



SCOPE OF ACCREDITATION

**Leggett & Platt - Schukra
PROTOTYPE & TEST LABORATORY
360 Silver Creek Industrial Dr. RR#1 Tecumseh
Lakeshore, ON
N8N 4Y3**

Accredited Laboratory No. 301
(Conforms with requirements of ISO/IEC 17025:2005)

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CLIENTS SERVED: L&P Automotive Group, Schukra of North America (SNA)

FIELDS OF TESTING: Electrical/Electronic, Mechanical/Physical

INITIAL ACCREDITATION DATE: 1999-07-30

SCOPE ISSUED ON: 2019-07-10

ACCREDITATION VALID TO: 2023-07-30

MACHINERY

Transportation, Agricultural and Construction Vehicles and Components:

Automobiles, Light Trucks, Vans & Trailers

(Vehicle Seating and Assemblies: Lumbar Assemblies and Components, and Tilt Adjuster and Components)

1	FCA Global Seat Complete Assembly PF. 90232 (Sept 2015)	Reliability/Durability Requirements. Section: 9.13
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2	FCA Global Front Seat Structure Performance Standard PF. 90234 (Oct 2015)	Functional Requirements Sections: 7.12 - 7.13 - 7.14 - 7.20 - 7.21 Reliability/Durability Requirements Sections: 9.11 - 9.12
3	Ford SDS/ARL ID: Seat Version 117	Sections: * Operating Noise of Power Seat Features - RQT-011000 - 015907 * Seat System Operation at Extreme Temperatures - RQT-011000-015910 * Seat System Jounce Durability - RQT-011000-015931 * Adjustable Seat Back Lumbar, MCS, and Bolsters Life Cycle - RQT-011000-015975 * Adjustable Seat Bolster Life Cycle - RQT-011000-015976
4	Ford SDS/ARL ID: EESYS Version 103	Sections: * Software Short CKT Protection of Outputs - (RQT-191001-009855) - (EC-0007) * Power Supply Dropout Management - (RQT-191001-009891) - (EC-0043) * Module Power-Up/Reset Requirements - General Req- (RQT-191001-009897) - (EC-0049) * Low/High Voltage Guaranteed Function/Performance - (RQT-191001-009906) - (EC-0058) * Load Management - (RQT-191001-009911) - (EC-0063) * Maximum PCB Temperatures - (RQT-191001-009986) - (EC-0238) * Module to Load Interface Verification - (RQT-191001-019788) - (EC-0261)
5	Ford SDS/ARL ID: ELCOMP Version 55	Sections: * MUX: Local Interconnection Network (LIN) - (RQT-000600-009619) - (EY-0136) * E/E System & Component Operating Voltage - (RQT-002600-009624) - (EY-0141)
6	General Motors 421.15 – Comfort Systems -CG3909	Component Technical Specification - Revision 2.0, 30th November 2015 Sections: 3.3.2.1 - 3.3.3. - 3.3.3.1 - 3.3.3.2 - 3.3.3.3 - 3.3.3.4 - 3.3.3.5 - 3.3.3.6 - 3.3.4.1 - 3.3.4.2 - 3.3.4.3 - 3.5.1.2 - 3.5.1.3 - 3.5.2 - 3.6.2.1 - 3.6.2.2 - 3.6.2.3 - 3.6.2.6 - 3.6.2.9
7	General Motors GMW3191	Connector Test and Validation Specification Sections: 4.2.8 - 4.2.18 - 4.2.19 - 4.5.2
8	General Motors GMW14407_Ed2 Nov 2014	Lumbar and Lumbar Support Testing



9	Lear - Latch Actuators Technical Component Specification SPC 1705, A, 5 17, AUG 2017	LMA High and Low Force Power Actuator LMA HIGH L0408403AA.01.005 LMA LOW L0426385AA.00.003 Sections: 3.2.1.1 - 3.2.1.2 - 3.2.1.3 - 3.2.1.4 - 3.2.2.1 - 3.2.2.2 - 3.2.1 - 4.2.3.1 - 4.2.3.2 - 4.2.3.3 - 4.2.3.4 - 4.2.3.5
10	Hyundai ES 88550-10 Rev 20	Front Power Seat - Operation Sections: 3.1.4 - 3.15 - 3.1.6
11	Hyundai ES 88770-10 Rev 12	Lumbar Support - Operation Sections: 3.2 - 3.3.2 - 3.3.3 - 3.3.4 - 3.3.5 - 3.4.1 - 3.5.1 - 3.5.2 - 3.5.3 - 3.5.4
12	Hyundai ES 95400-10 Rev 17	Vehicle's Electronical Environment Test Sections: 6.1.1 - 6.2.6 - 6.2.7 - 6.2.8 - 6.2.10 - 6.5.1 - 6.5.2
13	Mazda MES PA 57014 Feb 2006 Lumbar Level	Section: 7.4.2 Operational Durability of Lumbar Support
14	Mazda MES PA 57012 Dec 2008 Lumbar level	Section: 7.3.2 - Seat Back Center Strength
15	Mazda MES PA 57015 Feb 2008 Lumbar level	Section: 7.5.9 - Seat Back Fatigue Test
16	Mazda MES PW 67601 Apr 2013 Lumbar level	Sections: 7.2.2 - Low Temperature Operation 7.5.1 - High Temperature Durability
17	Nissan 8700NDS00[29]	Nissan Seat Design Specification, Sections: 2-10; 3-1-1; 3-5; 3-12; 4-5; 5-16; 5-25; 6-1; 6-2; 6-3; 6-4; 6-5; 6-6; 6-7; 6-8; 6-9; 6-10
18	Toyota TSF 6106G (TB BSDA1406G)	Test Method for Seat Operation Durability Sections: 5.1 and 5.2
19	Toyota TSF 6244G (TB BSDA1444)	Durability Test Method for Seat Cushion & Seat Back (150,02000 cycles for lumbar) Section: 4
20	Toyota TSM 0502G (TB BSDM0502)	General Test Method regarding Material Properties for Plastic Parts Sections: 4.1.1 - 4.1.3 - 4.2.2



