

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

RCO TECHNOLOGIES, LLC¹
45601 Five Mile Road
Plymouth, MI 48170
Kimberly Purcell Phone: 734 354 0655

E-mail: kim.purcell@rcoeng.com

MECHANICAL

Valid To: January 31, 2018 Certificate Number: 1394.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location listed above as well as the two satellite laboratory locations listed below to perform the following tests using flexible test cells on <u>automotive vehicles</u>, <u>components</u>, <u>seats</u>, <u>interior systems and aerospace/aircraft components</u> using customer specific test methods and standards based on the test technologies and methods using the parameters listed below. Typical customer specifications: FMVSS, ECE, NHTSA, SAE, Mil-Spec, DaimlerChrysler, Ford, General Motors, Honda, and Nissan.

<u>Test Technology/Test Parameter(s):</u> <u>Test Method(s):</u>

Durability of Seating System and Interior Parts and Vehicle Components

Mechanical Cycling (Using Pneumatics and TS-WI-05-06-08; TS-WI-05-06-03;

Robotics) Up to 1,000 lbs.² TS-WI-05-06-35

Trim Durability Cycling TS-WI-05-06-31

 $(Up to 360 lbs.)^2$

Jounce and Squirm and Impact TS-WI-05-06-07

 $(Up to 300 lbs.)^2$

Robotic Ingress/Egress TS-WI-05-06-06

 $(Up to 360 lbs.)^{2}$

Oscillation Durability – Vibration (Wet and Dry) MIL-STD-810 F, G;

 $(Up to 360 lbs.)^2$ TS-WI-05-06-45

Environmental Conditioning

Steady State MIL-STD-810 F, G

 $(-50 \text{ to } 115) \,^{\circ}\text{C}$, (Up to 95% RH)²

Cycling MIL-STD-810 F, G

 $(-50 \text{ to } 115) \,^{\circ}\text{C}$, (Up to 95% RH)²

Fatigue (1000 lbs. max.)² TS-WI-05-06-04

(A2LA Cert. No. 1394.01) 03/08/2016

t- (. But

Page 1 of 5

Test Technology/Test Parameter(s): Test Method(s):

Environmental Conditioning (cont'd)

Electro Durability (0.1 to 50) Amp, TS-WI-05-06-08

 $(0.1 \text{ to } 24) \text{ Volts DC}^2$

Torque of Seating Systems and Fasteners (Up to 200 in./lbs.) 2 TS-WI-05-06-10

Static Loading Strength (20,000 lbs. max.) FMVSS 202, 202a, 207 (Para. S.4.3), 210, 225;

ECE R-14 (Para. 6.3, 6.6), R-17 (Para. 6.2, 6.4), R-21

Dynamic Impact (0.1 to 200) G's FMVSS 201, 209 (Para. S.4.3);

ECE R-17 (Para. 6.8), R-21 (Para. 5.1, 5.7)

Displacement TS-WI-05-06-34

 $(Up to 20 in.)^2$

Weight and Center of Gravity of TS-WI-05-06-23

Seating Systems

H-Point of Seating Systems **SAE J826**

FMVSS 302 Flammability

Ford DVM-0042-ST Salt Spray

Thermal Imaging TS-WI -08-02-16-A

Vibration MIL-STD-810 F, G (514); TS-OI-05-05-16;

(20 to 2000) Hz TS-OI-05-05-15 Sine and Random

Displacement: 152mm Peak to Peak

5500 Pounds Force

Combined Environment

Temperature Range (-55 to 115)°C Humidity: 30°C up to 80% RH

Shock: MIL-STD-810 F, G (514)

Up to 5 G's @ 34 mil/sec; 2 G's

at 55 mil/sec.

