### **DTB ENGINEERING & TEST DIVISION**



### **BATTERY TESTING**

DTB provides testing services to ensure the

safety of Lithium Ion (Li-ion) batteries. While Li-ion batteries offer several advantages over conventional battery types, it's important to test and validate Li-ion batteries and Li-ion powered devices to assure risks are mitigated.

As the automotive, heavy equipment, aerospace, defense, and aviation markets shift to EV, testing services also must shift to meet government compliance criteria while addressing new technological shifts. DTB provides a wide range of Li-ion testing services in order to support the changing landscape.

# **COMPREHENSIVE TESTING**

### Some of the product types, systems, and applications we test —

- Battery Packs
- Chargers
- Electric & Hybrid Vehicles
- Primary Battery Systems (Alkaline, Lithium)

### **RELIABLE RESULTS**

#### Testing performed by experienced professionals —

- Abuse Testing
- Ampacity
- Application
- Chemical Composition
- Construction
- Continuity
- Continuous Charging
- Crush

- Dielectric Voltage Withstand
- Enclosure Integrity
- Fault Analysis
- Fire Exposure
- Hazardous Monitoring
- Heating
- HV Exposure
- Insulation Resistance

- Our battery testing services include lithiumlon battery safety, performance, fire and abuse, and UN transportation testing (UN/DOT 38.3).
- Mold Stress-Relief Distortion
- Pack Construction
- Performance
- Puncture
- Rollover
- Separator Shutdown
- Thermal Stability

### DTB IS THE LARGEST INDEPENDENT TEST LAB IN THE U.S.

Service Disconnects

Uninterruptible Power Supplies

Super Capacitors

• Wire Harnesses



### **DTB ENGINEERING & TEST DIVISION**

### **BATTERY TESTING**

### Test your battery in real-world conditions...

Analyze response and performance in a wide range of **environmental simulations** 

- Sand and Dust
- · Salt Fog
- Immersion
- Thermal Vacuum

 Low Pressure (Altitude)

- Temperature/ Humidity
- Fungus
- HALT/HASS





EMI/EMC Testing of a Battery as Installed in a System



Saltwater Testing

DTB tests to industry standards, including relevant MIL-STD specifications, IEEE/ANSI, EN, CISPR requirements, IEC 62133, UN/DOT 38.3, UL 2054, UL 2580, UL 1642, IEC 62660, ISO 12405, SAE J2380, SAE J2464, SAE J2929 for our diverse customer base.

## TESTING SERVICES

#### Electromagnetic

- EMI/EMC
- ESD
- RF Emissions
- RF Immunity/Susceptibility
- Overcharge
- Export Electrical Transients
- Imported Electrical Transients

#### **Dynamics & Vibration**

- Vibration \*
- Shock/Drop
- Seismic

\* Including T5500 with extreme capability!

- Imbalanced Charging
- Charge/Discharge Cycling
- Forced Discharge
- Limited Power Source
- Steady Force
- Capacitance
- Short Circuit Test

### **Engineering Services**

- Materials Analysis
- Failure Analysis
- Corrosion & Surface Evaluations

