SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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MECHANICAL

Valid To: July 31, 2028 Certificate Number: 2582.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on aircraft components, automotive components, marine components, coatings, packaging and containers, electronics, and consumer goods:

Test:	Parameters:	Test Method(s) [1]:
Mechanical Vibration: Includes: Sine Random Sine-on-Random Gunfire Random-on-Random Loose Cargo Vibration	(1 to 3,000) Hz 12” Stroke 18,000 lbs Force	ASTM D4169; BellCore GR-63-CORE 5.4.2, 5.4.3; IEC 68-2-59, Test Fe; IEC 68-2-34, Test Fd; IEC 68-2-35, Test Fda; IEC 68-2-6, Test Fc; IEC 60601-1-11; JESD22 B103B; MIL-STD-810E, Method 514.4, 519.4; MIL-STD-810F, Method 514.5, 519.5; MIL-STD-810G, Method 514.6, 519.6; MIL STD-810H, Methods 514, 519; 526 MIL-STD-167-1 (A SHIPS); MIL-STD-202G, Method 201A, 204D, 214A; MIL-STD-883G, Method 2005.2, 2007.3, 2026; MIL-STD-883H, Method 2005.2, 2007.3, 2026; MIL-STD-1344A, Method 2005.1; RTCA DO-160D, E, F, G, Sec. 8.0; RTCA DO-227 6/23/1995, Sec. 2.3.1; SAE J1455, Sec. 4.10; SAE J1211, Sec. 4.7; UN ST/SG/AC.10/11 Rev. 5, Para. 38.3.4.3; ASTM D4728; ASTM D999

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Test:	Parameters:	Test Method(s) [1]:
Mechanical Shock	Drop Shock: Force 600 G Period (2 to 80) ms Vibe Shock: 3” Stroke 30 000 lbs Force	IEC 68-2-27, Test Ea; IEC 68-2-29, Test Eb; IEC 60601-1-11; JESD22 B104C Conditions A, C, D, E; MIL-STD-810E, Method 516.4; MIL-STD-810F, Method 516.5; MIL-STD-810G, Method 516.6; MIL STD-810H, Method 516; MIL-STD-202G, Method 213B; MIL-STD-883G, Method 2002.4; MIL-STD-883H, Method 2002.5; MIL-STD-1344A, Method 2004.1; RTCA DO-160D, E, F, G, Sec. 7.2; RTCA DO-227 6/23/1995, Sec. 2.3.2; SAE J1455, Sec. 4.11; SAE J1211, Sec. 4.8; UN ST/SG/AC.10/11 Rev. 5, Para. 38.3.4.4
Acceleration	r=36” 250 RPM	MIL-STD-810E, Method 513.4; MIL-STD-810F, Method 513.5; MIL-STD-810G, Method 513.6; MIL STD-810H, Method 513; MIL STD-202G, Method 212A; MIL-STD-1344A, Method 2011.1; RTCA DO-160D, E, F, G, Sec. 7.3
Thermal (Temperature): Includes: High/Low Temperature Thermal Shock Temperature Cycling	High +300°C Low -100 °C Temperature Shock (-70 to 150) °C Temperature Cycle (-100 to 150) °C	BellCore GR-63-CORE, Sec. 5.1.1.1 and 5.1.1.2; IEC 68-2-1 Test A; IEC 68-2-2, Test B; IEC 60601-1-11; JESD 22, Sec. A104C; MIL-STD-810E, Method 501.3, 502.3; MIL-STD-810F, Method 501.4, 502.4; MIL-STD-810G, Method 501.5, 502.5; MIL-STD-810E, Method 503.3, 520.1; MIL-STD-810F, Method 503.4, 520.2; MIL-STD-810G, Method 503.5, 520.3; MIL STD-810H, Methods 501; 502; 503; MIL-STD-202G, Method107G; MIL STD-883G, H, Method 1010.8; MIL-STD-1344A, Method 1003.1; RTCA DO-160D, E, F, G, Sec. 5.0; RTCA DO-227 6/23/1995, Sec. 2.3.3; SAE J1455, Sec. 4.1; SAE J1211, Sec. 4.1; UN ST/SG/AC.10/11 Rev. 5, Para. 38.3.4.2; RTCA DO-160D, E, F, G, Sec. 4; ASTM D4169; ASTM D4332

