

■ Dash-Panel Assembly: Spring-Clip Insertion Validation

Highlights:

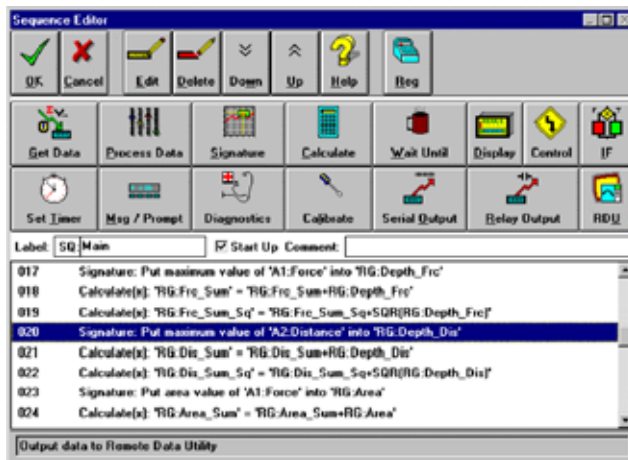
- Defect detection and classification
 - Oversized or undersized part
 - Incorrect part orientation
 - Part deformation
 - Mechanical misalignment
- Dual function in single process cycle
- Press verification
- Depth gage validation
- Password protected operator menus
- Operator display messaging
- Industry recognized communications
- Connected PC based functionality
 - Graphical representation of process
 - 100% data storage

Utilizing built-in Signature Analysis and real-time data processing Sciometric's SigMETER® Series provides validation of the spring-clip insertion process during the assembly of automotive dash panel.

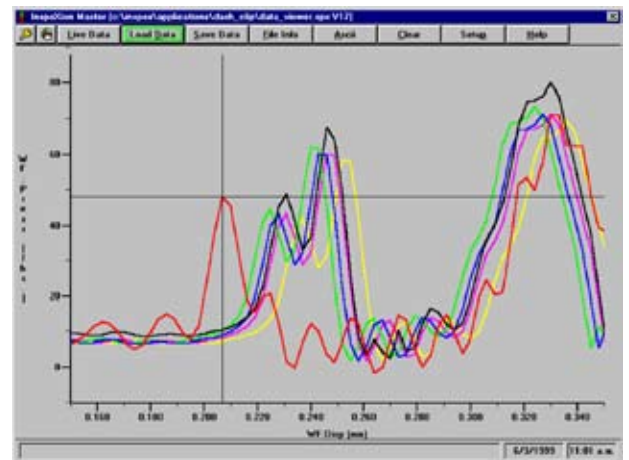
Compatible with test and assembly stations equipped with such measurement sensors as LVDT's (Linear Variable Displacement Transducers) and strain-gage type load cells, a Sciometric SigMETER® offers an unparalleled approach to "Force-vs.-Displacement" comparisons. The instrument conditions and acquires inputs from both sensors as the mechanical fixture advances and performs the press operation. Upon completion, with real-time speed and digital accuracy, the meter employs several of over three dozen built in processing and analysis tools to verify the insertion process. Performing 100% sampled data processing and signature analysis while compensating for variations in sensor alignment by implementing built in "auto calibration" functions and comparing waveform data against statistically derived and/or user defined limit windows, the system provides reliable pass/fail results at the rate of four parts per minute. Unlike peak detection meters formerly used almost exclusively in such applications, the SigMETER® analyzes sensor data collected throughout the entire operation. After learning the definitive parts of the data produced by the insertion press operation, the SigMETER® utilizes several of its built-in capabilities to segment the waveform data and apply the appropriate analysis. This unique ability provides information pertaining to the root cause of failed parts significantly reducing false rejects and more importantly identifying substandard presses attributing to appreciable warranty repair issues.



Industrial packaging, integrated self-diagnostics, automatic temperature compensation, and standard digital I/O makes the Sciometric SigMETER® compatible with today's manufacturing environments. Complete with PC based software utilizing an ergonomic graphical user interface (GUI) for comprehensive configuration, the SigMETER® is defining a new standard for in-process testing and assembly verification.



SigMETER® Wizard Screen showing Easy to Configure User Interface



SigMETER® Screen showing Force versus Displacement curve