



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

GM GLOBAL BATTERY SYSTEMS LAB - SHANGHAI

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ELECTRICAL

Valid To: September 30, 2020

Certificate Number: 2954.02

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

**Test Technology**

**Test Method(s)**<sup>1,2</sup>

**Parameters:**

DC Voltage – Generate & Measure: 0 to 420 V

DC Current – Generate & Measure:  $\pm 1,000$  A

Temperature – Generate & Measure: -40 to 85 °C

Humidity – Generate & Measure:

25 °C at (30 to 95) %RH

Flow – Generate & Measure:

Range – 0 to 30 L/min

Displacement – Generate & Measure

Range – 0 to 200 mm

Pressure (Force) – Generate & Measure

Range – 0 to 200kPa

Load – Generate & Measure

Range – 0 to 15kN

Using customer specified methods relating to the tests listed below

***Battery Packs, Cells, Modules and Components***<sup>1,2</sup>

Static Capacity and Hybrid Pulse Power  
Characterization (HPPC) Test for Rechargeable  
Energy Storage Systems (RESS)

GMW16460

Static Capacity and HPPC with Long Duration Pulse  
for RESS

GMW16461

**Test Technology**

**Test Method(s)<sup>1,2</sup>**

***Battery Packs, Cells, Modules and Components***<sup>1,2</sup>

Self Discharge Storage for RESS	GMW16463
Frost Dew	GMW16463
Cold Crank for RESS	GMW16464
Cycle Life Reference Performance Test (RPT)	DOE/ID-11069; INL/EXT-07-12536; INEEL/EXT 0401986
Reverse Grade	GMW16465
Calendar Life	GMW16478
Cell Hybrid Power Assist Cycle Lift	GMW16935
Cell Fast Charge Cycle Life	GMW16936
Cell Charge Depleting Cycle Life	GMW16937
Safety and Abuse	SAE J2464

***Product Family***

Generic Rechargeable Energy Storage System (RESS) Standards <i>*excluding vibration</i>	GMW16390; GMW16390-December 2015
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<sup>1</sup> Also using customer-specified methods directly related to the types of tests and parameters listed above.

<sup>2</sup> When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is expected to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA R101- *General Requirements: Accreditation of ISO-IEC 17025 Laboratories*.





## Accredited Laboratory

A2LA has accredited

### GM GLOBAL BATTERY SYSTEMS LAB-SHANGHAI

*Shanghai, People's Republic of China*

for technical competence in the field of

### Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *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 10<sup>th</sup> day of September 2018

A handwritten signature in black ink, written over a horizontal line.

President and CEO  
For the Accreditation Council  
Certificate Number 2954.02  
Valid to September 30, 2020  
Revised June 30, 2020

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