



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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ELECTRICAL

Valid To: June 30, 2026

Certificate Number: 7256.01

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

<b><u>Test Technology:</u></b>	<b><u>Test Method(s):</u></b>
<i>EMC tests</i>	
Absorber-Lined Shielded Enclosure (ALSE)	ISO 11452-2; ISO 11452-2 (2004); SAE J1113-21
Bulk Current Injection (BCI)	ISO 11452-4; ISO 11452-4 (2005; 2011); SAE J1113-4; SAE J1113-4 (2014)
Conducted Immunity on Power lines Supply Voltage transients	ISO 7637-2; ISO 7637-2 (2004); ISO 7637-4; SAE J1113-11
Conducted Immunity on Signal Lines	ISO 11452-10; ISO 7637-3; ISO 7637-3 (2007); SAE J1113-12
Conducted Transient Emissions	ISO 7637-1; ISO 7637-2; ISO 7637-2 (2004); ISO 7637-4
Electrical Loads	ISO 16750-1; ISO 16750-2; ISO 16750-2 (2006; 2012)
Electrical Tests for Voltage Class B Systems and Components	ISO 21498-1; ISO 21498-2

<b>Test Technology:</b>	<b>Test Method(s):</b>
Electrostatic Discharge (ESD)	ISO 10605; ISO 10605 (2001; 2008); SAE J1113-13; SAE J1113-13 (2015)
HV-LV Coupling Test	CISPR 25; CISPR 25 (2008; 2016)
Immunity to Magnetic Fields	ISO 11452-8; ISO 11452-8 (2007); SAE 1113-22
Immunity to Voltage Fluctuations, Disturbances of the Supply Voltage Lines (Dropouts, Dips, Cranking, Ramp Up/Down)	ISO 16750-2; ISO 16750-2 (2006; 2012)
Method of Testing for Immunity of Vehicles to Electromagnetic Radiation	ISO 11451-2; ISO 11451-2 (2005); ISO 11451-3; ISO 11451-3 (2007; 2015)
Over/Under, Reverse, Jump Start, Defective Regulator Voltages, Electrical Stress	ISO 16750-2; ISO 16750-2 (2006; 2012)
Portable Transmitter RF Immunity	ISO 11452-9; ISO 11452-9 (2012)
RF Conducted Emissions	CISPR 25; CISPR 25 (2008; 2016); CISPR 32; ICES-002; SAE J1113-41
RF Radiated Emissions	CISPR 12; CISPR 25; CISPR 25 (2008; 2016); CISPR 32; CISPR 36; ICES-002; SAE J1113-41
Road vehicles — Supply Voltage of 48 V — Electrical Requirements and Tests	ISO 21780
Stripline Immunity	ISO 11452-5; SAE J1113-23
Transverse Electromagnetic (TEM) Cell	ISO 11452-3; ISO 11452-3 (2001; 2016); SAE J1113-24
Flicker	IEC 61000-3-3; IEC 61000-3-11
Harmonics	IEC 61000-3-2; IEC 61000-3-12
Electrical Fast transients/ Burst	IEC 61000-4-4
Surge	IEC 61000-4-5

<b>Test Technology:</b>	<b>Test Methods:</b>
<p><b>Generic Product Specific Automotive Component EMC Standards</b></p>	<p>BMW GS95002;  BMW GS95002 (2010);  BMW GS95002-2;  BMW GS95002-2 (2021);  BMW GS95002-3;  BMW GS95002-3 (2015);  BMW GS95002-5;  BMW GS95002-5 (2015);  BMW GS95003-2;  BMW GS95003-2 (2010);  BMW GS-95023;  BMW GS95024-2-1;  BMW GS95024-2-1 (2010);  BMW GS95024-2-2;  BMW GS95024-2-2 (2011);  BMW GS95024-2-3;  BMW GS95024-2-3 (2011);  BSL 0006-100;  BSL 0006-100 (2015);  CEVT Reg. No. 8888621495-1;  CEVT Reg. No. 8888621495-2;  CEVT Reg. No. 8888621495-3;  CEVT Reg. No. 8888621495-4;  Claas (CN 05 0215-1);  CS.000244;  CS.000245;  CS.000246;  FCA CS.00054;  FCA CS.00054 (2015; 2018);  Fiat 9.90110;  Fiat 9.90110 (2007);  Fiat 9.90111;  Fiat 9.90111/01;  Fiat 9.90111/01 (2012);  FMC 1278;  FMC 1278 (2018; 2021);  FMC 1280;  FMC 1280 (2018);  FPT FPI9.EMS011;  GMW 3097;  GMW 3097 (2015; 2019);  GMW 3172;  GMW 3172 (2015; 2018);  Hyundai/Kia ES 96200-00;  Hyundai/Kia ES 96200-00 (rev 20);  Hyundai/Kia ES 95400-10;  JLR-EMC-CS;  JLR-EMC-CS v1.0;  John Deere JDQ 203;  John Deere JDQ 203 (2013; 2018);  Lotus LTS 41001;  Lotus LTS 41001-2019;  LV 123;  LV 124-1;  LV 148</p>

