

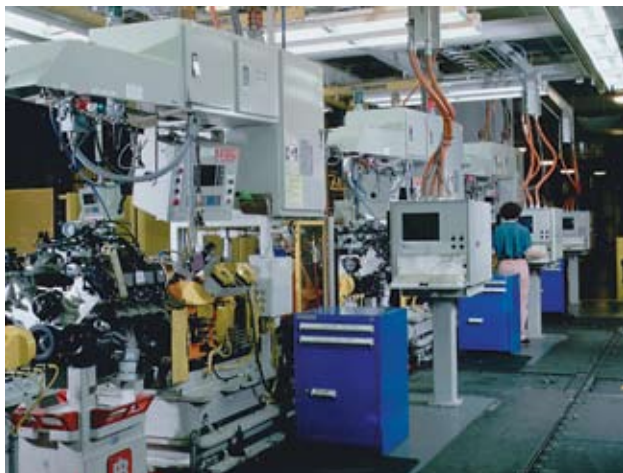
## ■ Cold Engine Testing: Mechanical Integrity and Fuel System Tests

### Highlights:

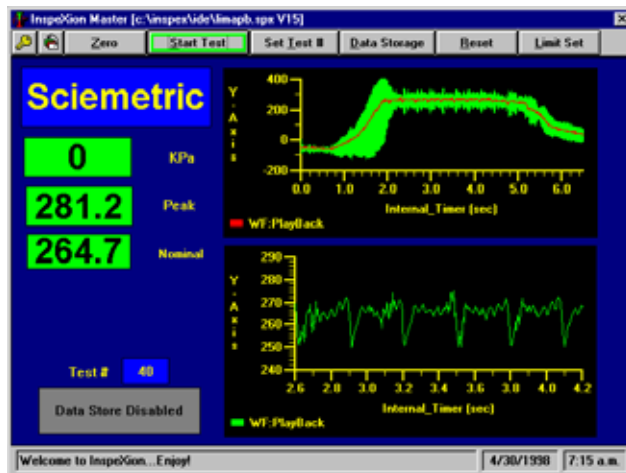
- Tests crankshaft torque, intake vacuum, oil pressure, fuel rail, fuel injectors
- High speed Pentium™ based Signature Analysis
- Modbus Plus™ connection for PLC communication
- All test data is logged to disk for storage by engine serial number (traceability)
- Statistical analysis shows trends and helps set  $\pm 3s$  limits
- Easy to use menuing and full graph displays

Sciometric's Signature Analysis System is used to perform the comprehensive final "end-of-line" testing for a major manufacturer of high performance V8 engines.

An electric motor is used to rotate the crankshaft with the engine "cold" (i.e., not started) while the Signature Analysis System records and analyzes waveform data from various sensors including torque, crankshaft angle and pressures. By comparing the waveforms and their common characteristics with those of "good" engines, the system quickly identifies and pinpoints defects, rejecting abnormal or substandard engines.



Typical Engine Cold Test Station  
(Sciometric Signature Analysis Systems shown)



Fuel Injector Test Waveform