



THE AMERICAN ASSOCIATION FOR  
LABORATORY ACCREDITATION

## ACCREDITED LABORATORY

A2LA has accredited

**DAYTON T. BROWN, INC.**  
**Bohemia, NY**

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 January 2009*).



Presented this 13<sup>th</sup> day of March 2009.

A handwritten signature in cursive script, reading "Peter Abney".

\_\_\_\_\_  
President

For the Accreditation Council

Certificate Number 0767.02

Valid to December 31, 2010

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

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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ELECTRICAL (AEMCLAP<sup>1</sup>/EMC)

Valid To: December 31, 2010

Certificate Number: 0767.02

In recognition of the successful completion of the A2LA and the Automotive EMC Laboratory Accreditation Program (AEMCLAP)<sup>1</sup> evaluation process, accreditation is granted to this laboratory to perform the following test on Automotive Electromagnetic Compatibility (EMC); Electrical; Military, Commercial, and Industrial EMC; and Telecommunications Tests:

Test Technology

***AEMCLRP<sup>(1)</sup> (Rev. 4) Recognized Tests  
and Addendum May 25, 2007***

Test Method(s)

**Electrostatic Discharge (ESD), Appendix D**  
(GM, Ford)

Test Set-up Designation/Location:

*Tempest Chamber Room 1*

ISO 10605 (2001);  
ES-XW7T-1A278-AC (CI 280);  
GMW 3097 (2006) Section 3.6

**RF Conducted Emissions, Appendix F**

(Ford, GM)

*(Voltage Method)*

Test Set-up Designation/Location:

*Anechoic 1 Chamber*

CISPR 25 (2002) Section 6.2;  
ES-XW7T-1A278-AC (CE420);  
GMW 3097 (2006) Section 3.3.2

**Bulk Current Injection, Appendix I**

*Substitution Method*

(GM, Ford)

Test Set-up Designation/Location:

*Tempest Chamber Room 1*

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

**Absorber-lined Shielded Enclosure RI**

**Test Procedure Radar Pulse Only (ALSE),**

*Appendix M*

(Ford, GM)

Test Set-up Designation/Location:

*Anechoic 1 Chamber*

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

Test Technology

***AEMCLRP<sup>(1)</sup> (Rev. 4) Recognized Tests  
and Addendum May 25, 2007***

Test Method(s)

**Absorption Lined Shielded Enclosure (ALSE)**

*Appendix K*

*(Using Nonmetallic Bench with*

*metallic surface Ground Plane)*

*(substitution method)*

*(200 MHz to 18 GHz up to 1000V/meter)*

*(GM, Ford)*

Test Set-up Designation/Location:

*Anechoic 1*

ISO 11452-2 (2004);

GMW 3097 (2006) Section 3.4.2;

ES-XW7T-1A278-AC (RI 114)

**Non-AEMCLAP EMC Tests**

**Bulk Current Injection (BCI)**

*Closed Loop Method*

ISO 11452-4 (2005); SAE 1113-4;

GMW 3097/3100 1999, 2001

**Bulk Current Injection (BCI)**

*Substitution Method*

SAE 1113-4; GMW3097/3100 1999, 2001;

ES-XW7T-1A278-AB

**Radiated Immunity – Reverberation  
Mode Stirring**

SAE J1113-27 (2004); GMW 3097/3100 1999, 2001,  
GMW 3097 (2004)

**Radiated Emissions**

GMW 3097/3100 1999, 2001; SAE J1113-41;  
ES-XW7T-1A278-AB

**Absorption Chamber**

GMW 3097/3100 1999, 2001; ES-XW7T-1A278 AB;  
SAE J1113-21 (2005)

**Electrostatic Discharge (ESD)**

SAE J1113-13 (2004); ES-XW7T-1A278-AB;  
GMW 3097/3100 1999, 2001

Test Technology  
**Non-Automotive EMC Tests**

Test Method(s)

**Conducted Emissions**

MIL-STD-461/462 (A, B, C) Methods CE01, CE02, CE03, CE04, CE05, CE06, CE07; MIL-STD-461(D, E, F) Methods CE101, CE102, CE106; RTCA/DO-160 (A, B, C, D, E), Sec. 21; Boeing D6-16050-4 Rev. C Para. 8.1, 8.2, Boeing D6-16050-5 Rev. B Para. 8.1, 8.2, Boeing D6-44588 Rev. AA Para 3.4.5.3; UK DEF STAN 59-41 (Part 3) Supp A DCE01, Supp B DCE02, Supp C DCE03; CISPR 11 (2004); CISPR 22 (2005); CISPR 25 (2002); EN55011:1998 (Amendment 1:1999; Amendment 2:2003); EN 55022:1998 (Amendment 1:2000, Amendment 2:2003, Corrigendum: 2006); SAE J1113-41, J1113-42 (2006); ES-XW7T-1A278-AB, ES-XW7T-1A278-AC CE410, CE420; Fiat 9.90110, 7-Z0470, 7-Z0471, 7-Z0485; Toyota TSC 7508G, Sec. 3-3-1, 3-3-2; Nissan 28400NDS21 Sec. 6.1, 28401NDS02 Sec. 6.5; CNS 13438; CFR 47, Part 15 Subpart A & B Sec. 15.107; CFR 47, Part 18 Subpart A & C Sec. 18.307; GR-1089-CORE Issue 4, Sec. 3; AS/NZS 3548;

