



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Calspan Corporation
4455 Genesee Street, Buffalo, NY 14225

(Hereinafter called the Organization) and hereby declares that Organization is accredited in accordance with the recognized International Standard:

ISO/IEC 17025:2005

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Mechanical Testing
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President/Operations Manager

Initial Accreditation Date:

July 17, 2013

Issue Date:

November 21, 2018

Expiration Date:

December 31, 2020

Accreditation No.:

76654

Certificate No.:

L18-546

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjllabs.com



Certificate of Accreditation: Supplement

Calspan Corporation

4455 Genesee Street, Buffalo, NY 14225

Contact Name: Scott Abramowski Phone: 716-631-6989

Accreditation is granted to the facility to perform the following testing:

FIELD OF TEST	ITEMS, MATERIALS OR PRODUCTS TESTED	SPECIFIC TESTS OR PROPERTIES MEASURED	SPECIFICATION, STANDARD METHOD OR TECHNIQUE USED	RANGE (WHERE APPROPRIATE) AND DETECTION LIMIT	
Mechanical ^F	Vehicle Crash Testing of Perimeter Barrier	Small Passenger (C)	ASTM F2656	Rating P1-P4	
		Pickup Truck (T)			
		Medium-Duty Truck (M)			
		Penetration Distance	IWA 14-1:2013 PAS 68:2013		
		Debris Distance			
	Child Restraint Seat Systems	Dynamic Test	ECE R44	Head Excursion – Various	
			FMVSS 213	Head/Knee Excursion – Various	
			CMVSS 213		
	Ambulance Equipment		SAE J2917	Acceleration – Various	
			SAE J2956		
			SAE J3044		
			SAE J3043	Visual Inspection	
			SAE J3058		
			SAE J3059	Excursions – Various, Visual Inspection	
			BS EN 1789		
			SAE J3027	Head Excursion – 0 in to 14 in	
	SAE J3026	Injury Criteria – Various Visual Inspection			
	ATD Head Drop		Resultant Acceleration	CFR 49	0 g to 300 g
			Lateral Acceleration	Part 572 – Subpart E, O, U, V	D.L. = 15 g
			Unimodal Oscillation		0 % to 17 %
			Temperature		18.9 °C to 25.6 °C
			Humidity	10 % to 70 %	
	ATD Head Impact		Velocity	FM-ATD-HDTH50-069*	1.95 m/s to 2.05 m/s
			Acceleration		0 g to 124.2 g
			Force		0 N to 5 972 N
			Temperature		20.6 °C to 22.2 °C
			Humidity		10 % to 70 %
ATD Face Impact		Velocity	FM-ATD-FCTH50-068*	6.68 m/s to 6.78 m/s	
		Acceleration		0 g to 267 g	
		Force		0 N to 11 143 N	
		Temperature		20.6 °C to 22.2 °C	
		Humidity		10 % to 70 %	



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Mechanical ^F	ATD Neck Pendulum	Impact Velocity	CFR 49, Part 572 –	3.3 m/s to 7.13 m/s
		Dynamic Velocity	Subpart E, O, U, V	0 m/s to 4.92 m/s
		Acceleration	-FM-ATD-NETH50-072*	0 g to 34.1 g
		Rotation	-FM-ATD-NFFTH50-073*	0° to 114°
		Force	-FM-ATD-NLFTH50-074*	0 N to 2 893 N
		Moment	-FM-ATD-NTTH50-075*	0 Nm to 130 Nm
		Angular Rate		0 °/s to 2 114 °/s
		Temperature		18.9 °C to 25.6 °C
		Humidity		10 % to 70 %
	ATD Shoulder Impact	Velocity	CFR 49, Part 572 –	4.2 m/s to 4.4 m/s
		Displacement	Subpart U, V	0 mm to 37 mm
		Acceleration		0 g to 25 g
		Temperature		20.6 °C to 22.2 °C
		Humidity		10 % to 70 %
	ATD Thorax Impact	Velocity	CFR 49, Part 572 –	4.2 m/s to 6.83 m/s
		Displacement	Subpart E, O, U, V	0 mm to 72.6 mm
		Acceleration	-FM-ATD-UTTH50-077*	0 g to 212 g
		Hysteresis	-FM-ATD-LTTH50-071*	50 % to 70 %
		Force		0 N to 11 100 N
		Temperature		18.9 °C to 25.6 °C
		Humidity		10 % to 70 %
	ATD Abdomen Impact	Velocity	CFR 49, Part 572 –	3.2 m/s to 4.4 m/s
		Force	Subpart U, V	0 N to 4 800 N
		Acceleration	-FM-ATD-ABTH50-067*	0 g to 16 g
		Displacement		0 mm to 101.6 mm
		Temperature		20.6 °C to 22.2 °C
		Humidity		10 % to 70 %
	ATD Torso Flexion	Velocity	CFR 49, Part 572 –	0.5 °/s to 1.5 °/s
		Force	Subpart O	0 N to 390 N
		Angle		0° to 45.5°
		Temperature		18.9 °C to 25.6 °C
		Humidity		10 % to 70 %



