

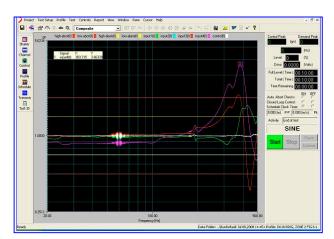
## Independent Engineering Laboratories, Inc.

**Innovation Beyond Limitation** 

## **VIBRATION**

*iEL* is proud to offer a wide array of vibration equipment to support our growing customer demand. From simple to complex fixture design and build to field failure replication in a controlled environment, *iEL* has the expertise and equipment necessary to support any development and validation requirements.

Currently *iEL* has 4-electrodynamic shakers capable of 6,000 force pounds, and 5-Servo-Hydraulic shakers capable of up to 30,000 force pounds. All shakers available can be combined with fuel rated environmental chambers, mechanical, and electrical cycling, allowing for true simulation of real world conditions.

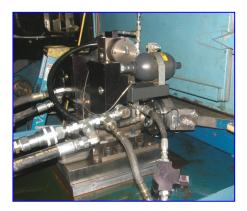




## Electrodynamic 5-5000Hz 6000 force pounds 0-1 inch stroke

## Servo-Hydraulic

0-1000Hz To 30,000 force pounds Up to 150in/sec 0-12 inch stroke Up to 6'x6' slip table





- Ability to import actual vehicle road data.
- Combined environmental, mechanical, and electrical cycling.
- Failure replication
- Fixture design and build.
- Multi-harmonic Sine on Random.
- Random Vibration.
- Resonance Search and Dwell (up to 6-channels).

- Shock up to 100g's, 100ms.
- Sine on Random Vibration.
- Sine Vibration.
- Testing with Fuels.
- Transient Vibration.
- Under-wing Armament
- Windmilling and more......