**Conducted Susceptibility  
(Immunity)**

MIL-STD-461/462 (A, B, C) Methods CS01, CS02, CS03, CS04, CS05, CS06, CS07, CS08, CS09, CS10, CS11, CS12, CS13; MIL-STD-461/462D, MIL-STD-461(D, E, F) Methods CS101, CS103, CS104, CS105, CS109, CS114, CS115, CS116; RTCA/DO-160 (A, B, C, D, E) Sec. 17, 18, 20; UK DEF STAN 59-41 (Part 3) Supp G DCS01, Supp H DCS02, Supp J DCS03, Supp K DCS04, Supp L, DCS05, Supp M DCS06, Supp P DCS08, Supp Q, DCS09, Supp S DCS11, Supp T DCS12; EN 61000-4-6; IEC 1000-4-6; IEC 801-6; Boeing D6-16050-4 Rev C Para. 7.2, 7.3.1, 7.4, 7.5, Boeing D6-16050-5 Rev B Para. 7.2, 7.3.1, 7.4, 7.5; SAE J1113-2 (2004), J1113-3(2006), J1113-4 (2004); J1113-11 (2006), J1113-12 (2004), J1455 Sec. 4.11.1, 4.11.2; ISO 11452-5 (2002); Ford ES-XW7T-1A278-AB, ES-XW7T-1A278-AC, CI210, CI220, CI230, CI240, CI250, CI260, CI270; GMW 3097 2004, Sec. 3.5.2, 3.5.3, 3.5.4, 3.5.5; Fiat 9.90110, 7-Z0440, 7-Z0441, 7-Z0443, 7-Z0444, 7-Z0446; Toyota TSC 7501G, TSC 7515G Sec. 5-13, 5-14, 5-15; 5-16, 5-17, 5-18, 5-19, 5-23; Nissan 28401NDS02 Sec. 6.1, 6.2 ; IEC/EN 61000-4-6

Test Technology

**Non-Automotive EMC Tests**

Test Method(s)

**Radiated Emissions**

MIL-STD-461/462 (A, B, C) Methods RE01, RE02, RE03, MIL-STD-461/462D, MIL-STD-461(D, E, F) Methods RE101, RE102, RE103; RTCA/DO-160 (A, B, C, D, E), Sec. 21; Boeing D6-16050-4 Rev. C Para. 8.2.2, Boeing D6-16050-5 Rev. B Para. 8.2.2; UK DEF STAN 59-41 (Part 3) Supp D DRE01, Supp E DRE02, Supp F DRE03; CISPR 11 (2004); CISPR 22 (2005); CISPR 25 (2002); EN55011:1998 (Amendment 1:1999, Amendment 2:2003), EN 55022:1998 (Amendment 1:2000, Amendment 2:2003, Corrigendum:2006); SAE J1113-41; Fiat 9.90110, 7-Z0472; Toyota TSC 7508G Sec. 3-3-3, 3-3-4; Nissan 28400NDS21 Sec. 6.2, 28401NDS02 Sec. 6.6; CNS 13438; CFR 47, Part 15 Subpart A & B Sec. 15:2001; CFR 47, Part 18 Subpart A & C Sec. 18. 309:2001; GR-1089-CORE, Issue 4, Sec. 3; OET MP5; AS/NZS 3548

**Radiated Susceptibility (Immunity)**

MIL-STD-461/462 (A, B, C) Methods RS01, RS02, RS03, RS04, RS05, RS06; MIL-STD-461/462D, MIL-STD-461(D, E, F) Methods RS101, RS103, RS105; RTCA/DO-160 (A, B, C, D, E), Sec. 19, 20; Boeing D6-16050-4 Rev C Para. 7.2, 7.3.2; Boeing D6-16050-5 Rev B Para. 7.2, 7.3.2, UK DEF STAN 59-41 (Part 3) Supp U DRS01, Supp V DRS02; EN 61000-4-3 :2002 (Amendment 1:2003, Amendment 2:2005); IEC 1000-4-3, IEC801-3; ENV50204; ISO 11452-1 (2005), 11452-2 (2004), 11452-3 (2001), 11452-4 (2005), 11452-6, 11452-7 (2003); Ford ES-XW7T-1A278-AB, ES-XW7T-1A278-AC RI-110, RI-111, RI-112, RI-114, RI-120, RI-130, RI-140; Fiat 9.90110, 7-Z0449; Toyota TSC 7506G, TSC 7514G Sec. 5-21, TSC7513G; Nissan 28401NDS02 Sec. 6.3

