



# DETROIT TESTING LABORATORY, INC.



## Vibration & Shock Testing

Years of wear and tear on vehicles can be simulated in-house with our electrodynamic and servo-hydraulic vibration equipment. Test methods utilized replicate the vibration and shock of road conditions components would be subject to under real conditions. Our staff engineers and machinists can design and build test fixtures needed for your project.

Vibration tests can be combined with environmental conditions such as temperature, humidity, or high pressure fluid flow. DTL is also experienced with testing parts that require special handling such as fuel systems and batteries. Our vibration lab has explosion-proof chambers with fire-suppression to ensure a safe testing environment. DTL offers 13 shakers with three-axis vibration capability. This includes a system capable of 24,000 force pounds and 2 inches of displacement.

Also available are shakers with AGREE vibration chambers that combine vibration testing with temperature and humidity testing ranging from -77°C to +177°C up to 95% RH.

### Shaker Capabilities Profile Capabilities

- Up to 24,000 lbf
- 70 inches per second Velocity
- 2 inches Maximum Displacement
- FDR (Field Data Replication)
- Sine
- Random
- Random on Random
- Sine on Random

### Shock Testing

- Shock Levels up to 3,500 g's
- Pulse Duration 0.2ms to 35ms
- Half Sine Pulse
- Sawtooth Pulse

### Combined Environment Capabilities

- Temperature Range -77°C to +177°C
- Humidity Range to 95% RH
- Fuel/High Pressure Flow

### Routinely Tested Components

- Airbag Modules
- Brackets
- Brake Calipers
- CD Players
- Crash Sensors
- Fuel Injectors
- Fuel Pumps
- Fuel Rails
- Fuel Tanks
- Switches
- Automotive Batteries
- Hoses
- Instrument Panel Components
- Lock Assemblies
- Motors
- Passive Restraints
- Radiators
- Solenoids
- Speakers
- Headlights/Taillights

For further information contact:

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