LABORATORY ACCREDITATION BUREAU

**Certificate # L2062-1**

# Scope of Accreditation
# For
# B83 Testing & Engineering, Inc.

3040 West Hopkins Street
Milwaukee, WI 53216
Steven M. Yokosh
414-449-9396

In recognition of a successful assessment to ISO/IEC 17025 2005, accreditation is granted to **B83 Testing & Engineering, Inc.** to perform the following tests:

Accreditation granted through: **February 24, 2013**

**Testing**

| Technology | Range, when necessary | Methods Used | Product Types | Remarks |
|---|---|---|---|---|
| Tensile | (0 to 300 000) $lb_f$ | SAE J684<br>VESC V-5<br>Customer Specifications | Components, Sub Assemblies, Full Assemblies, Structures (welded, bolted, cast) | Automotive, Heavy Truck, Construction, Railroad, Medical, Aerospace, Agriculture, Government Defense, Petroleum, Marine, Industrial, Consumer Product Industries |
| Compression | (0 to 300 000) $lb_f$ | SAE J684<br>VESC V-5<br>Customer Specifications | | |
| Shear | (0 to 300 000) $lb_f$ | SAE J684<br>VESC V-5<br>Customer Specifications | | |
| Torsion | (0 to 500 000) in · $lb_f$ | Customer Specifications | | |
| Axial Fatigue | (0 to 300 000) $lb_f$ | Customer Specifications | | |
| Torsional Fatigue | (0 to 500 000) in · $lb_f$ | Customer Specifications | | |
| Durability Simulation | (0 to 300 000) $lb_f$ | Customer Provided Road / Load Profiles<br>Customer Specifications | Components, Sub Assemblies, Full Assemblies, Structures (welded, bolted, cast), Electrical & Electronic Devices | |

| Technology | Range, when necessary | Methods Used | Product Types | Remarks |
|---|---|---|---|---|
| Vibration (Sine & Random) | (5 to 3000) Hz<br>(0 to 12 000) $lb_f$ | MIL-STD-810 (Method 514)<br>MIL-STD-810 (Method 519)<br>MIL-STD-167-1A<br>MIL-STD-202 (Methods 201A, 204D, 214A)<br>MIL-STD-883 (Method 2005)<br>MIL-STD-883 (Method 2007)<br>ETSI EN300 019-2-1 v.2.1.2<br>ETSI EN300 019-2-2 v.2.1.2<br>ETSI EN300 019-2-3 v.2.2.2<br>IEC 60068-2-64<br>IEC 60068-2-6<br>RTCA DO 160 (sect. 8)<br>SAE J1211 (sect. 4.7)<br>SAE J1455 (sect. 4.9)<br>Customer Provided Road / Load Profiles<br>Customer Specifications | Components, Sub Assemblies, Full Assemblies, Structures (welded, bolted, cast), Electrical & Electronic Devices | Automotive, Heavy Truck, Construction, Railroad, Medical, Aerospace, Agriculture, Government Defense, Petroleum, Marine, Industrial, Consumer Product Industries |
| Shock | Up to 80 g (Dependent on specimen mass and shock pulse width.) | MIL-STD-810 (Method 516)<br>MIL-STD-202 (Method 213B)<br>MIL-STD-883 (Method 2002)<br>ETSI EN300 019-2-1 v.2.1.2<br>ETSI EN300 019-2-2 v.2.1.2<br>ETSI EN300 019-2-3 v.2.2.2<br>IEC 60068-2-27<br>RTCA DO 160 (sect. 7)<br>SAE J1211 (sect. 4.8)<br>SAE J1455 (sect. 4.10)<br>Customer Provided Road / Load Profiles<br>Customer Specifications | | |
| Temperature | (-83 to 350) °F | Bellcore GR63 CORE (sect. 5.1)<br>MIL-STD-810<br>MIL-STD-883 (Method 1008)<br>MIL-STD-883 (Method 1010)<br>ETSI EN300 019-2-1 v.2.1.2<br>ETSI EN300 019-2-2 v.2.1.2<br>ETSI EN300 019-2-3 v.2.2.2<br>RTCA DO 160 (sect. 5)<br>SAE J1211 (sect. 4.1)<br>SAE J1455 (sect. 4.1)<br>Customer Specifications | | |

| Technology | Range, when necessary | Methods Used | Product Types | Remarks |
|---|---|---|---|---|
| Humidity | (20 to 95) % RH | Bellcore GR63 CORE (sect. 5.1)<br>MIL-STD-810<br>MIL-STD-202 (Method 103B)<br>MIL-STD-883 (Method 1004)<br>ETSI EN300 019-2-1 v.2.1.2<br>ETSI EN300 019-2-2 v.2.1.2<br>ETSI EN300 019-2-3 v.2.2.2<br>RTCA DO 160 (sect. 6)<br>SAE J1211 (sect. 4.2)<br>SAE J1455 (sect. 4.2)<br>Customer Specifications | Components, Sub Assemblies, Full Assemblies, Structures (welded, bolted, cast), Electrical & Electronic Devices | Automotive, Heavy Truck, Construction, Railroad, Medical, Aerospace, Agriculture, Government Defense, Petroleum, Marine, Industrial, Consumer Product Industries |

Notes:

1) This laboratory offers commercial testing service.

Approved by: _____ Date: December 16, 2010

R. Douglas Leonard Jr.
Chief Technical Officer

Re-Issued: 12/16/10