



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

CASCADE ENGINEERING SERVICES, INCORPORATED
6640 185th Ave. NE
Redmond, WA 98052
Cliff Nahm Phone: 425 895-8617
Cliffn@cascade-eng.com

MECHANICAL

Valid To: November 30, 2023

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(s) ¹:

Temperature Testing ²
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 Cycling ²
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(s) ¹:

Shock and Vibration Testing using
Electro-Dynamic Shaker ²

Random:
Frequency Range: (10 to 3,000) Hz
Shock: 45g's

Sine:
Frequency Range: (10 to 3,000) Hz

IEC 60068-2-6;
IEC 60068-2-27;
IEC 60068-2-47;
IEC 60068-2-59;
IEC 60068-2-64;
MIL-STD-810E/F/G/H Sec. 514, 516, 519;
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;
ASTM B117

Constant Acceleration Testing ²
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 Testing²
(-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

¹When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA R101 - *General Requirements- Accreditation of ISO-IEC 17025 Laboratories.*

²Including Customer Specifications directly related to the test technologies and within the equipment capabilities/parameters listed above



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 17025:2017 *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 April 2017).



Presented this 14th day of February 2022.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3521.01
Valid to November 30, 2023

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