

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

GREENING TESTING LABORATORIES, INC. 19465 Mt. Elliott Avenue Detroit, MI 48234 Charles Greening, Jr. Phone: 313 366 7160

MECHANICAL

Valid To: March 31, 2026

Certificate Number: 1575.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following test types on the following products: <u>Brakes, Friction Material, Automatic</u> <u>Transmission Fluid and Components, Clutches, and Wheels.</u>

Accreditation is granted to perform these test types within, but not limited to, the following industries: Aerospace, Automotive, Commercial Vehicles, Military, and Renewable Energy

<u>Test</u>

Typical Test Method(s)²

Dynamometer Testing¹

Torque¹

(1 to 500) lbf/ft (10 to 5,000) lbf/ft (100 to 20,000) lbf/ft

Pressure¹ Pneumatic (1 to 200) lbf/in² Hydraulic (1 to 2,900) lbf/in²

Rotational Speed¹ (0.1 to 5) r/min, (1 to 14,000) r/min

Temperature¹ (32 to 1,800) °F

Air Speed¹ (5 to 50) mi/hr

Displacement¹ Hydraulic (up to 3 in³) Linear (up to 12 in)

Force¹ (5 to 5,000) lbf FMVSS TP-121D-01; ECE-R90; SAE J2115, SAE J2521, SAE J2784

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FMVSS TP-121D-01; ECE-R90; SAE J1073, SAE J2115, SAE J2521, SAE J2784

FMVSS TP-121D-01; ECE-R90; SAE J661, SAE J2115, SAE J2521, SAE J2784; VESC V-3

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Test	<u>Typical Test Method(s)²</u>
Dynamic Cornering Fatigue Testing	SAE J267, SAE J328, SAE J1095
Noise Testing	
Frequency (10 Hz to 20 kHz)	SAE J2521
Sound Pressure Level (50 to 150) dBA	SAE J2521
Hardness Testing	
Brinell (3,000 kgf) Gogan Rockwell (HRLW, HRMW, and HRRW only)	ASTM E10; ISO 6506-1; GTL3902 SAE J379 ISO 2039-2; JIS D4421; Kenya Standard DKS249
Compressibility Testing	
Brake Lining Compressive Strain Test (1 to 100,000) N (0.1 to 25,000) Microns	ABNT NBR 9301; GMW 15334; ISO 6310; SAE J2468, SAE J3079; ASTM D695, D790
Shear Testing	
(1 to 130,000) N	ABNT NBR 5537; Kenya Standard DKS249; ISO 6311, ISO 6312, ISO 6314; SAE J840
Specific Gravity	SAE J380
Swell, Growth, and Dimensional Stability Testing	ABNT NBR 5505; ISO 6313; SAE J160
Tensile/Compressive Strength Testing	
(1 to 130,000) N	ISO 6892
Wet Friction Testing	SAE J2487, SAE J2488, SAE J2489, SAE J2490, SAE J2964; DEXRON VI (Appendix C, App. D, App. J); MERCON V (Appendix 4, Appendix 5)
Vibration Testing	
Random: (5 to 3,000) Hz Sine: (5 to 2,500) Hz 6600 lbf Shock: ½ Sine Pulse, 32G, 10 ms duration	MIL-STD-810G; GMW15367

¹ The following test methods are also conducted using the testing capabilities listed above: D³EA[®], Kenya Standard DKS249, ISO 26865, ISO 26866, ISO 26867, JASO C-406, JASO C-407, JASO C-427, JASO C-441, SAE J2522, SAE J2684, SAE J2690, SAE J2707, SAE J2928, SAE J3006, TMC RP-628, U.S. Dept. of Defense ATPD-5324-A, Technical Standard NTC COLOMBIAN 1715

²Using customer supplied specifications directly related to the types of tests listed above.

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Accredited Laboratory

A2LA has accredited

GREENING TESTING LABORATORIES, INC.

Detroit, MI

for technical competence in the field of

Mechanical 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 8th day of January 2024.

Mr. Trace McInturff, Vice President, Accreditation Services For the Accreditation Council Certificate Number 1575.01 Valid to March 31, 2026