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Mechanical ^F	ATD Lumbar Pendulum	Impact Velocity	CFR 49, Part 572 – Subpart U	5.95 m/s to 6.15 m/s
		Dynamic Velocity		Corridor
		Rotation		0° to 55°
		Temperature		20.6 °C to 22.2 °C
		Humidity		10 % to 70 %
	ATD Hip Flexion	Angular Velocity	CFR 49, Part 572 – Subpart E	5 °/s to 10 °/s
		Angle		0° to 50°
		Torque		0 Nm to 203 Nm
		Temperature		18.9 °C to 25.6 °C
		Humidity		10 % to 70 %
	ATD Rib Module	Velocity	CFR 49, Part 572 – Subpart U	3 m/s to 4 m/s
		Displacement		0 mm to 51 mm
		Temperature		20.6 °C to 22.2 °C
		Humidity		10 % to 70 %
	ATD Pelvis Impact	Velocity	CFR 49, Part 572 – Subpart U, V	4.2 m/s to 6.8 m/s
		Acceleration		0 g to 47 g
		Force		0 N to 5 400 N
		Temperature		20.6 °C to 22.2 °C
		Humidity		10 % to 70 %
	ATD Iliac Impact	Velocity	CFR 49, Part 572 – Subpart V	4.2 m/s to 4.4 m/s
		Acceleration		0 g to 45 g
		Force		0 N to 4 300 N
		Temperature		20.6 °C to 22.2 °C
		Humidity		10 % to 70 %
	ATD Knee Impact	Velocity	CFR 49, Part 572 – Subpart E, O	2.07 m/s to 2.13 m/s
		Force		0 N to 5 780 N
		Temperature		18.9 °C to 25.6 °C
		Humidity		10 % to 70 %
ATD Knee Slider Impact	Velocity	FM-ATD-KNTH50-070*	2.15 m/s to 2.25 m/s	
	Displacement		0 mm to 20.9 mm	
	Force		0 N to 7 170 N	
	Temperature		20.6 °C to 22.2 °C	
	Humidity		10 % to 70 %	



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Mechanical ^F	ATD Upper Leg Impact	Velocity	FM-ATD-ULTH50-076*	2.55 m/s to 2.65 m/s	
		Force		0 N to 5 093 N	
		Temperature		20.6 °C to 22.2 °C	
		Humidity		10 % to 70 %	
	ATD Lower Leg / Foot Impact	Velocity	FM-ATD-INLX-060* FM-ATD-EVLX-061* FM-ATD-HFLX-062* FM-ATD-BFLX-063*	1.9 m/s to 5.1 m/s	
		Force		0 N to 3 477 N	
		Rotation		0° to 35.6°	
		Moment		0 Nm to 61.3 Nm	
		Temperature		20.6 °C to 22.2 °C	
		Humidity		10 % to 70 %	
	Vehicle Frontal Impact Testing	Speed, Weight, Injury Criteria, Vehicle Response	Internal work Instruction (Based upon FMVSS 208 and NCAP)	Various	
	Vehicle Frontal Offset Deformable Barrier Testing				
	Vehicle Front Left/Right Oblique Barrier Testing				
	Vehicle Side Impact Testing				Internal Work Instruction (Based upon FMVSS 214 and NCAP)
	Vehicle Rear Impact Testing				Internal Work Instruction (Based upon FMVSS 301 and NCAP)

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this testing at its fixed location.
2. The presence of an asterisk (*) means that these forms/procedures and accompanying ranges are per the version of the most current THOR-50 Qualification Procedures Manual issued by NHTSA.