



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CURTIS-STRAUS, LLC ¹
One Distribution Center Circle, Suite # 1
Littleton, MA 01460
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MECHANICAL

Valid until: July 31, 2019

Certificate Number: 1627.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location listed above, *as well as the two satellite laboratory locations listed below*, to perform the following tests on the following types of products: Environmental, Medical, Consumer, Industrial, Automotive, Commercial, Telecommunications, Military, Marine, Test & Measurement, Lighting, Outdoor, Aerospace:

<u>Test:</u>	<u>Test Method(s):</u>
Acoustic	GR-63-CORE; ISO 7779; ISO 3744; GR-487-CORE
Ingress Protection (IP)	IEC 60529, EN 60529 Sections IPX1-4; ETS 300 019-2-2; IEC 60068-2-18, Sections 1.2 and 2.2; EN 60068-2-18, Sections 1.2 and 2.2; Daimler-Chrysler 10611
Ultraviolet Resistance	GR-487-CORE; ASTM G155; ISO 4892-2
Brush Fire Resistance	GR-950-CORE; GR-487-CORE
Water Resistance Rain, Lawn Sprinkler, Immersion	GR-487-CORE; GR-950-CORE

¹*This accreditation covers testing performed at the main laboratory listed above, and the two satellite laboratories listed below:*

CURTIS-STRAUS, LLC
168 Ayer Rd.
Littleton, MA 01460

<u>Test:</u>	<u>Test Method(s):</u>
<i>Thermal</i>	
Temperature Tests * (-70 to 125) °C	GR-63-CORE; ETS 300 019-2-1/IEC 60068-2-1 Ab/EN 60068-2-1 Ab; ETS 300 019-2-1/IEC 60068-2-2 Bb/EN 60068-2-2 Bb; MIL-STD-810G
Temperature and Humidity Tests * (-70 to 125) °C (10 to 95) %RH	Daimler-Chrysler 10611; ETS 300 019-2-3/IEC-60068-2-30 Db, -14 Nb, -1 Ab/Ad, -2 Bb/Bd, -56 Cb; GMW 3172; GR-49-CORE; GR-63-CORE; GR-418-CORE; GR-950-CORE; MIL-STD-810G
Thermal Shock /Aging * (-70 to 125) °C	GR-487-CORE, Sections 3.27 and 3.34.2; GR-49-CORE; GR-950-CORE; GR-3108-CORE; MIL-STD-810G; Chrysler/Fiat CS 11982
Altitude * 60m below to 20,000m above sea level	GR-63-CORE; MIL-STD-810G
Heat Dissipation (Power)	GR-63-CORE
Heat Dissipation (Surface Temp)	GR-63-CORE
Freeze/Thaw	GR-950
Solar Load: Exposure to High Temperature	GR-487-CORE; GR-3108-CORE
<i>Mechanical</i>	
Rodent Resistance (Rockwell)	GR-950-CORE
Conductor Pullout	GR-49-CORE
RJ Plug Mechanical (Insertion)	GR-49-CORE
Connector Torque	GR-49-CORE
Ingress Protection (IP)	IEC 60529, Sections IPX5-8 and IP1-6X; ETS 300 019-2-2/IEC 60068-2-18, Sections 1.2 and 2.2; Daimler-Chrysler 10611
Fire Burn (GR63/Verizon)	GR-63-CORE; ANSI T1.319
Needle Flame	GR-63-CORE; ANSI T1.307
Drop Tests: Packaged / Unpackaged Handling	Daimler-Chrysler 10611; ETS 300 019-2-2/IEC 60068-2-32 Ed; ETS 300 019-2-3/68-2-27 Ea; GMW 3172; GR-63-CORE; GR-487-CORE; GR-950-CORE; MIL-STD-810G



