



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, 2022

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: Brakes, Friction Material, Automatic Transmission Fluid and Components, Clutches, and Wheels.

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

Test

Typical Test Method²

Dynamometer Testing¹

Torque¹

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

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

Pressure¹

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

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

Rotational Speed¹

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

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

Temperature¹

(32 to 1,800) °F

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

Air Speed¹

(5 to 50) mi/hr

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

Displacement¹

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

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

Force¹

(5 to 5,000) lbf

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

Dynamic Cornering Fatigue Testing

SAE J267, SAE J328, SAE J1095

<u>Test</u>	<u>Typical Test Method²</u>
<u>Noise Testing</u>	
Frequency (10 Hz to 20 kHz)	SAE J2521
Sound Pressure Level (50 to 150) dBA	SAE J2521
<u>Hardness Testing</u>	
Brinell (3,000 kgf)	ASTM E10; ISO 6506-1
Gogan	SAE J379
Rockwell (HRLW, HRMW, and HRRW only)	ISO 2039-2; JIS D4421
<u>Compressibility Testing</u>	
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
<u>Shear Testing</u>	
(1 to 130,000) N	ABNT NBR 5537; ISO 6311, ISO 6312, ISO 6314; SAE J840
<u>Specific Gravity</u>	
	SAE J380
<u>Swell, Growth, and Dimensional Stability Testing</u>	
	ABNT NBR 5505; ISO 6313; SAE J160
<u>Tensile/Compressive Strength Testing</u>	
(1 to 130,000) N	ISO 6892
<u>Wet Friction Testing</u>	
	SAE J2487, SAE J2488, SAE J2489, SAE J2490, SAE J2964; DEXRON VI (Appendix C, App. D, App. J); MERCON V (Appendix 4, Appendix 5)
<u>Vibration Testing</u>	
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

¹ The following test methods are also conducted using the testing capabilities listed above:
D³EA[®], 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

² Also using proprietary, customer supplied, or other commercial or industry test methods directly related to the capabilities listed above.



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 23rd day of December 2019.

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

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1575.01
Valid to March 31, 2022

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