**Electrostatic Discharge**

IEC 801-2; SAE J1113-13 (2004); ISO 10605:2001; RTCA/DO-160(D, E), Sec. 25; UK DEF STAN 59-41 (Part 3) Supp R DCS10; Boeing D6-16050-4 Rev. C Para.7.1.1; GR-1089-CORE Sec. 2; Boeing D6-16050-4 Rev C Para. 7.1, Boeing D6-16050-5 Rev B Para. 7.1

**Electrical Fast Transient**

EN 61000-4-4; IEC 1000-4-4 ; IEC 801-4

**Surge Immunity**

EN 61000-4-5; IEC 1000-4-5; IEC 801-5; IEEE-587-1980; ANSI C62.41; ANSI C62.32

**Harmonic Current Emissions**

EN 61000-3-2:2001; IEC 61000-3-2:2005

**Voltage Fluctuation and Flicker**

EN 61000-3-3:1995 (Amendment 1:2001, Amendment 2:2002); IEC 61000-3-3:2002

<u>Test Technology</u>	<u>Test Method(s)</u>
<b><u>Non-Automotive EMC Tests</u></b>	
<b>Product Family Standards</b>	EN 55024:1998 (Amendment 1:2001, Amendment 2:2003), EN 61326:1998 (R2005), EN 55103-1:1997, EN 55103-2 :1997
<b>Generic Standards</b>	EN 50081-1:1992, EN 50081-2:1994, EN 50082-1:1998, EN 50082-2:1995, EN 61000-6-2:2001
<b>NEBS Telecom EMI/EMC</b>	ETSI EN 300 386 V1.3.3 (04 :2005); Bellcore GR-1089-CORE:1999; Telcordia GR-1089:2002
<b>Magnetic Field Immunity</b>	EN 61000-4-8:1994 (Amendment 1:2001); IEC 1000-4-8; SAE J1113-22; DOD-STD-1399 Sec. 70; UK DEF STAN Supp W DMFS01
<b>Voltage Dips, Interruptions, Variations and Transients</b>	EN61000-4-11; IEC 1000-4-11; MIL-STD-704F; MIL-STD-1399; MIL-STD-1275B
<b><u>Electrical Tests</u></b>	
<b>Dielectric Withstand Voltage</b>	MIL-STD-202G Method 301
<b>Insulation Resistance</b>	MIL-STD-202G Method 302
<b>Contact Resistance</b>	MIL-STD-202G Method 307
<b>DC Resistance</b>	MIL-STD-202G Method 303
<b>Contact Chatter</b>	MIL-STD-202G Method 310
<b>Capacitance</b>	MIL-STD-202G, Method 305
<b>Quality Factor</b>	MIL-STD-202G, Method 306
<b>Temperature Rise vs. Resistance</b>	MIL-STD-202G, Method 304
<b>Voltage (AC/DC)</b>	UL 950; UL 1010; EN 60950; EN61010
<b>Current (AC/DC)</b>	UL 950; UL 1010; EN 60950; EN61010
<b>Electrical General Requirements</b>	MIL-E-16400 Section 4.6. Electrical Tests Only; MIL-STD-2036 Section 5 Electrical Tests Only

On the following types of materials and products:

Aerospace Components & Systems; Automotive Components & Systems; Shipboard Components & Systems; Railroad & Industrial Vehicle Components & Systems; Information Technology & Telecommunication Equipment & Systems; Electrical & Electronic Components & Systems; Medical Electronic Equipment; Military Equipment & Hardware.

<sup>1</sup> A2LA provides Accreditation for the Automotive EMC Laboratory Recognition Program (AEMCLRP) which is designated as the Automotive EMC Laboratory Accreditation Program (AEMCLAP). Chrysler, Ford Motor Company (Ford) and General Motors Corporation (GM) provide overall recognition as part of the AEMCLRP document (Fourth Edition, 01/27/06 and Addendum May 25, 2007 with Chrysler Addendum to DC-11224 (2007/06) and DC-11225 (2007/07) with Addendum to DC-11224/5 Rev A dated April, 2008 and Ford Corrections or Requirements to ES-XW7T-1A278-AC Updated June 7, 2006 and September 18 2007).

The AEMCLRP document is available on the A2LA web site ([www.A2LA.org](http://www.A2LA.org)). Accreditation to the A2LA AEMCLAP requirements does not ensure recognition by the aforementioned organizations. Confirmation of recognition can be obtained from these organizations directly. If any items are not covered by AEMCLRP Rev.4 or there are any conflicts among the documents, the actual issued test method standards of Chrysler, Ford Motor Company and General Motors Corporation and OEM issued corrections/addendums these will supersede AEMCLRP Rev. 4 and Addendum May 25, 2007.