GE Aviation

GE Aviation Test Services: Vibration & Structural Testing

Vibration and structural testing services are available at three North America locations (East Cost US, Midwest US, and Quebec, CA) with on-site capabilities as needed. Automated LCF and HCF testing can be performed with multiple loads (tension/compression/torsion) on structural and rotating components. Custom load cells can be developed and calibrated from the hardware under test, to determine internal loads in complex geometries and for bearing thrust load calibration.

Extensive process development from decades of test experience as well as automated control and data systems provide efficient test execution with a variety of sensing and measurement options. All testing can be augmented by instrumentation design & application and custom fixtures for each individual test.

Test Capabilities

On-Site Modal Test

Heated/RT HCF Test

3D LDV Strain Distribution

Configuration Durability Test

LCF/HCF/Ultimate Structural Test

Facilities

- Piezoelectric Shakers
- Electrodynamic Shakers
- 1D/3D LDV
- Travelling Wave
- Large Structures Lab

GE's range of test services covers the range of Technology Readiness Levels, and are available for research, engineering, product development, and product improvement testing, for aviation and power generation applications.

Facilities

Vibration

Electrodynamic Shakers	500–24,000 lbf / 5–10,000 hz (16 shakers)
Piezoelectric Shakers	1-6 kW / DC-80 khz (7 shakers)
High Speed Siren	100–45,000 hz (3)
1D/3D Laser Vibrometry	1–6 kW / 5–80,000 hz (4)
Other Capabilities	Blue Light, Photogrammetry, Travelling Wave

Structural

Maximum Load (tension/compression)	450,000/600,000 lbf
Maximum Load (torsional)	625,000 lbf-ft

Support Capabilities

GE has extensive capabilities for a turnkey test solution to meet your needs:

- Assembly & teardown in segregated facilities

- Instrumentation design, application, leadout, and checkout

- Design and build of tooling & support hardware

- Full customer data segregation

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