<u>Test:</u>	<u>Test Method(s):</u>
<i>Mechanical (cont.)</i>	
Vibration * Earthquake: Operating Vibration Hydraulic: (1 to 600) Hz, 10g Electro-dynamic: (1 to 3,500) Hz, 100g	GR-63-CORE; GR-487-CORE; ETS 300 019-2-2; IEC 60068-2-6 Fc, -64 Fh; EN 60068-2-6 Fc, -64 Fh; ETS 300 019-2-3; IEC 60068-2-57 Ef; EN 60068-2-57 Ef; ETS 300 019-2-3; IEC 60068-2-6 Fc, -64 Fh; EN 60068-2-6 Fc, -64 Fh; MIL-STD-810G; Daimler-Chrysler 10611
Shock (Bump)	Daimler-Chrysler 10611; ETS 300 019-2-3/68-2-27 Ea; MIL-STD-810G
Illumination	GR-63-CORE
Door Restrainers (Vertically-Hinged Doors)	GR-487-CORE
Horizontally-Hinged Doors	GR-487-CORE
Lifting Details	GR-487-CORE
Pole Mounted, Aerial Cabinets	GR-487-CORE (R3-165, R3-168)
Water Resistance Rain, Lawn Sprinkler, Immersion	GR-487-CORE; GR-950-CORE
Wind Resistance	GR-487-CORE
Impact Resistance	GR-487-CORE; GR-950-CORE; GR-49-CORE
Coating Defects	GR-950-CORE
Bond Clamp Retention	GR-950-CORE
Cable Clamping	GR-950-CORE
Sheath Retention	GR-950-CORE
Cable Flexing	GR-950-CORE
Cable Torsion	GR-950-CORE
Compression	GR-950-CORE
Assembly	GR-950-CORE
Metal Coating Flexibility	GR-487-CORE; ASTM D2794
<i>Chemical</i>	
Polymeric and Other Non-Metallic Materials-Chemical Resistance	GR-950-CORE; GR-487-CORE; Daimler-Chrysler 10611
Hygroscopic Dust	GR-63-CORE; GR-3108-CORE
Salt Fog/Corrosion	GR-487-CORE; ASTM B117; GR-950-CORE; GR-3108-CORE; MIL-STD-810G; Daimler-Chrysler 10611

<u>Test:</u>	<u>Test Methods:</u>
<i>Marine Standards</i> (Thermal / Mechanical / Chemical / Electrical)	DNV Standard for Certification No. 2.4 (2006); Lloyd's Register Type Approval System (2015); IACS req. 2014, Rev.6 (2014:E10); ABS Steel Vessels 2016, Part 4, Chapter 9, Section 8; ABS High Speed Craft 2015 Part 4 Section 11; BV Marine Rules Part C, Chapter 3, Section 6; 46 CFR Part 162.060-30; DNVGL CG-0339; MEPC.174(58); MEPC 107(49) Part 3; BV BWMS Guidance Note NI 538 DT R01 E
<i>Automotive Standards</i> (Thermal / Mechanical / Chemical / Electrical)	VW 8000; BN LV124; BMW-LV-124; LV-124

CURTIS-STRAUS, LLC
80 West Street
Westford, MA 01886

<u>Test:</u>	<u>Test Methods:</u>
Bullet Resistance	GR-950-CORE; GR-487-CORE, Section 6.6.1

The methods listed above on this Scope are accredited. The following test methods are guidelines utilized to perform the above test types for Verizon and AT&T:

Verizon NEBS Compliance Clarification Document	VZ TPR.9305
AT&T NEBS Guideline	AT&T TP76200

*Also using customer supplied methods directly related to the test technologies listed above.





Accredited Laboratory

A2LA has accredited

CURTIS-STRAUS, LLC

Littleton, MA

for technical competence in the field of

Mechanical 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 8 January 2009).



Presented this 20th day of September 2017.

A handwritten signature in black ink, appearing to read "L. Sen", written over a horizontal line.

President and CEO
For the Accreditation Council
Certificate Number 1627.02
Valid to July 31, 2019

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