

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY KOKOMO

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ELECTRICAL

Valid To: May 31, 2026 Certificate Number: 1123.06

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following <u>electronics testing</u>:

Test Type	Test Parameters
Voltage	
AC – Measure ¹	10 μV to 1 kV, 1 Hz to 2 MHz
AC – Generate ¹	1 mV to 10 V, 1 Hz to 1.3 MHz
DC – Measure ¹	1 μV to 1000 V
DC – Generate ¹	1 μV to 3,000 V
Current	
AC/DC Current Measure ¹	10 μA to 600 A
DC – Generate ¹	10 μA to 600 A
Resistance Measure	
Measure ¹	100 μohms to 1.6 x 10 ⁹ ohms
Generate ¹	100 μohms to $1.6 \times 10^{10} \Omega$
Dielectric Testing	
AC^1	(100 to 4,000) V
DC^1	(100 to 1,100) V
Frequency	
Measure ¹	1 Hz to 200 MHz
Generate ¹	1 Hz to 80 MHz
Capacitance ¹	100 pF to 10 μF
Resistivity ¹	$1 \times 10^6 \Omega$ to $1 \times 10^{10} \Omega$

Electrical Tests Based on GMW 3172:	
- Jump Start	GMW 3172^2
- Reverse Polarity	
- Over Voltage	

- State Change Waveform

Characterization

- Ground Path Inductance Sensitivity

- Parasitic Current

- Power Supply Interruptions - Battery Voltage Dropout

Sinusoidal Superimposed Voltage - Pulsed Superimposed Voltage

- Intermittent Short Circuit to Battery/Ground

- Continuous Short Circuit to Battery/Ground

- Multiple Power and Multiple Ground **Short Circuit Including Pass** Through

- Open Circuit Single Line Open Circuit Multiple Lines

Ground Offset

- Power Offset

Overload – All Circuits

- Overload - Fuse Protected Circuits

- Insultation Resistance

Crank Pulse Capability and Durability

Switched Battery Line

- Fretting Corrosion Degradation

²This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn including but not limited to GMW 3172 (2008, 2010, 2012, 2015, 2018)²

<u>Test Name</u>	<u>Test Method</u>
Dielectric Withstanding Voltage	MIL-STD-202G, Method 301
Insulation Resistance	MIL-STD-202G, Method 302
DC Resistance Resistance Temperature Characteristic	MIL-STD-202G, Method 303 MIL-STD-202G, Method 304
Electrical Tests Based on USCAR-2:	
Dry Circuit Resistance	USCAR-2
Voltage Drop	USCAR-2
Insulation Resistance	USCAR-2

On the following types of materials or products: Consumer based, Automotive Components; Electrical Devices; Circuit Boards; and Electrical Components

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



Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY KOKOMO

Kokomo, IN

for technical competence in the field of

Electrical 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 23rd day of July 2024.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council Certificate Number 1123.06

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