



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CASCADE ENGINEERING SERVICES, INCORPORATED

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MECHANICAL

Valid To: November 30, 2019

Certificate Number: 3521.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on: Automotive, Aerospace, Medical, Military and Electrical, Electronic and Mechanical components, assemblies and packaging:

Test Type/Equipment Capabilities

Test Method

Temperature Testing¹

Temperature range:

(-65 to +150) °C

IEC 60068-2-1;

IEC 60068-2-2;

IEC 60068-2-78;

MIL-STD 810E/F/G Sec. 502;

MIL-STD 883G/H, Sec. 1011;

RTCA DO-160 D, E, F, G Sec. 4.0

Thermal Shock/ Temperature Cycling¹

Temperature range:

(-65 to +150) °C

IEC 60068-2-14;

MIL-STD 202G Sec. 107;

MIL-STD 810E/F/G Sec. 501, 503, 520;

MIL-STD 883G/H, Sec. 1010;

RTCA DO-160 D, E, F, G Sec. 5.0

Temperature Humidity Testing

IEC 60068-2-30;

IEC 60068-2-38;

IEC 60068-2-78;

IEC 60068-3-4;

MIL-STD 810E/F/G Sec. 507;

MIL-STD 202G Sec. 103, 106;

MIL-STD 883G/H Sec. 1004;

RTCA DO-160 D, E, F, G Sec. 6.0;

ISTA 2A, 3A, 6A

Test Type/Equipment Capabilities

Test Method

Shock and Vibration Testing using Electro Dynamic Shaker ¹	IEC 60068-2-6; IEC 60068-2-27; IEC 60068-2-47; IEC 60068-2-59; IEC 60068-2-64;
Random:	
Frequency Range: (10 to 3,000) Hz	IEC 60068-2-59;
Shock: 45g's	IEC 60068-2-64;
Sine:	MIL-STD 810E/F/G Sec. 514.5, 516, 519.5;
Frequency Range: (10 to 3,000) Hz	MIL-STD 883G/H Sec. 2002, 2005, 2007; MIL-STD 202G Sec. 201, 204, 213, 214; RTCA DO-160 D, E, F, G Sec. 7.0, 8.0; ISTA 2A, 3A, 6A
Salt Fog Chamber Testing	IEC 60068-2-11; MIL-STD 202G Sec. 101; MIL-STD 810E/F/G Sec. 509; MIL-STD 883G/H Sec. 1009; RTCA DO-160 D, E, F, G Sec. 14.0
Constant Acceleration Testing ¹ Up to 20 G Forces	IEC 60068-2-7; MIL-STD 810E/F/G Sec. 513; MIL-STD 202G method 212A
Crash Safety Testing	RTCA DO-160 D, E, F, G Sec. 7.3
Altitude Testing ¹ (-1,500 to 100,000) Feet	RTCA DO-160, D, E, F, G Sec. 4.0
Temperature Range (-65 to +150) °C	
Rapid Decompression and Overpressure	RTCA DO-160, D, E, F, G Sec. 4.0
Waterproofness Testing	IEC 60529; MIL-STD 810E/F/G Sec. 506; RTCA DO-160, D, E, F, G Sec. 10.3.2 Drip Test and Sec. 10.3.3 Spray Test
Drop Testing	ISTA 2A, 3A, 6A
Compression Testing	ISTA 2A, 3A, 6A

¹Including Customer Specifications directly related to the test technologies and within the equipment capabilities/parameters listed above

²The laboratory is only accredited for testing activities outlined within the test methods listed above. Reference to any other activity within these standards, such as risk management or risk assessment, does not fall within the laboratory's accredited capabilities.



Accredited Laboratory

A2LA has accredited

CASCADE ENGINEERING SERVICES, INCORPORATED

Redmond, WA

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 29th day of November 2017.

A handwritten signature in black ink, written over a horizontal line.

President & CEO
For the Accreditation Council
Certificate Number 3521.01
Valid to November 30, 2019