

Got your number

Technifor is leading the push for greater part traceability among the UK's automotive firms and their suppliers. Matt Bailey reports

According to US-based business consultancy AMR Research, cost and productivity initiatives by the world's vehicle manufacturers aim to shift up to 45 per cent of warranty liability to suppliers whose part numbers were named as the "prime part" in a component failure. It's the wrong part in the wrong place at the wrong time that causes most of the trouble, says the AMR report, accounting for 35 per cent of total warranty costs. It also claims that 20 per cent of production line part problems go unreported because of the lack of factory floor visibility.

To solve the problem means keeping track of the many thousands of in-house and bought-in parts used in a typical vehicle. To do so, automotive companies are investing in component traceability systems. Suppliers will have to do likewise.

Mark'nRead by Technifor is based on a two-dimensional data matrix code, marked on parts by either laser or micro-percussion, allowing verification and automatic reading by industrial vision tools. Parts can be monitored throughout the manufacturing process, and the data read in the 2D code is transmitted and recorded.

Technifor has already supplied the Mark'nRead system to a number of well-known UK-based automotive manufacturers. Improved productivity is directly related to the quantity and quality of data collected, and to the way that data is used.

Many of Technifor's customers see traceability as a means of achieving

sustainable competitive advantage.

"Technifor deals with the three W's: what, when and where," says Technifor sales engineer Peter McCullough. "By encoding data on to a part or a component in a machine-readable format, we can automatically collect and store valuable data about that part and the processes it went through within the organisation."

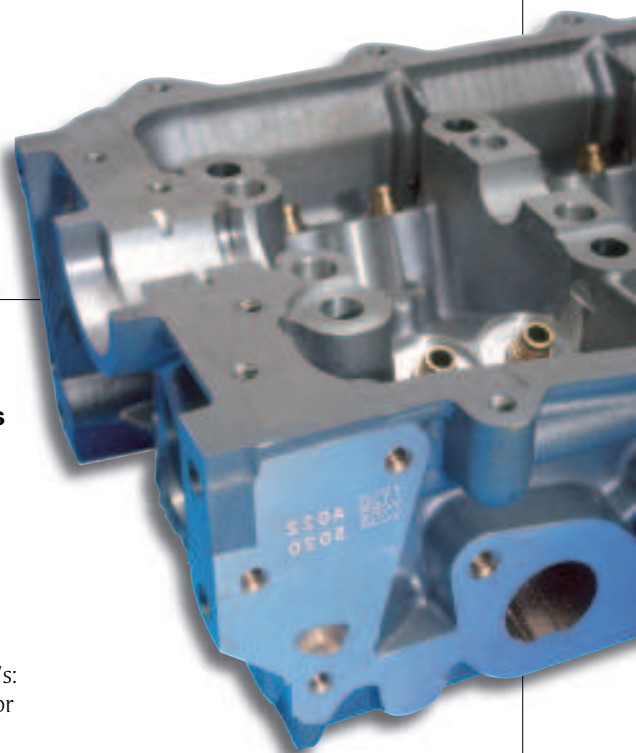
Although NASA was involved in the development of mark-and-read technology, it is the automotive industry that is probably the most demanding volume production environment for mark-and-read applications, often helping to identify the root cause of a recurring problem.

GENETIC CODE

The two dimensional matrix is, in effect, a genetic marker; a key to the history of how that part came to be. All data (time/date, shift codes, test or measurement results) recorded for each product and collected by camera, are stored in real time.

"As companies strive to become more efficient, there are fewer operatives to read data manually," says Mr McCullough. "Because the matrix is machine readable, it eliminates operator error and writes the data straight to a database where production and quality engineers can access and use it to monitor the production process. Even if part of the matrix is removed or obscured, it can still be read."

By combining an alarm or emergency stop to automatic parts identification at



Mark-and-read will help shift warranty liability to automotive suppliers

each stage of manufacturing, a non-conforming part can instantly be prevented from moving on to the next operation.

"The database can be sorted and programmed to provide useful indicators for tool test planning and maintenance programs," adds Mr McCullough. "Other data may be used for stock management or for production speeds analysis."

"When a customer contacts us with a requirement, we examine the production process and the production environment and advise on all aspects of mark-and-read, including the type and volume of data the company wants to collect," he says. "We take full responsibility for the solution and for support and service."

As the traceability requirements of manufacturers grow, maintaining lean practices will require more highly automated data collection and better use of that data. It's no longer sufficient to monitor a pallet or consignment of components; companies need to track the life of every individual part. The cost of not doing so is currently measured in billions of dollars. □

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