 employees and operates 150 wholly owned manufacturing sites in 32 countries.

Supplying advanced suspension systems to an Oxford based major car manufacturer, Delphi Automotive Systems ensures the right components are supplied to the assembly line in the right sequence as they are needed.

The Challenge

As a result of lean manufacturing initiatives designed to reduce assembly costs, automotive manufacturers require their suppliers to provide just-in-time deliveries of pre-assembled systems directly to their production lines. Delphi Automotive Systems delivers multiple, small batches of suspension systems as they are needed. This means the automotive manufacturer can minimize inventory levels and improve operational efficiency.

Delphi must also deliver their suspension systems in the correct assembly sequence as each new vehicle is built-to-customer order, possessing its own unique build specifications rather than built-to-stock. In fact, of every 1,000,000 cars that roll off the production line only 10 will be identical.

The Solution

To successfully meet the challenge of supplying the correct suspension modules on over 5,200 vehicles each week, Delphi designed an innovative picking process with TPL Labels Ltd., a specialist provider of custom labels, auto-identification and data capture solutions. Through their partnership, Delphi reorganized its shop floor into specific lanes designated by the final destination of the suspension module on the vehicle: front-left, front-right, rear-left, rear-right.

Jim Allen, Operations Manager, explained, “We were tasked to deliver suspension modules in sequence to our customer’s production line. We needed to have a robust and reliable error-proofing system that ensured our customer would be consistently supported, and protect Delphi with a fully traceable document and scanning audit trail.”

Together, Delphi and TPL Labels Ltd. constructed the architecture of the error-proofing system and selected bar code readers from Datalogic for the hardware and integration. According to Jim, “Datalogic was selected as the hardware provider for this project because of its market reputation for quality, reliability and project management.”

Connected electronically to the automotive manufacturers assembly line management system, Delphi’s Luton plant prepares batch deliveries using a combination of a truck-mounted Datalogic Mobile’s Rhino-Net™ rugged mobile computer, a Datalogic Automation’s DS4600A fixed position laser scanner and Datalogic PowerScan™ M8300, a premium industrial handheld bar code reader.

Mounted on an electric pallet truck, Delphi and TPL Labels Ltd. devised a system whereby the operator moves along the picking lane and is instructed as to which suspension module is required by the Rhino-Net mobile computer. Once the suspension module is picked, the operator places it on a vertical arm where its identifying bar code is automatically scanned by the DS4600A.

Upon positively identifying that the suspension module is the correct one, the operator places it in a customized “pigeon hole” storage system on the truck. Each compartment of the storage system is individually numbered and assigned a corresponding bar code. Once the suspension module is in the storage compartment, the operator scans the bar code to positively identify that the right suspension unit has been picked and placed in the correct storage compartment prior to shipping.

Delphi chose the PowerScan PM8300 industrial reader primarily due to the device’s extremely rugged construction. For instance, this reader features a IP64 rating and can withstand drops from 2 m / 6.6 ft onto concrete. The environmental design of this reader was a key benefit to choosing a solution that would work in the harsh warehouse environment at Delphi.

Furthermore, the PowerScan reader’s 3GL™ good read feedback system and superior reading performance ensures that all products are being scanning correctly. Using Datalogic’s STAR Cordless System™ for narrow band radio communications (433 MHz or 910 MHz), the PowerScan M8300 industrial handheld scanner also offers reliable, secure data transfer without Wi-Fi interference or the constraints and hazards of a corded device.

The Results

For the automotive manufacturer, Delphi’s supply-in-line sequence process means greatly reduced

line-side storage, simpler, more efficient manufacturing logistics, increased production flexibility and lower costs. By choosing the PowerScan reader from Datalogic, Delphi has safe-guarded their investment as the device maintains its outstanding performance in the toughest conditions and also positions the company for the future with advanced leading capabilities, such as GS1 DataBar™.

Customer

Delphi Automotive Systems

Industry

Manufacturing

Sub-Industry

Automotive

Application

Track and Trace

Country

United Kingdom

Datalogic Products

PowerScan™ PM8300

Datalogic Mobile Rhino-Net™

Datalogic Automation DS4600A

Datalogic Partners

TPL Labels Ltd.