SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

NATIONAL TECHNICAL SYSTEMS (NTS)
12601 Southfield Road
Detroit, MI 48223
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ACOUSTICS & VIBRATION

Valid To: December 31, 2019 Certificate Number: 0214.07

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following types of tests:

Test Type	Test Capabilities[1]	Test Methods[2]
Vibration	Electro-Dynamic / Servo-Hydraulic Shakers Sine, Random, Sine on Random, Random on Random, Resonance Survey, Resonant Dwell, Windmilling **Random:** Frequency Range: Frequency (5 to 2,500) Hz Up to 50 Grms **Sine:** Frequency (5 to 2,500) Hz Up to 75 G's **Combined Environments**: Temperature: (-55 to 150) °C Temperature and Humidity Temperature: (20 to 150) °C RH: (5 to 98) %RH Temperature at 95 °C: 95% RH	MIL-STD-202 Method 201, 204, 213 (F, G); MIL-STD-810 Method 514, 516, 519, 528 (C, D, E, F, G); GMW 3172 (2005, 2007, 2008, 2010, 2012); RTCA/DO-160 (F, G, Sections 7, and 8); SAE J577, J575, J1455 (All SAE Revisions)
Highly Accelerated Life Test (HALT) - Highly Accelerated Stress Screening (HASS)	Temperature: (-100 to 200) °C Temperature ramp rate: 60 °C/min Vibration: 50 G's	GMW 3172

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Test Type	Test Capabilities[1]	Test Methods[2]
Shock	Electro-Dynamic / Servo-Hydraulic Shakers and Drop Shock Machine Up to 1,500 G's, 0.5msec Excitation: Single Axis (0 to 3,600) HZ **Combined Environments**: Temperature: (-55 to 150) °C Temperature and Humidity Temperature: (20 to 150) °C RH: (5 to 98) %RH Temperature at 95 °C: 95 %RH	MIL-STD-202 Method 207 (F, G); MIL-STD-810 (C, D, E, F, G); GMW 3172; RTCA/DO-160 (F & G); SAE: J577, J575, J1455 (All SAE Revisions)

On the following products or types of products:

Automotive, Aerospace, Medical, Military, and Electrical/Electronic/Mechanical Components & Assemblies

[1]Also using customer-specified methods directly related to the parameters and types of tests listed above.

[2]When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is expected to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA *R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories*.

Accredited Laboratory

A2LA has accredited

NATIONAL TECHNICAL SYSTEMS (NTS)

Detroit, MI

for technical competence in the field of

Acoustics and Vibration Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 19th day of January 2018.

President and CEO
For the Accreditation Council
Certificate Number 0214.07
Valid to December 31, 2019

For the types of tests to which this accreditation applies, please refer to the laboratory's Acoustics and Vibration Scope of Accreditation.