



SQ3000™ for Automotive Tuning Fork

Automotive Case Study

Benefit Summary

The SQ3000™ provides accurate, repeatable inspection for mass production, despite high variation in size, color and gaps of automotive tuning fork modules.

Challenge

Our customer was in search of a reliable inspection process for automotive tuning forks. They had yet to find a robust, flexible sensor and inspection algorithm that provided accurate and repeatable 2D and 3D gap measurements. The tuning forks are >10mm with high shape, color and gap variation, creating shadows and reflections. Lowering their escape rate was vital for their growing mass production needs.

Along with needing to meet strict safety standards required for consumer use, this customer's criteria for a solution included the ability to ramp up speed to meet high production goals and catch defects earlier in the manufacturing process to reduce costs down the line. An automated system would allow them to increase yields, reduce operator costs, and promote a quality product to remain competitive in their industry.

Solution

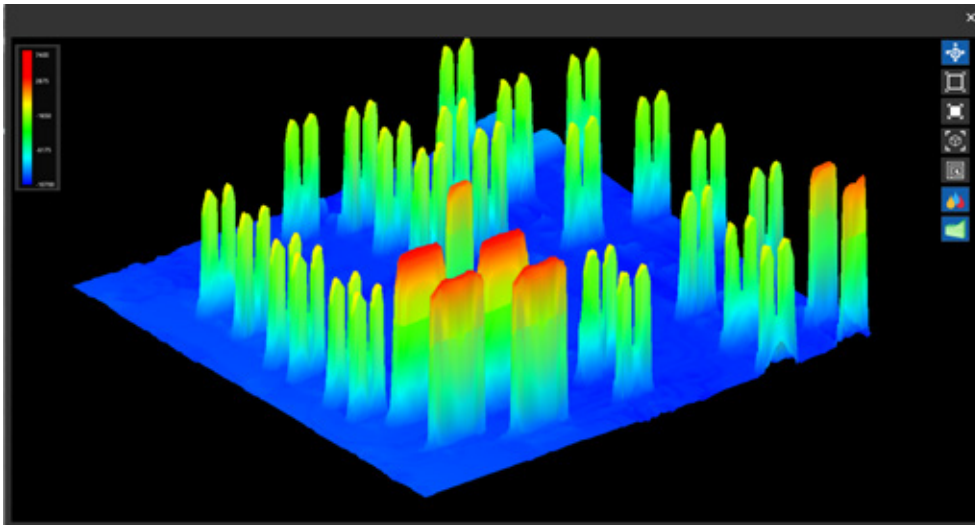
We worked with our customer to integrate the SQ3000™ 3D Automated Optical Inspection (AOI) into their manufacturing process. This versatile solution is easy to use and provides consistent, accurate results at high speeds. The sensor, software and system all work together to completely automate the full-line inspection process, with low mean time between failures and a low-to-zero escape rate.

By implementing a full-line inspection process, our customer is able to identify and pinpoint defects sooner in the process for operator ease. The SQ3000™ has AI2 searching capability to pre-locate each tuning fork, and an advanced edge detection algorithm to measure the gaps accurately with high repeatability. This range of coverage provides reliable data for gap measurement, bent terminal, twisted terminal, missing terminal and contaminated terminal.

With the Multi-Reflection Suppression (MRS) technology, our customers are able to find defects sooner and mitigate any measurement inaccuracies due to shine or shadow, for high yield inspection at fast speeds.

This proprietary system was evaluated as best-in-class with a high-quality user interface that helps our customers build trust with their customers based on a commitment to the highest quality. It offers a remarkably low escape rate, reduces costs, improves yields and continues to create operational efficiencies.





For more information on Nordson Test and Inspection products, services, or solutions, visit our website at www.nordson.com/TestInspect

For more information, speak with your Nordson representative or contact your Nordson regional office

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