Temperature Exposure MIL-STD-810F (501.4, 501.2, 507.4); (-55 to 120)°C

TS-OI-05-05-20; TS-OI-05-05-22;

TS-OI-05-05-19

Motor Vehicle Seat Comfort

Overall Load Deflection **SAE J2896**

Hardness Profile **SAE J2896**

V- (. Buit Page 2 of 5 (A2LA Cert. No. 1394.01) 03/08/2016

Test Technology/Test Parameter(s): Test Method(s):

Motor Vehicle Seat Comfort (cont'd)

Impact Absorption **SAE J2896**

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

RCO ENGINEERING 15711 12 Mile Road Roseville, MI 48066

Kimberly Purcell Phone: 734 354 0655 E-mail: kim.purcell@rcoeng.com

MECHANICAL

Test Technology/Test Parameter(s): Test Method(s):

Density ASTM D3574 (Part A)

ILD Hardness ASTM D3574 (Part B1); DCX MS DC-634;

WSB-M2D402-A3; GM 6923M (Para. 3.2.7);

TS-WI-05-06-49

IFD Testing ASTM D3574 (Part B2); TS-WI-05-06-49

H-Point SAE J826; TS-WI-05-06-24

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

RCO TECHNOLOGIES 49200 Halyard Rd Plymouth MI 48170

Kimberly Purcell Phone: 734 354 0655 E-mail: kim.purcell@rcoeng.com

MECHANICAL

Test Technology/Test Parameter(s): Test Method(s):

Durability of Seating System and Interior Parts and Vehicle Components

Mechanical Cycling (Using Pneumatics and Robotics) TS-WI-05-06-08; TS-WI-05-06-03;

 $(Up to 1,000 lbs.)^2$

TS-WI-05-06-35

V- (. But

(A2LA Cert. No. 1394.01) 03/08/2016

Page 3 of 5

¹ This accreditation covers testing performed at the main laboratory listed above, and the satellite laboratories listed below.

Test Technology/Test Parameter(s):

Test Method(s):

Durability of Seating System and

Interior Parts and Vehicle Components (cont'd)

Trim Durability Cycling

(Up to 360 lbs.) 2

TS-WI-05-06-31

Jounce and Squirm and Impact

 $(Up to 300 lbs.)^{2}$

TS-WI-05-06-07

Robotic Ingress/Egress

 $(Up to 360 lbs.)^{2}$

TS-WI-05-06-06

Oscillation Durability – Vibration (Dry)

 $(Up to 300 lbs.)^2$

MIL-STD-810 F, G; TS-WI-05-06-45

Environmental Conditioning

Temperature: $(-50 \text{ to } 115) \,^{\circ}\text{C}^2$

MIL-STD-810 F, G

Temperature and Humidity

(-50 to 115) °C, Up to 95% RH²

MIL-STD-810 F, G

Fatigue (1000 lbs. max.)²

TS-WI-05-06-04

Electro Durability (0.1 to 50) Amp,

 $(0.1 \text{ to } 24) \text{ Volts DC}^2$

TS-WI-05-06-08

Torque of Seating Systems and Fasteners

(Up to 200 in./lbs.)²

TS-WI-05-06-10

Static Loading Strength (20,000 lbs. max.)

FMVSS 207 (Para. S.4.3), 210, 225;

ECE R-14 (Para. 6.3, 6.6)

Displacement

 $(Up to 20 in.)^2$

TS-WI-05-06-34

Weight and Center of Gravity of Seating Systems TS-WI-05-06-23

H-Point of Seating Systems

SAE J826; TS-WI-05-06-24

Thermal Imaging

TS-WI -08-02-16-A

Vibration

5500 Pounds Force

Stroke: 4 inch peak to peak 5 to 2000 Hertz

TS-OI-05-05-16; TS-OI-05-05-15

V- (. But

MIL-STD-810F (514.5);

(A2LA Cert. No. 1394.01) 03/08/2016

Page 4 of 5

Test Technology/Test Parameter(s):

Test Method(s):

Environmental Conditioning (cont'd)

Temperature Exposure -55° to +115°C

MIL-STD-810F (501.4. 501.2, 507.4); TS-OI-05-05-22; TS-OI-05-05-19

A- (. But

² Also using customer-specified methods directly related to the types of tests and parameters listed above.



Accredited Laboratory

A2LA has accredited

RCO TECHNOLOGIES, LLC

Plymouth, MI

for technical competence in the field of

Mechanical 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 8th day of March 2016.

V- (. But

Senior Director of Quality and Communications For the Accreditation Council

Certificate Number 1394.01

Valid to January 31, 2018