



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

TUV SUD AMERICA – PLYMOUTH
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ELECTRICAL (EMC)

Valid to: June 30, 2012

Certificate Number: 0265.05

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following automotive electromagnetic compatibility tests:

TEST TECHNOLOGY

TEST METHOD(S)

Electrostatic Discharges (ESD)
Test Set-up/Location Designation:
ESD Room

ISO 10605 (2001);
Ford ES-XW7T-1A278-AC (CI 280);
GMW 3097 (2006) Section 3.6;
ISO 10605 (2001) Section 5 (ESD);
SAE J1113-13 (2004) (ESD);
ISO 13766 (2006) Para 5.9 (ESD);
ISO 14982 (1998) Para 6.7 (ESD);
EN 13309 (2000) Para 4.8 (ESD) ;
EMC-CS-2009

Conducted Emissions
Test Set-up/Location Designation:
SAC, PSAC & CISPR chambers

CISPR 25 (2002) Section 6.2;
Ford ES-XW7T-1A278-AC (CE 420);
GWM 3097 (2006) Section 3.3.2;
SAE J1113-41 (2000) Section 5;
CISPR 25 (2002, 2008) Sections 6.2 and 6.3;
EMC-CS-2009

RF Radiated Emissions
(up to 2500 MHz with current M&TE)
Test Set-up/Location Designation:
SAC, PSAC & CISPR chambers

CISPR 25 (2002) Section 6.4;
Ford ES-XW7T-1A278-AC (RE 310);
GMW 3097 (2006) Section 3.3.1;
SAE J1113-41 (2000) Section 7;
CISPR 25 (2002, 2008) Section 6.4;
EMC-CS-2009

TEST TECHNOLOGY

Bulk Current Injection (BCI)
Substitution Method
Test Set-up/Location Designation:
BCI, PSAC & SAC chambers

Absorber-Lined Shielded Enclosure (ALSE)
(Up to 3200 MHz and 200 V/m with current M&TE)
Test Set-up/Location Designation:
SAC & PSAC chambers

Reverberation Radiated Immunity
Mode Tuned
Test Set-up/Location Designation:
Reverb chamber

Absorber-Lined Shielded Enclosure (ALSE)
Radar Pulse only
(Up to 300 V/m)
Test Set-up/Location Designation:
SAC chamber

Radiated Immunity
(Up to 4 GHz)

TEST METHOD(S)

ISO 11452-4 (2005);
Ford ES-XW7T-1A278-AC (RI 112);
GMW 3097 (2006) Section 3.4.1

ISO 11452-2 (2004);
Ford ES-XW7T-1A278-AC (RI 114);
GMW 3097 (2006) Section 3.4.2

IEC 61000-4-21 (2003);
Ford ES-XW7T-1A278-AC (RI 114) ;
GMW 3097 (2006) Section 3.4.3

ISO 11452-2 (2004);
Ford ES-XW7T-1A278-AC (RI-114);
GMW 3097 (2006) Section 3.4.2

2004/104/EC Annex IX(BCI);
2004/104/EC Annex IX(Absorption Chamber);
95/54/EC Annex IX Section 8
(Absorption Chamber);
95/54/EC Annex IX Section 10 (BCI);
97/24/EC Chapter 8 Annex VII Section 9 (BCI);
97/24/EC Chapter 8 Annex VII Section 11
(Absorption Chamber);
ISO 11452-2 (2004) (Absorption Chamber);
ISO 11452-4 (2005) (BCI);
ECE Regulation 10.02 Annex 9 Section 8
(Free Field);
ECE Regulation 10.02 Annex 9 Section 10 (BCI);
ECE Regulation 10.03 Annex 9 Section 4.1
(Free Field);
ECE Regulation 10.03 Annex 9 Section 4.3 (BCI);
SAE J1113-28 (2004) (Reverberation Method);
SAE J1113-21 (2005) (Free Field);
SAE J1113-4 (2004) (BCI) (*Excluding Current Monitoring Probe Method*)

TEST TECHNOLOGY

Radiated Immunity (cont.)
(Up to 4 GHz)

Conducted and Transient Immunity

TEST METHOD(S)

ISO 13766 (1999) Para 6.6 (Radiated Field);
ISO 13766 (1999) Para 6.6 (BCI);
ISO 13766 (2006) Para 5.8 (Radiated Field);
ISO 13766 (2006) Para 5.8 (BCI);
ISO 14982 (1998) Para 6.6 (Free Field);
ISO 14982 (1998) Para 6.6 (BCI);
EN 13309 (2000) Para 4.7 (Free Field);
EN 13309 (2000) Para 4.7 (BCI)
EMC-CS-2009 (BCI and ALSE Immunity)
2004/104/EC Annex VII (Broadband);
2004/104/EC Annex VII (Narrowband);
95/54/EC Annex VII (Broadband);
95/54/EC Annex VIII (Narrowband);
97/24/EC Chapter 8 Annex V (Broadband);
97/24/EC Chapter 8 Annex VI (Narrowband);
ISO 13766 (1999, 2006) Annex D (Broadband);
ISO 13766 (1999, 2006) Annex E (Narrowband);
ISO 14982(1998) Annex D (Broadband);
ISO 14982 (1998) Annex E (Narrowband);
EN 13309 (2000) Annex D (Broadband);
EN 13309 (2000) Annex E (Narrowband);
ECE Regulation 10.02 Annex 7 (Broadband);
ECE Regulation 10.02 Annex 8 (Narrowband);
ECE Regulation 10.03 Annex 7 (Broadband);
ECE Regulation 10.03 Annex 8 (Narrowband)

SAE J1113-11 (2000) (Power Supply Transients);
ISO 7637-2 (2004) (Supply Lines);
ISO 13766 (1999) Para 6.8
(Power Supply Transients);
ISO 13766 (2006) Para 5.10
(Power Supply Transients);
ISO 14982 (1998) Para 6.8
(Power Supply Transients);
EN 13309 (2001) Para 4.9
(Power Supply Transients);
SAE J1113-12 (2000)
(Capacitive & Inductive Transients);
ISO 7637-3 (1995)
(Capacitive & Inductive Transients);
ISO 7637-3 (2007) (Other than Supply Lines);
Ford ES-XW7T-1A278-AC (CI-230) Including
Temperature Conditioning



TEST TECHNOLOGY

TEST METHOD(S)

Mode Tune Test

EMC-CS-2009

Radar Pulse Test

EMC-CS-2009

Toyota TSC 7006G (Rev 4)

Section 4.4.2 Broadband Antenna Nearby Test;

Toyota TSC 7026G (Rev 2)

Narrowband RF Emissions

Toyota TSC 7508G (Rev 4)

Section 7.3 Radiated Noise above 30 MHz

Nissan 28401NDSO2 (Rev 4)

EQ/MC 02 Conducted Current Emissions;
EQ/MC 03 Radio Frequency Conducted Emissions
(*Excluding RF Voltage Probe Method*);
EQ/MR 01 Radio Frequency Radiated Emissions;
EQ/MR 02 Magnetic Field Radiated Emissions

Transient Emissions

SAE J1113-42 (2000);
ISO 7637-2 (2004)



World Class Accreditation

The American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

TUV SUD AMERICA - PLYMOUTH

Plymouth, MI

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *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 8 January 2009*).

Presented this 3rd day of August 2010.



A handwritten signature in black ink, reading "Peter Meyer".

President & CEO
For the Accreditation Council
Certificate Number 0265.05
Valid to June 30, 2012
Revised November 2, 2011

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