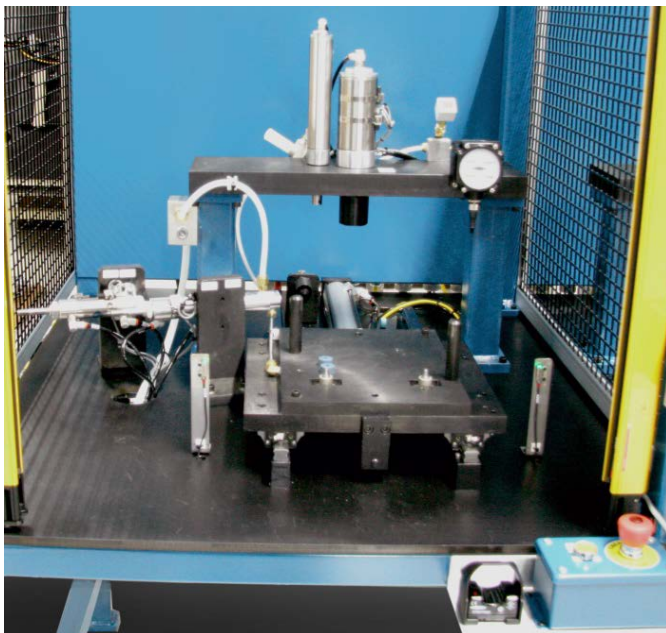


## Pressure Decay Leak Test

### System Description

This custom dual station leak test system tests front and rear engine cylinder heads to ensure the castings meet manufacturer specifications. Both stations operate the same, custom part fixtures, part clamping and sealing supports dedicated station testing to allow parts to be tested independently or simultaneously.

The engine heads are aluminum castings and the system is designed to test 'as casted' parts with air checking for flow (blockage) and cavity leakage. The system was designed for semi-automatic operation; once the part is manual loaded and the leak test initiated the system will test a part without operator intervention. The part is automatically shuttled to the test position, automatically clamped and the test ports sealed to isolate the test cavity and the leak test begins. Status lights provide pass/fail/test malfunction reporting. At the conclusion of the test the part is returned to the load position.



*View of the part nest shuttle with part clamping/sealing shown at rear*



*Dual Station Test System designed to individually leak test front and rear engine cylinder heads*

### Features and Benefits

- Pneumatically operated test system provides automated part clamping and sealing with semi-automatic operation
- Dual station test system
  - Independent or simultaneous testing
  - The front and rear heads are test separately at different stations to allow for continuous testing, stage parts at one station while testing at the other
  - Independent or simultaneous testing
  - Both heads a flow test 2 psia to ensure a minimum flow rate of 220 LPM and leak tested at 5 ccs/m at 60 psig.
  - Independent light curtains provide safe operation
- System uses Sentinel I28 test instruments
  - The I28 is customizable to meet customer and application needs
  - Mass flow testing up to 3,000 sccm, pressure/vacuum decay testing from vacuum to 500 psi and higher
- Part impact marker for 'tested part' identification
- Cycle Time: 42 seconds (approx.)

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