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BMW | The World's Most Advanced Engine Plant Uses Printronix Printers with Online Data Validation (ODV™) to Improve Quality Control in the Supply Chain

Profile

Known as the "world's most advanced car engine productions plant," the £400 million, 85-acre BMW plant at Hams Hall, near Coleshill, Warwickshire, employs 700 people in the manufacture of approximately 600 four-cylinder petrol engines, from 1.6 to 2.0 liter capacity, a day.

Situation

Each engine produced at Hams Hall is labelled with a Code 39 bar code that holds the engine serial number. Code 39, or Code 3 of 9, is one of the most popular symbologies used for identification, inventory and tracking in the automotive industry. The bar code labels, which have a touch face coating and are applied using a particularly strong adhesive, are fixed for the life of the engine.

If the bar code cannot be read properly, when the engine is despatched to a BMW automotive assembly plant in Germany, North America or South Africa, production and the plant's automated processes can be significantly impacted.

Goals

- To place readable, durable bar codes on each engine in order to:
  - Streamline production
  - Improve quality control in the supply-chain
  - Enable the tracking of an engine over its entire lifetime

Results

Since initiating production, Hams Hall has been using Printronix thermal printers — six T5306s and four T5308s — with Online Data Validation to print and validate the Code 39 bar codes. The labels, which have a tough face coating and are applied using a strong adhesive, are affixed for the life of the engine.

Online Data Validation (ODV™) checks if a barcode can be properly read by the scanners validating the print quality of linear and PDF417 barcodes. It features read-after-print technology and carefully analyses every printed bar code to ensure that it meets stringent compliance standards, eliminating failures which could translate into a rejected item, the need for manual correction, productivity delays and heavy fines. If a label does not pass the validation check, it is fed back into the printer, voided and then reprinted and revalidated.

Reaction

"We print around 600 barcodes a day and have been using Printronix thermal printers – six T5306s and four T5308s – from the start. The engines we produce go from Hams Hall to the car production plants, where the barcodes on the engines are scanned in on the production line. If for any reason they can't read the barcode, this impacts on their automated processes. Issues like this can potentially have a significant impact. We have quality targets as part of our key performance indicators (KPIs), which could be adversely impacted by barcodes that don't read properly. This is why Printronix's Online Data Validation is so important to us – it has brought significant improvements."

Steven Davis
Project Engineer