<b>Test Technology:</b>	<b>Test Method(s):</b>
<p><b>Generic Product Specific Automotive Component EMC Standards (cont.)</b></p>	<p>MACLAREN MSL.03.04;            MBN 10284-2;            MBN 10284-2 (2008; 2011; 2015; 2019);            MBN 10284-4;            MBN 10284-4 (2011; 2017);            MBN 11123; MBN 11123 (2019);            MBN LV 123; MBN LV 123 (2014);            MBN LV 124-1;            MBN LV 124-1 (2011; 2013);            MES PW 67602;            MES PW 67602 D (2019);            Mitsubishi ES-X82114;            Mitsubishi ES-X82114 (2009);            NAVISTAR DR100159-            06_Electrical_Environmental_Spec;            Nissan 28400 NDS91;            Nissan 28400 NDS91 (2012);            Nissan 28401 NDS02;            Nissan 28401 NDS02 (2010; 2013; 2016);            Piaggio 7431;            PSA B21 7110;            PSA B21 7110 (2008; 2012; 2015; 2019);            PSA B21 7112;            Renault 36-00-808;            Renault 36-00-808 (2010; 2012; 2016);            Renault 36-00-811;            Renault-Nissan RNDS-C-00513;            Renault-Nissan RNDS-C-00513 v4.0;            Renault-Nissan RNDS-C-00517;            Renault-Nissan RNDS-C-00517 v3.0;            Rivian EMC Component Standard;            SAME DEUTZ FAHR;            SCANIA TB1901;            SCANIA TB1901 (2016; 2020);            SPT 0024;            TESLA TS-0000048-07;            TESLA TS-0000425-05;            Triumph (S5263);            TSC0501G; TSC0502G;            Volvo Note-Treg 33659457;            Volvo Note-Treg 33659457 (2019);            Volvo REQ-043878;            Volvo STD 515-0003;            Volvo STD 515-0003 (2009; 2017);            VW 80000; VW 80000 (2013; 2017);            VW 80101; VW 80101 (2006; 2009);            VW 80300; VW 80300 (2016);            VW 80303;            VW 80303 (2014);            VW TL 81000;            VW TL 81000 (2013; 2014; 2016; 2018; 2021);            VW/Audi/Porsche VW80101;            ZOOX ZIST-EMC;            IEC 61000-6-3 (IEC 61000-3-2, 3-3, 3-11, 3-12)</p>

<b><u>Test Technology:</u></b>	<b><u>Test Method(s):</u></b>
Industrial Control Equipment, power conversion and supply systems*	IEC 62477-1; IEC 62109-1; IEC 62109-2; UL 1741; IEC 61851-1; IEC 61851-23; IEC 61851-23 (2014); IEC 61851-24; IEC 61851-24 (2014); IEC 61439-1; IEC 61439-1 (2011); IEC 61439-2; IEC 61439-2 (2011); IEC 61439-7; IEC 61439-7 (2018); IEC 62817; UL 3703; IEC 62116; RD244/2019; CSA C22.2 No. 107.1; UL 991; UL 2594; CSA C22.2 No. 280; UL 508A; C22.2 N° 286; IEC 62040-1; IEC 61683; IEC 50530; IEC 61727
<b><i>EMC Tests Military and Airborne Equipment</i></b>	RTCA-DO160 F/G Section 15 (Magnetic Effect); RTCA-DO160 F/G Section 16 (Power Input); RTCA-DO160 F/G Section 17 (Voltage Spike); RTCA-DO160 F/G Section 18 (Audio Frequency Conducted Susceptibility – Power Inputs, excluding CAT Z (270 Volts DC Electric system)); RTCA-DO160 F/G Section 19 (Induced Signal Susceptibility) 19.3.4 ----> Both versions (F & G). Category ZC minimum harness length of 3 meters as limitation (600 VAC maximum output voltage) 19.3.4 ----> Both versions (F & G). Category CC minimum harness length of 9 meters as limitation (600 VAC maximum output voltage)

<b><u>Test Technology:</u></b>	<b><u>Test Method(s):</u></b>
<b><i>EMC Tests Military and Airborne Equipment (cont.)</i></b>	<p>RTCA-DO160 F/G Section 20 (Radio Frequency Susceptibility) Radiated Immunity Up to 150 V/m (CW, SW and PM modulations) excluding Reverberation Chamber method  RTCA-DO160 F/G Section 21 (Conducted RF Emissions);  RTCA-DO160 F/G Section 25 Electrostatic Discharge (ESD)  RTCA-DO160 F/G Section 22 Lightning Induced Transient Susceptibility</p> <p>MIL-STD-461 E/F/G CE101  MIL-STD-461 E/F/G CE102  MIL-STD-461 E/F/G CE106  MIL-STD-461 E/F/G CS101  MIL-STD-461 E/F/G CS103  MIL-STD-461 E/F/G CS104  MIL-STD-461 E/F/G CS105  MIL-STD-461 F CS106  MIL-STD-461 E/F/G CS109  MIL-STD-461 E/F/G CS114  MIL-STD-461 E/F/G CS115  MIL-STD-461 E/F/G CS116  MIL-STD-461 G CS118  MIL-STD-461 E/F/G RE101  MIL-STD-461 E/F/G RE102  MIL-STD-461 E/F/G RE103  MIL-STD-461 E/F/G RS101  MIL-STD-461 E/F/G RS103. Up to 150 V/m (PM modulation) Excluding Reverberation Chamber method  MIL-STD-461G CS117, conducted susceptibility, lightning induced transients, cables and power leads.</p> <p>MIL-STD-704 according to MIL-HDBK-704-8 D/E/F</p>

\*This laboratory performs field testing for these tests.



# Accredited Laboratory

A2LA has accredited

## LGAI TECHNOLOGICAL CENTER S.A.

*Bellaterra, SPAIN*

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 6<sup>th</sup> day of August 2024.

A blue ink signature of Mr. Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 7256.01  
Valid to June 30, 2026

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