



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY AUBURN HILLS
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ACOUSTICS AND VIBRATION

Valid To: September 30, 2024

Certificate Number: 1123.08

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests using the parameters and methods listed below on the following products and materials: abrasives; automotive components; coatings; glass and glass products; textiles; instrument clusters; and circuit boards.

Test Type	Test Parameters	Test Method/ Standard
Acoustics Testing¹ Semi Anechoic Acoustics Testing Pressure Pulsation Rotational Noise Evaluation Injector Bench Testing	Ambient Noise Level < 20 dBA Sound Pressure Level (dB) and Loudness (Sones): 150 Hz cut off frequency to 20 kHz	Including but not limited to the following TL-6180 TL-6935 TL-7015
Random Vibration¹ Single Axis Vibration Testing. Electro-dynamic vibration tables. Controllers using client methods within the following parameters:	Displacement: up to 2in pk-to- pk Force: Up to 12,000 force-lbs Frequency: 5Hz to 3,000Hz Temperature: (-50 to +150) °C. Ramp rate 20°C/min max. Humidity: 30% to 95% RH	Including but not limited to the following: TL-6172 TL-6550 EPS-24126248 EPS-24138553 Ford CETP:00.00-E-412; ASTM D4728; FCA CS.00056; Ford CEPT:00.00-E-412; GMW 3172 ² ; GMW 3191; Hyundai/KIA ES95400-10; IEC 60068-2-27; IEC 60068-2-64; ISO 16750-3; JDQ 53.3; JIS D 1601; MIL-STD-202 (G,H) methods 201, 214;

Test Type	Test Parameters	Test Method/ Standard
		MIL-STD-81 0(G,H) method 514; Nissan 28401NDS01; SAE J 1455; TSC 7000G; USCAR-2; USCAR-21
<p>Sine Vibration¹</p> <p>Single Axis Vibration Testing. Electro-dynamic vibration tables. Controllers using client methods within the following parameters:</p>	<p>Displacement: up to 2in pk-to-pk</p> <p>Force: Up to 15,000 force-lbs</p> <p>Frequency: 5Hz to 3,000Hz</p> <p>Acceleration: Up to 100g (depending on product and fixture design & mass)</p> <p>Temperature: (-50 to +150) °C Ramp rate 20°C/min max.</p> <p>Humidity: 30% to 95% RH</p>	Including but not limited to the following: TL-6172 TL-6550 EPS-24126248 EPS-24138553 Ford CETP:00.00-E-412; ASTM D4728; FCA CS.00056; Ford CEPT:00:00-E-412; GMW 3172; GMW 3191; Hyundai/KIA ES95400-10; IEC 60068-2-27; IEC 60068-2-64; ISO 16750-3; JDQ 53.3; JIS D 1601; MIL-STD-202 (G,H) methods 204; MIL-STD-810 (G,H) methods 514; Nissan 28401NDS01; SAE J 1455; TSC 7000G; USCAR-2; USCAR-21
<p>Mechanical Shock¹</p> <p>Electro-dynamic vibration tables with mechanical shock controller using client methods within the following parameters:</p>	<p>Displacement: Up to 2 in pk-to-pk</p> <p>Force: Up to 26,000 lbf (half-sine)</p> <p>Acceleration: Up to 100g (depending on product and fixture design, mass, and pulse duration)</p> <p>Temperature: (-50 to +150) °C Ramp rate 20°C/m max.</p>	Including but not limited to the following: EPS-24138553 EPS-24126248 Ford CETP:00.00-E-412; ASTM D4728; FCA CS.00056; Ford CEPT:00:00-E-412; GMW 3172; GMW 3191; Hyundai/KIA ES95400-10; IEC 60068-2-27; IEC 60068-2-64; ISO 16750-3;

Test Type	Test Parameters	Test Method/ Standard
	Humidity: 20% to 95% RH Up to 100g (electrodynamic) (depending on product and fixture design, mass, and pulse duration)	JDQ 53.3; JIS D 1601; MIL-STD-202 (G, H) methods 203, 213; MIL-STD-810 (G, H) method 514; Nissan 28401NDS01; SAE J 1455; TSC 7000G; USCAR-2; USCAR-21
Vibration Transmissibility ¹	Frequency: 5Hz to 3,000Hz	GMW3172 ²
Handling Drop ¹		Including but not limited to the following: EPS-24126248 GMA3172 ² USCAR-2 ISO 16750-3 IEC 60068 2-32, Procedure 1 CS00056 section 5.4.6
Mechanical Impact ¹		Including but not limited to the following: TL-6987 EPS-24138553 EPS-24126248
Pendulum Impact ¹		Including but not limited to the following: TL-7003 EPS-24138553 EPS-24126248

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

² This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn including but not limited to GMW 3172 (2008, 2010, 2012, 2015, 2018).



Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY AUBURN HILLS

Auburn Hills, MI

for technical competence in the field of

Acoustic and Vibration 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 laboratory also meets the requirements of any additional program requirements in the Acoustics and Vibration field. 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 6th day of September 2022.

A blue ink signature of Mr. Trace McInturff.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1123.08
Valid to September 30, 2024
Revised September 22, 2023

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