



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Innovative Testing Solutions, Inc.

32680 Townley Street
Madison Heights, MI 48071

Fulfills the requirements of

ISO/IEC 17025:2017

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

Jason Stine, Vice President

Expiry Date: 25 February 2027

Certificate Number: AT-1528



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
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).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Innovative Testing Solutions, Inc.
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TESTING

Valid to: **February 25, 2027**

Certificate Number: **AT-1528**

Electrical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
DC Current Measurement: ¹ 1 micro-amperes up to 2000 amperes DC Current Source: 10 milli-amperes up to 2000 amperes	USCAR-2 USCAR-15 USCAR-20 USCAR-21 USCAR-30 USCAR-38 USCAR-45 GMW3191 FCA PF.90012 Nissan 24352NDS00[3] Nissan 24014-NDS01[7] MES PA 67001 SAE J2863	Electrical Components	DC Shunts Clamp-on Ammeter DMM
DC Voltage Measure: 10 micro-volts to 1000 volts DC Voltage Source: 10 milli-volts to 1000 volts	USCAR-2 USCAR-15 USCAR-20 USCAR-21 USCAR-30 USCAR 38 USCAR-45 Nissan 24012 NDS05 [1] Nissan 24352NDS00 [3] GMW3191 FCA PF.90012 SAE J2863 Nissan 24014-NDS01[7] MES PA 67001 Takata 1102706-AB Nissan 24012 NDS05 [1]	Electrical Components	DMM Micro-Voltmeter

Electrical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or	Key Equipment or Technology
Resistance 1 milli-ohms to 120 Mega-ohms Resistance LLCR / Dry Circuit 100 micro-ohms to 10 ohms	GMW3191 MES PA 67001 Toyota TSC1000G Mil Std 202 Method 303 Nissan 24012 NDS05 [1] USCAR-21 USCAR-45 Takata QES-001 FCA	Electrical Components	DMM MicroOhmmeter
Insulation Resistance DC Electrical 50 volts to 1000 volts; 1 Mega-ohm to 200 Giga-ohms	USCAR-2 USCAR-15 Toyota TSC1000G GMW3191 FCA PF.90012 FCA PF.90051 MES PA 67001 Mil Std 202 Method 302 Nissan 24014-NDS01[7] Nissan 24012 NDS05 [1]	Electrical Components	Megger
Dielectric Strength (0.1 to 5) kVAC (0.1 to 6) kVDC	MES PA 67001 Toyota TSC1000G GMW3191 Mil Std 202 Method 303	Electrical Components	Hipot

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Force (-10000 to +10,000) lbf	EIA 364-29B EIA 364-35B EIA 364-37B FCA PF.90012 GMW3191 MES PA 67001 Honda 3210Z-TGVA-A010-M1 USCAR-2 USCAR-15 USCAR-21 USCAR-30 USCAR-38 USCAR-45 Nissan 24352NDS00 [3] Nissan 24014-NDS01[7] Takata 1102706-AB FCA PF.90154 FCA .90051	Electrical & Mechanical Components	Tensile Testers
Torque (0.5 to 1200) in-lbs.	USCAR-15 Honda 3210Z-TGVA-A010-M1	Electrical & Mechanical Components	Torque Wrenches
Free Fall (Drop Test)	GMW3172 USCAR-2 FCA .90051 FCA CS.00056 Honda 3210Z-TGVA-A010-M1	Electrical & Mechanical Components	Tape Measure 25'
Seal Integrity	USCAR-15 USCAR-2 FCA PF.90012 FCA PF.90051 GMW3191 MES PA 67001 GMW17136 Nissan 24014-NDS01[7] Renault 36-05-019/-F	Electrical & Mechanical Components	Gas Vac / Pressure Pump Pressure / Vac Gauges Digital Leak Tester
Electrical & Mechanical Durability Cycling	USCAR-2 Section 5.3.4 USCAR-15 Section 6.2 SAE Intl. J2863 Section 5.4.8	Electrical & Mechanical Components	Misc. Test Equipment
Water Spray	USCAR-15 USCAR-2 GMW3191 FCA PF.90012 Honda 3210Z-TGVA-A010-M1	Electrical & Mechanical Components	HP Sprayers IPX-9 Spray Chamber Pressure Gauges
Terminal Cross-Sectioning	USCAR-21 USCAR-45 USCAR-38	Electrical Terminals	Cross-Section Stand

Mechanical

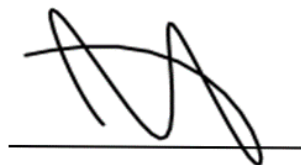
Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Environmental Exposure -70°C to 155°C; 10% RH to 95% RH	USCAR-2 USCAR-15 USCAR-20 USCAR-21 USCAR-30 USCAR-38 FCA PF.90012 GMW3172 GMW3191 MES PA 67001 Mil Std 1344A Method 1003.1 Nissan 24014-NDS01[7] Nissan 24352NDS00 [3] Takata 1102706-AB FCA PF.90051 FCA PF-10099	Electrical & Mechanical Components	Environmental Chambers Circulating Ovens
High Temperature Exposure and Temperature Rise 25°C to 350°C	USCAR-15 USCAR-2 GMW-3191	Electrical & Mechanical Components	Environmental Chambers Circulating Ovens
Vibration – Sine, Random and Sine on Random and Combined Conditions Up to 8400 force pounds; 4 inch stroke Combined Conditions: (5 to 6500) Hz; Up to 8400 force pounds; 4 inch stroke	EIA 364-28D USCAR-2 USCAR-20 USCAR-15 USCAR-30 USCAR-38 FCA PF.90012 FCA PF.90051 GMW 3172 GMW3191 Nissan 24014-NDS01 Honda 3210Z-TGVA-A010-M1	Electrical & Mechanical Components	Electrodynamic Shakers AGREE Chambers
Shock Half Sine and SRS, 100 Gs	USCAR-2 USCAR-15 USCAR-30 USCAR-38 GMW3191 IEC 68-2-27 FCA PF.90012	Electrical & Mechanical Components	Four-Inch Stroke ED Shaker
Thermal Shock -70°C to 150°C	EIA 364-32C USCAR-2 Honda 3210Z-TGVA-A010-M1 USCAR-15 USCAR-20 USCAR-21 USCAR-30 USCAR-38 USCAR-45 GMW3191 Takata QES-001 FCA PF.90012	Electrical & Mechanical Components	Thermal Shock Chambers
Chemical Resistance / Exposure	USCAR-2 USCAR-15 GMW3191 FCA PF.90012 Honda 3210Z-TGVA-A010-M1 MES PA 67001 Nissan 24014-NDS01[7]	Electrical & Mechanical Components	Fume Hood Circulating Ovens

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Dust Resistance	Honda D 3217-15; Nissan 24014 NDS01 GMW3172	Electrical & Mechanical Components	Dust Chamber
Impact Resistance	Honda HES D3217-15; Nissan 24014NDS01	Electrical & Mechanical Components	Impact Shock Tester

Note:

1. On-site testing services are available for this parameter.
2. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-1528.



Jason Stine, Vice President