21	Toyota (TB BSDA1708)	Test Method for Seat Asm Abnormal Noise Section: Abnormal Noise Test
22	Toyota TSF 6117G	Test Method for Power Seat Noise
23	SAE J4002 Jan 2010	H-Point Machine (HPM-II) Specifications and Procedure for H-Point Determination—Auditing Vehicle Seats
24	SAE J4003 Oct 2008	H-Point Machine (HPM-II) Procedure for H-Point Determination--Benchmarking Vehicle Seats
25	SAE J826 Nov 2015	Devices for Use in Defining and Measuring Vehicle Seating Accommodation
26	WI-ERG-002	Lumbar Digitization
27	WI-ERG-003	H-Point Audit
28	WI-ERG-004	Seat Digitization
29	WI-ERG-005	Pressure Distribution Measurement
30	WI-ERG-006	Subjective Ergonomics Evaluation
31	WI-ERG-007	Lumbar Deflection Test
32	WI-LAB-010	Manual Lumbar Durability Test
33	WI-LAB-011	Power Lumbar Durability Test
34	WI-LAB-012	Springboard Actuator Durability Test
35	WI-LAB-014	Sound Measurement - Mechanical Lumbar Assembly and Lumbar Actuator
36	WI-LAB-015	Sound Test Data Post Processing
37	WI-LAB-016	Sound Test - Pneumatic Pump
38	WI-LAB-019	Lumbar - Impact Drop Test
39	WI-LAB-022	Travel Time, Running & Stall Current Test
40	WI-LAB-023	Tensile Strength Test
41	WI-LAB-024	Fatigue Test
42	WI-LAB-025	Lumbar - Hot Set Test
43	WI-LAB-026	Jounce Test - Seat Back Durability
44	WI-LAB-033	Motorized Effort (Torque) Test
45	WI-LAB-058	Motor Performance Test
46	WI-LAB-065	Spring Rate & Initial Tension Measurement Test



47	WI-LAB-068	Cable Load - Force Measurement Test
48	WI-LAB-069	Displacement Test
49	WI-LAB-070	Drop Test
50	WI-LAB-073	Lumbar - Steel Ball Drop Test
51	WI-LAB-075	Power Lumbar Durability Test- Honda
52	WI-LAB-077	Manual Actuator - Free Play Test
53	WI-LAB-079	Lumbar Basket - Force & Deflection Test
54	WI-LAB-081	Lumbar Basket – Permanent Set Test
55	WI-LAB-082	Lever Actuator - Permanent Set Test
56	WI-LAB-083	Thermal Cycle Test
57	WI-LAB-089	Vibration Test (BSR)
58	WI-LAB-098	Angular Travel Test
59	WI-LAB-100	Cable Travel Test
60	WI-LAB-102	Screw Stripping Torque Test
61	WI-LAB-107	Operating Speed Test
62	WI-LAB-109	Module Pressure Measure Test
63	WI-LAB-110	Jamming Test
64	WI-LAB-118	Motor PTC Test
65	WI-LAB-147	Solenoid Air Flow Test
66	WI-LAB-148	Solenoid Climate Cycle Test
67	WI-LAB-149	Solenoid High Temp Soak Test
68	WI-LAB-151	Solenoid Over Voltage Test
69	WI-LAB-152	Solenoid Startup Voltage Test
70	WI-LAB-153	Solenoid Temperature Rise Test
71	WI-LAB-158	IPVS - Environmental Leakage Test
72	WI-LAB-159	Burke and Porter Jounce Machine
73	WI-LAB-160	Lumbar Actuator Holding Torque Test
74	WI-LAB-162	IPVS - Flow Rate Measurement Test
75	WI-LAB-163	IPVS - Relief Pressure Test
76	WI-LAB-165	IPVS - Sensor Output Voltage Test



77	WI-LAB-166	IPVS - Inflation Deflation Test
78	WI-LAB-167	IPVS - Solenoid Motor Test
79	WI-LAB-168	IPVS - Air Hose Pull Test
80	WI-LAB-170	IPVS - Durability Test
81	WI-LAB-171	IPVS - Climate Cycle Soak Test
82	WI-LAB-174	Motor Noise Test
83	WI-LAB-175	Power Lumbar Over-Voltage Test
84	WI-LAB-176	Motor Vibration Test
85	WI-LAB-177	Creep Test
86	WI-LAB-178	Four Corner Test

Notes:

ISO/IEC 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories

FCA: FCA US LLC (formerly Chrysler Group)

SAE: Society of Automotive Engineers

WI: Internal work instruction

Elias Rafoul, Vice President,
Accreditation Services

Date: 2019-07-10

Number of Scope Listings: 86

SCC 1003-15/373

Partner File #0

Partner: None