

○ Success Story – Automotive

Type of Customer

Our customer is a global supplier of vehicle technology.

Our Customer's Requirements

Our customer needed a highly accurate, cost-effective, 100% inspection solution for turning fork gap measurement.

The company's biggest challenge was to streamline its manufacturing process by installing a reliable, automated inspection system that would detect defects early on, saving time and money. However, the height of the tuning fork requiring measurement was less than 10mm and therefore, needed a robust and flexible sensor. In addition, a precise inspection algorithm was required to ensure reliable 2D and 3D data was obtained for the fork itself and the gaps of the tuning fork, which varied significantly in shape and color. These exacting and unique requirements needed to be met without compromising the high-speed essential for mass production or the cost of the end product that enabled the company to remain competitive.

Our Solution – The CyberOptics SQ3000™ AOI System

Accuracy – With CyberOptics' unrivaled, high-resolution MRS sensory technology, the SQ3000 was able to mitigate the measurement inaccuracies associated with the tall object and narrow pitch of the tuning fork.

Speed – Significantly faster at delivering accurate metrology-grade measurements than traditional CMMs, the SQ3000 met the company's production requirements for line cycle time.

Inspection Performance – The SQ3000 incorporates an AI² searching capability for pre-locating the tuning forks and an advanced edge detection algorithm to measure the gap accurately and with high repeatability.

Inspection Coverage – CyberOptics' system delivered a detailed and comprehensive inspection which included gap measurement, bent terminal, twisted terminal, missing terminal and contaminated terminal.

Ease-of-use – The SQ3000 requires less operator intervention to maintain the machine. The intuitive software and interface also allows for quick and easy programming as well as minimal training time and investment.

Reliability – Since installing the SQ3000, this company has experienced a higher mean time between failures of the tuning forks inspected.

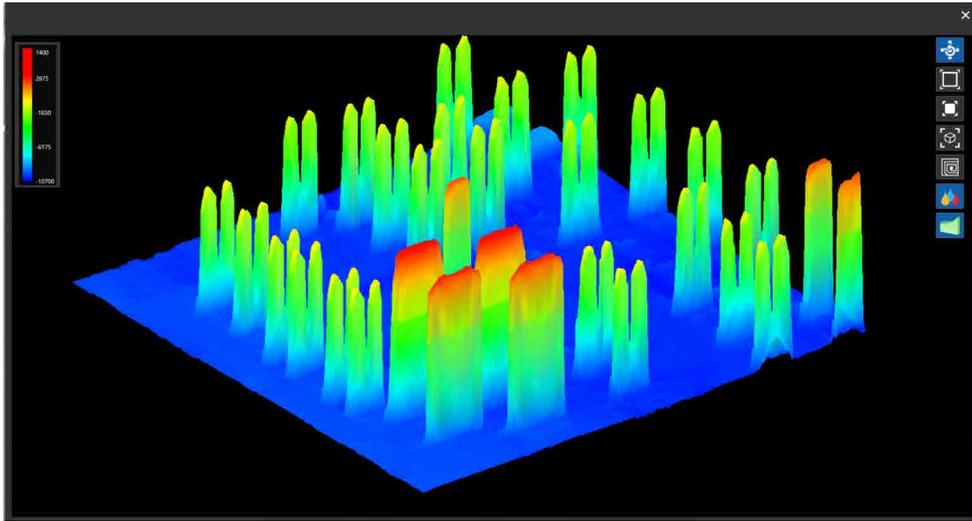
Reduced Costs – The company has benefited from significant cost efficiencies with the SQ3000, within their financial justification including factory automation.

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The Result

In the SQ3000, our customer found a highly-accurate, high-speed solution that met its objectives for a reliable, cost-efficient inspection system. The tuning fork defect escape rate has been noticeably reduced, saving the company time and money, and providing the quality assurance required by our customer's client.



For more information on CyberOptics products, services, or solutions, visit our website at www.cyberoptics.com.

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