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Test:	Parameters:	Test Method(s) [1]:
Temperature / Humidity	(5 to 95) % RH	BellCore GR-63-CORE 5.1.1.3 and 5.1.2; IEC 68-2-30, Test Db; IEC 60601-1-11; MIL-STD-810E, Method 507.3; MIL-STD810F, Method 507.4; MIL-STD-810G, Method 507.5; MIL STD-810H, Method 507; MIL-STD-202G, Method 103B, 106G; MIL-STD-883G, H, Method 1004.7; MIL-STD-1344A, Method 1002.2; RTCA DO-160D, E, F, G, Sec. 6.0; RTCA DO-227 6/23/1995, Sec. 2.3.6; SAE J1455, Sec. 4.2; SAE J1211, Sec. 4.2
Salt Spray Salt Fog, Corrosion		ASTM B117; IEC 68-2-52, Test Kb; MIL-STD-810E, Method 509.3; MIL-STD-810F, Method 509.4; MIL-STD-810G, Method 509.5; MIL STD-810H, Method 509; MIL-STD-202G, Method 101E; MIL-STD-883G, H, Method 1009.8; MIL-STD-1344A, Method 1001.1; NEMA 250, Sec. 5.8 and 5.9; RTCA DO-160D, E, F, G, Sec. 14.0; SAE J1455, Sec. 4.3; SAE J2334; SAE J1211, Sec. 4.3
Altitude (Barometric Pressure) Temperature Altitude	(-1,500 to 70,000) ft (-70 to 140) ºC	MIL-STD-810E, Method 500.3; MIL-STD-810F, Method 500.4; MIL-STD-810G, Method 500.5; MIL STD-810H, Method 500; MIL-STD-202G, Method 105C; MIL-STD-202 E, F, and G Method 213; MIL-STD-883G, H, Method 1001.1; MIL-STD-1344A, Method 1011; SAE J1455, Sec. 4.9; SAE J1211, Sec. 4.6; UN ST/SG/AC 10/11 Rev. 5 Para. 38.3.4.1; RTCA DO-160 D, E, F, G, Sec. 4.0;
	(-50 to 80) ºC 8,000 to 55,000 ft.	RTCA/DO-160 IEC 60601-1-11; ASTM D4169;

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Test:	Parameters:	Test Method(s) [1]:
Altitude (Barometric Pressure) Temperature Altitude (cont.)	(-1,500 to 70,000) ft (-70 to 140) ºC	ASTM D6653
Thermal Vacuum	Pressure: (10^{-5}) Torr or Lower Temperature: (-100 to +190) ºC	SOP 011 Thermal Vacuum Test
Altitude: Decompression / Overpressure	Up to 100 psi	MIL-STD-810E, Method 500.3; MIL-STD-810F, Method 500.4; MIL-STD-810G, Method 500.5; MIL STD-810H, Method 500; RTCA DO-160D, E, F, G, Sec. 4.6; RTCA DO-227 6/23/1995, Sec. 2.3.4 and 2.3.5
Combined Environment Temp at Vibe	(1 to 3,000) Hz 3” Stroke 40,000 lbs Force Temperature Cycle (-70 to 150) ºC	MIL-STD-810E, Method 520.1; MIL-STD-810F, Method 520.2; MIL-STD-810G, Method 520.3; MIL STD-810H, Method 520
Drop Shock: Corner, Edgewise, Flat		ASTM D4169; BellCore GR-63-CORE, Sec. 5.3; ASTM D5276; MIL-STD-810; IEC 60601-1-11
Dust		IEC 60529, Sec. IP5X, IP6X; MIL-STD-810F, Sec. 510.4, Procedure III only
Waterproofness / Drip		IEC 60529, Sec. IP-X1, IP-X2, IP X3, X4, X5, X6, X7 and X8; MIL-STD-810E, Method 512.3; MIL-STD-810F, Method 512.4; MIL-STD-810G, Method 512.5; MIL-STD-810H, Method 512; NEMA 250, Sec. 5.7; RTCA DO-160F, Sec. 10.0; SAE J1211, Sec. 4.4; IEC 60601-1-11

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Test:	Parameters:	Test Method(s) [1]:
Icing / Freezing Rain		MIL-STD-810E, Method 521.1; MIL-STD-810F, Method 521.2; MIL-STD-810G, Method 521.3; MIL-STD-810H, Method 521; NEMA 250, Sec. 5.6; RTCA DO-160D, E, F, G, Sec. 24, Cat. A & C
UV Fluorescent Light Exposure		ASTM G154
Protection Against Solid Foreign Objects		IEC 60529, Sec. IPX5, IPX6, IP-1x, 2x, 3x, 4x; IEC 60601-1-11
HALT / HASS		Qualmark Guideline 9.0
Compression / Stacking		ASTM D4169; ASTM D642
Incline Impact		ASTM D4169; ASTM D880
Impact		ASTM D4169; ASTM D6344 (excluding sec 5.4 Pendulum)
Manual Handling		ASTM D4169; ASTM D6179

[1] When 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.

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Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY DENVER - LONGMONT

Longmont, CO

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 29th day of June 2026.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 2582.02
Valid to July 31, 2028

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

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