



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ELEMENT MATERIALS TECHNOLOGY DETROIT - WARREN 11 MILE
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ELECTRICAL

Valid To: December 31, 2020

Certificate Number: 0098.12

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests:

METHOD¹

TEST

ASTM D257

DC Resistance or Conductance of Insulating Materials

Chrysler PF 9590
(Sections 2.5.4, 2.5.5,
2.6.3.3d, 2.6.4, 2.6.5,
2.6.6.7c, and 2.6.7.3c)

Automotive Electrical Device Connection Systems

DOE/ID-11069

Ineel Battery Test Manual for Test: Static Capacity, Hybrid Pulse Power Characterization, Self-Discharge, Cold Cranking, Thermal Performance, Efficiency, Operating Set Point Stability, Cycle Life, Calendar Life, Reference Performance, Impedance Spectrum Testing

DOE/NE-ID-11173

FreedomCAR Ultracapacitor Test Manual

GMN 3148TP
Sections 2.3.1.9,
2.3.1.11, and 4.3.11

Lamps – Component Laboratory Tests

GMN 8020TP
Section 4.3.1.2.3
(*except photometrics*)

Lamps – Development and Validation Test Procedures

METHOD

TEST

GMW 3172
Sections 8.2 and 9.2

Specification for Electrical/Electronic Component
Analytical/Development/Validation (A/D/V) Procedures for
Conformance to Vehicle Environmental, Reliability, and Performance
Requirements

John Deere JDQ 201
Table #2, 24, 26, 29

Testing of Electronic and Electrical Devices – Environmental and
Mechanical Loads

John Deere JDQ 202:
Section JDQ 202A
Section JDQ 202B
Section JDQ 202C
Section JDQ 202D
Section JDQ 202H
Section JDQ 202S
Section JDQ 202U
Section JDQ 202W
Section JDQ 202Y
Section JDQ 202Z

Testing of Electronic and Electrical Devices – Electrical Transient
and Steady-State Loads

SAE J560
Sections 6.1.1 and 6.1.2

Primary and Auxiliary Seven Conductor Electrical Connector for
Truck-Trailer Jumper Cable

SAE J1798

Rating of Electric Vehicle Battery Modules

SAE J2288

Life Cycle Testing of Electric Vehicle Modules

Nissan 26010NDS00,
Section 3-6-21
(*except photometrics*)

Front Lamp



<u>Parameter</u>	<u>Range</u>	<u>Test Method</u>
Voltage –		
AC – Measure ²	100 μ V to 40 kV	ASTM D149
AC – Generate ²	100 mV to 10 V @ 1Hz to 30 MHz, 10V to 40V @ 1 Hz to 1.3 MHz 3 V to 40 kV, (50 to 60) Hz (3 to 300) V, (45 to 1,000) Hz	ASTM D149
DC – Measure ²	1 μ V to 15 kV	GMW 3172, Sections 8.2 and 9.2
DC – Generate ²	100 μ V to 1.5 kV	GMW 3172, Sections 8.2 and 9.2
Resistance ²	100 μ Ohms to 1.6 x 10 ¹⁶ Ohms	GMW 3431
Resistivity ²	1 x 10 ⁶ Ohms to 1.6 x 10 ¹⁶ Ohms	ASTM D257
Frequency ²	1 Hz to 1 gHz, Measure 1 Hz to 30 MHz, Generate	GMW 3172, Sections 8.2 and 9.2
Dielectric Testing ² –		
DC	100 V to 15 kV	ASTM D149
AC	100 V to 40 kV	
Inductance ²	100 μ H to 1000 H	DOE NE-ID-11173 FreedomCAR Ultracapacitor Test Manual
Capacitance ²	100 pF to 10 mF	DOE NE-ID-11173 FreedomCAR Ultracapacitor Test Manual

On the following products and components: motors, alternators, generators, controllers, starters; coils, inductors, transformers; connectors, relays, switches, solenoids, resistors, capacitors, cables, feeders; conductive materials; printed circuits; batteries (hybrid and lithium/ion); exterior/interior lighting components.

¹The laboratory is accredited for the test methods listed above. The accredited test methods are used in determining compliance with any material specifications included on this Scope; however, the inclusion of these material specifications on this Scope does not confer laboratory accreditation to the material specifications. Inclusion of these material specifications on this Scope also does not confer accreditation for every method embedded within the specification. Only the methods listed above on this Scope are accredited.

²Also using customer specific test methods utilizing any combination of test equipment parameters and ranges listed above.



Accredited Laboratory

A2LA has accredited

ELEMENT MATERIALS TECHNOLOGY DETROIT – WARREN 11 MILE

Warren, MI

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 28th day of August 2019.

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

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 0098.12 (Formerly 0038.03)
Valid to December 31, 2020
Revised August 20, 2020

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