



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

CONTINENTAL AUTOMOTIVE SINGAPORE PTE LTD. -  
QUALIFICATION LABORATORIES<sup>1</sup>

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ELECTRICAL

Valid to: January 31, 2024

Certificate Number: 4135.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electrical and mechanical tests on automotive, electrical, electronic, and mechanical components and assemblies:

<b><u>Test Technology:</u></b>	<b><u>Test Specification/Standard(s)<sup>2</sup>:</u></b>
Electrostatic Discharge (ESD)	ISO 10605; ISO 10605 (2001)
Conducted Transient Immunity	ISO 7637-2; ISO 7637-2 (2004); ISO 7637-3
Electrical Load Testing	ISO 16750-2; ISO 16750-2 (2010)
Radiated Emissions (RE)	CISPR 25, Section 6.5; CISPR 25 (2002), (2008)
Conducted Emissions (CE)	CISPR 25 Sections 6.3 and 6.4; CISPR 25 (2002), (2008)
Magnetic Field Emissions (ME)	MIL-STD-461F, Section 5.16
Absorber Lined Shielded Enclosure - Radiated Immunity (RI)	ISO 11452-2, Section 7
Transverse Electro Magnetic (TEM) Cell	ISO 11452-3
Harness Excitation Methods - Bulk Current Injection (BCI)	ISO 11452-4, Section 6.1, Section 7
Stripline	ISO 11452-5
Immunity to Magnetic Field	ISO 11452-8, Section 7.4
Portable Transmitters	ISO 11452-9

<b><u>Test Technology:</u></b>	<b><u>Test Capabilities:</u></b>	<b><u>Test Specification/Standard(s)<sup>2</sup>:</u></b>
Temperature <sup>3</sup> (Combined Temperature/Humidity)	Temperature Range: (-40 to 85) °C  Temperature Transition Rate: Up to 10 °C/min  Humidity Range: (60 to 95) %RH	BMW: GS 95024-3-1; MBN LV-124-2; Ford: CETP 00.00-E-412; Ford: WDS 00.00-EA-D11; GM: GMW3172; PSA: B217130 CL 12a; IEC 60068-2-30; IEC 60068-2-38; Toyota TSC6305G; ISO 16750-4; Renault 36-00-802; Nissan 28401NDS01; JASO D001-94; Nissan 24810NDS00; Mitsubishi ES-X82113, ES-X82010, ES-X45011, ES-X83239
Thermal Shock <sup>3</sup> (Air to Air)	Temperature Range: (-40 to 85) °C  Temperature Transition Rate Between Environments: up to 10s	BMW: GS 95024-3-1; MBN LV-124-2; Ford: CETP 00.00-E-412; Ford: WDS 00.00-EA-D11; PSA: B217130 CL07A; IEC 60068-2-14; Toyota TSC7010G; TSC6305G; GM: GMW3172; ISO16750-4; JASO D001-94; Nissan 24810NDS00; Mitsubishi ES-X82113, ES-X83239
Vibration <sup>3</sup> (Combined Vibration / Temperature/Humidity)	Frequency Range: (5 to 2,000) Hz  Sine Force: 2000 kgf Random Force: 2000 kgf  Displacement: 80 mm for Continuous  Temperature Range: (-40 to 85) °C  Humidity Range: (25 to 85) °C ((60 to 95) %RH	BMW: GS 95024-3-1; MBN LV-124-2; Ford: CETP 00.00-E-412; Ford: WDS 00.00-EA-D11; GM: GMW3172; PSA: B217120; Toyota TSC6305G; JASO D001-94; IEC 60068-2-6; IEC 60068-2-64; Mitsubishi ES-X82010, ES-X83239

<b><u>Test Technology:</u></b>	<b><u>Test Capabilities:</u></b>	<b><u>Test Specification/Standard(s)<sup>2</sup>:</u></b>
Mechanical Shock <sup>3</sup>	Half-sine Pulse Max Payload: 200kg  Velocity Change: 4.6 m/s  Max Drop Height: 550mm	IEC 60068-2-27

<sup>1</sup> This accreditation covers testing performed at the main laboratory listed above, and the satellite laboratories indicated below:



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 Continental Building  
 84 Boon Keng Rd.  
 SINGAPORE 339781

<b><u>Test Technology:</u></b>	<b><u>Test Capabilities:</u></b>	<b><u>Test Specification/Standard(s)<sup>2</sup>:</u></b>
Temperature <sup>3</sup> (Combined Temperature/Humidity)	Temperature Range: (-40 to 85) °C  Temperature Transition Rate: Up to 20 °C/min  Humidity Range: (60 to 95) %RH	BMW: GS 95024-3-1; MBN LV-124-2; Ford: CETP 00.00-E-412; Ford: WDS 00.00-EA-D11; GM: GMW3172; PSA: B217130 CL 12a; IEC 60068-2-30; IEC 60068-2-38; Toyota TSC6305G; ISO 16750-4; Renault 36-00-802; Nissan 28401NDS01; JASO D001-94; Nissan 24810NDS00; Mitsubishi ES-X82113, ES-X82010, ES-X45011, ES-X83239
Drop (Package, Handling, Free Fall)		BMW: GS 95024-3-1; MBN LV-124-2; Ford: CETP 00.00-E-412; Ford: WDS 00.00-EA-D11; GM: GMW3172; PSA: B217120; Toyota TSC6305G; Renault 36-00-802; Nissan 28401NDS01; Nissan 24810NDS00; Mitsubishi ES-X82113; IEC 60068-2-31, Chapter 5.3

<sup>2</sup> When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories.

<sup>3</sup>This laboratory also uses customer supplied specifications and/or methods directly related to the testing technologies and parameters listed above.





## Accredited Laboratory

A2LA has accredited

# CONTINENTAL AUTOMOTIVE SINGAPORE PTE LTD. - QUALIFICATION LABORATORIES

*Singapore*

for technical competence in the field of

## Electrical 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 13<sup>th</sup> day of December 2021.



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

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 4135.01  
Valid to January 31, 2024

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