

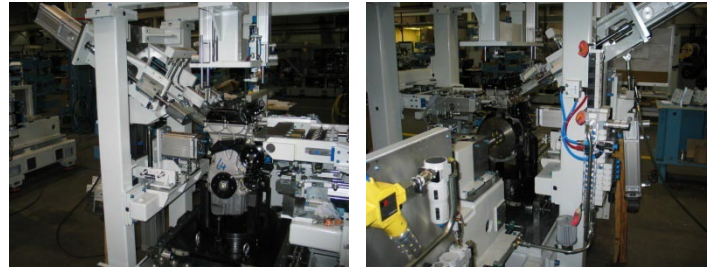
## Asian Engine Cold Test

A global power train manufacturer required a fully automatic engine test system for 100% production test capability. Cold Testing was desired to maximize the system's ability to detect specific defects at the earliest time in the process. The system provided the ability to test for a variety of defects and included NVH testing. Multiple models needed to be supported, including 2 displacements, 2 port configurations, and 4 models overall with considerations for even more models in the future. Available time for test was limited, so the ability to maximize time utilization was imperative. Data handling had significance due to the need to archive a large quantity of engine test data allowing SPC and trending analysis reporting.



### System Overview

- Two fully automatic Engine Cold Test Stations
- Pallet Delivery system with RFID for tracking
- State of the Art Waveform Analysis using ATW Test Executive data acquisition system
- Limited cycle time required multiple tests occurring simultaneously
- Engine Shuttle used to "Stage" engines for test, minimizing part transfer time.
- Multiple Ignition types including Coil on Plug or "COP" supported.
- Oscar Data Management System capable of managing multiple years worth of engine data, including SPC analysis capabilities was provided.



### System Values & Benefits

- Turn key test system providing single point accountability.
- Able to test a variety of engine models and variations.
- Able to detect faults that Hot Test cannot.
- Able to perform SPC analysis including trending on all engine data acquired.

### System Highlights

- Palletized Engine delivery system.
- Fully automatic engine engagement.
- Capability of supporting 4 engine types.
- Full analysis of all components' fit and function through advanced waveform analysis techniques.
- Advanced NVH analysis, utilizing ATW Patented components
- ATW Patent Pending NVH Probes
- State of the art Waveform analysis on input and exhaust signals.
- A full "Weather Station" is utilized, measuring current temperature, barometric pressure to correct all data to "standard" conditions.