



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

DATASYST ENGINEERING & TESTING SERVICES, INC.
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MECHANICAL

Valid To: February 29, 2012

Certificate Number: 2107.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on mechanical assemblies and electrical components:

Vibration Characteristics (Sine, Random, Sine-on-Random)

Frequency	DC to 3000 Hz
	Up to 30,000 Force Pounds
Temperature	(-73 to +177) °C

Mechanical Shock

Pulse	(0.1 to 300) g's Electro-Dynamic
Temperature	(-73 to +177) °C
Humidity	(5 to 95) % RH (Temperature Dependent)

Mechanical Impact (Drop up to 45 feet)

Durability/Mechanical Cycling (Using Forces Produced by Hydraulic Actuation with Force and /or Position Feedback)

Environmental Simulation

Temperature	(-73 to +177) °C
Thermal Shock	(-73 to +177) °C within 3 seconds
Humidity	5% to 95% RH
Temperature/Altitude	(0 to +177) °C: Sea Level to 40,000 feet or 24 inches Hg
Durability/Fatigue	Force to 30,000 pounds Displacement to 10 inches Velocity 35 inches per second

Using customer supplied test methods or specifications related to the testing parameters listed above as well as the test specifications and test methods listed below.

Test:

Air Temperature/Humidity
 Air Temp/RH/Vibration (Sine &
 Random)/Shock/Fall
 Air Temp/RH/Vibration (Sine & Random)/Shock

NEBS

Temperature, Humidity, Altitude
 Shock
 Vibration

Temperature
 Vibration (Sine)
 Shock- Up to 300 G's
 Damp Heat
 Damp Heat (Cyclic)
 Temperature/Humidity (Cyclic)
 Vibration (Broadband)
 Strain Gage Application (Installation of Bonded
 Resistance Strain Gages)
 Mechanical Cycling/Durability

Packaged Products for Parcel Delivery Systems –
 150 lbs or Less
 Vibration, Environmental Conditions

Humidity (Steady State)
 Shock
 Vibration
 Vibration (High Frequency)
 Vibration (Random)

Vibration
 Shock
 Gunfire Vibration
 Icing/Freezing Rain

Altitude (up to 50,000 ft)
 Immersion
 Moisture Resistance 80% RH to 100% RH
 (except Hipot)
 Steady State Life
 Intermittent Life
 Agree Life (MIL-STD 781)
 Stabilization Bake (up to 170°C)
 Temperature Cyclic (-73 to 170) °C
 Mechanical Shock
 Vibration Fatigue
 Vibration (Variable Frequency)

Test Method:

ETSI EN300 019-2-1 v.2.1.2
 ETSI EN300 019-2-2 v.2.1.2
 ETSI EN300 019-2-3 v.2.1.3

GR-63-CORE, 5.1
 GR-63-CORE, 5.3
 GR-63-CORE, 5.4

IEC 68-2-1
 IEC 68-2-6
 IEC 68-2-27
 IEC 68-2-28
 IEC 68-2-30
 IEC 68-2-38
 IEC 68-2-64
 ASTM E1237

Cycling Using Forces Produced by Hydraulic
 Actuation with Force and/or Position Feedback

ISTA 3A, 2006

MIL-STD 202G, 103B
 MIL-STD 202G, 213B
 MIL-STD 202G, 201A
 MIL-STD 202G, 204D
 MIL-STD 202G, 214A

MIL-STD 810F, 514
 MIL-STD 810F, 516
 MIL-STD 810F, 519
 MIL-STD 810F, 521

MIL-STD 883E, 1001
 MIL-STD 883E, 1002
 MIL-STD 883E, 1004

MIL-STD 883E, 1005
 MIL-STD 883E, 1006
 MIL-STD 883E, 1007
 MIL-STD 883E, 1008
 MIL-STD 883E, 1010
 MIL-STD 883E, 2002
 MIL-STD 883E, 2005
 MIL-STD 883E, 2007

Test:

Test Method:

Humidity	MIL-STD 1344A, 1002
Temperature Cyclic	MIL-STD 1344A, 1003
Temperature Life	MIL-STD 1344A, 1005
Fluid Immersion	MIL-STD 1344A, 1016
Shock (Specified Pulse – Ed Shakers)	MIL-STD 1344A, 2004
Vibration	MIL-STD 1344A, 2005
Cable Pull-out	MIL-STD 1344A, 2009
Insert Retention	MIL-STD 1344A, 2010
Temperature and Altitude	RTCA DO 160, 4
Temperature Variation	RTCA DO 160, 5
Humidity	RTCA DO 160, 6
Operational Shock and Crash Safety	RTCA DO 160, 7
Vibration	RTCA DO 160, 8

SAE J1211 Recommended Environmental Practice for Electronic Equipment Environmental Factors and Test Methods – Following Sections:

Recommended Environmental Practice for Electronic Equipment	SAE J1211
Environmental Factors and Test Methods	SAE J1211, 4
Temperature	SAE J1211, 4.1
Humidity	SAE J1211, 4.2
Immersion and Splash	SAE J1211, 4.4
Altitude	SAE J1211, 4.6
Mechanical Vibration	SAE J1211, 4.7
Mechanical Shock	SAE J1211, 4.8

SAE J1455 Recommended Environmental Practice for Heavy-Duty Trucks Environmental Factors and Test Methods – Following Sections:

Recommended Environmental Practice for Heavy-Duty Trucks	SAE J1455
Environmental Factors and Test Methods	SAE J1455, 4
Temperature	SAE J1455, 4.1
Humidity	SAE J1455, 4.2
Immersion and Splash	SAE J1455, 4.4
Altitude	SAE J1455, 4.9
Mechanical Vibration	SAE J1455, 4.10
Mechanical Shock	SAE J1455, 4.11
Drop Testing	CFR 49 Para. 178.603



The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

DATASYST ENGINEERING & TESTING SERVICES, INC.

Delafield, WI


for technical competence in the field of

Mechanical 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 17th day of March 2010.





President & CEO
For the Accreditation Council
Certificate Number 2107.01
Valid to February 29, 2012
Revised January 31, 2012

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.