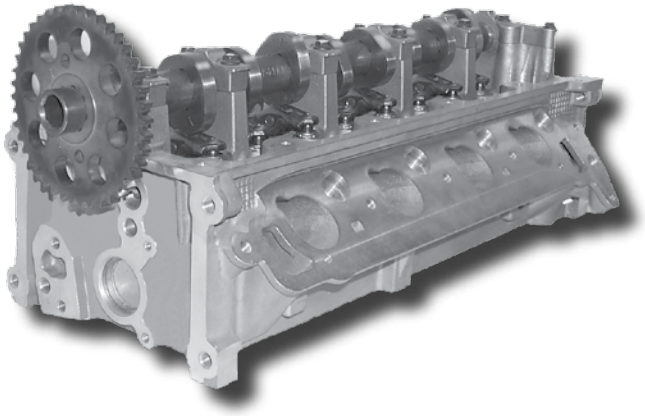
Head and Cam Assembly: Defect Identification Using Signature Analysis

Highlights:

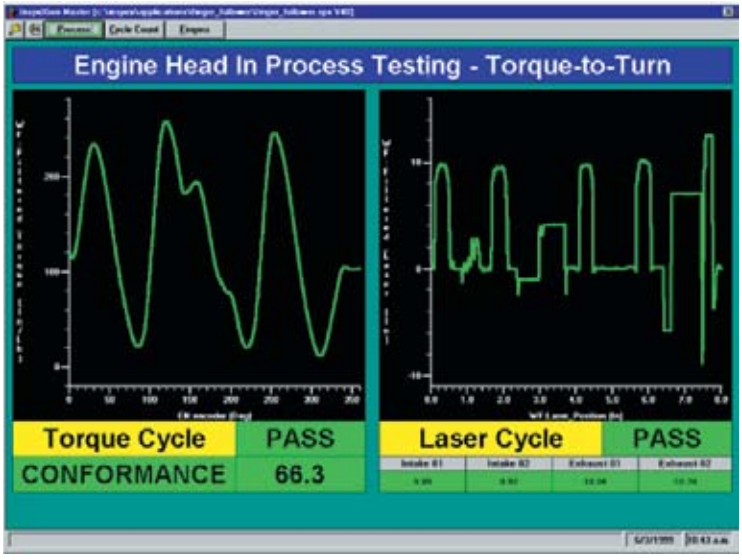
- Identifies a variety of defects using Signature Analysis techniques
- Sends reject information to screen for repair technician
- Performs 3 unique tests (endplay movement, breakaway torque, running torque)
- ModBus Plus™ PLC communication
- Automatic and manual modes of operation
- Automatically loads in correct Signature curves based on part type

A major automotive client required a test system to identify and contain manufacturing defects during the assembly of engine heads. The system selected to meet these requirements is based upon Sciemetric's Signature Analysis System and the Advanced Test Sequencer module.



In order to identify the customer's critical defects, the system performs a sequence of Signature tests on each head. Following the sequence of tests, the Advanced Sequencer module uses all pertinent Signature Analysis results to logically pinpoint probable defects. Identified defects are then transmitted back to the main PLC, which updates a remote display in a repair bay. The repair bay screen, using the defect information, presents a repair technician with a graphical representation of the defect and its location.

The final system also stores production data for all assembled heads, including complete waveform saving by head serial number.



InspeXion® Screen showing Torque to Turn Signature Waveforms

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