PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

FIT Pacific, Inc. Tsukuba Technical Center
3-20-1 Tokodai Tsukuba-shi, Ibarakiken 300-2635

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

ISO/IEC 17025:2017

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):

Testing of Crash Test Dummies
(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

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

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
May 28, 2011	May 18, 2022	June 30, 2024

Accreditation No.:	*Certificate No.:*
69511	L22-364

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.pjlabs.com

Certificate of Accreditation: Supplement

FIT Pacific, Inc. Tsukuba Technical Center
3-20-1 Tokodai Tsukuba-shi, Ibarakiken 300-2635
Contact Name: Nobuo Edakawa Phone: 029-848-0331

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]	Hybrid-III 95th, 50th, 5th, 10YO, 6YO, 3YO, CRABI Head Drop Test	Head Drop Test Stand (TS-1) Acceleration Meter	HIII Dummy Calibration Procedure(TT-ID-TM10001) On basis of: -49 CFR Part 572 – Subpart E, N, O, P, R -SAE EA-26: User's Manual for the Hybrid III 95th Test Dummy Engineering Aid (EA-26) - SAE User's Manual H III 10YO Test Dummy Engineering Aid(EA-34)	Acceleration: 0 m/s^2 to 2 942 m/s^2 (0 g to 300 g) Unimodal Oscillation: 0 % to 17 % Temperature: 19 °C to 26 °C Humidity: 10 % to 70 %
	Side Impact Dummy ES-1, ES-2/2re, SID-IIs (SBL-C&D) Head Drop Test	Head Drop Test Stand (TS-1) Acceleration Meter	Calibration Procedure (TT-ID-TM10002) and SID-II s Calibration Procedure (TT-ID-TM-10003) On basis of: -49 CFR(Part 572) – Subpart U, V -ECE Addendum 94: Regulation 95 -User's Manual-ES-2 50th Percentile Side Impact Crash Test Dummy -EuroNCAP_TRANS-WP29	Acceleration: 147 m/s^2 to 1 471 m/s^2 (15 g to 150 g) Unimodal Oscillation: 0 % to 15 % Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %
	Hybrid-III 95th, 50th, 5th, 10YO, 6YO, 3YO, CRABI Neck Extension Test	Neck Pendulum Test Stand (TS-2) Phototube, Acceleration Meter, Angle Gauge, Load Cell	HIII Dummy Calibration Procedure (TT-ID-TM-10001) On basis of: -49 CFR(Part 572) – Subpart E, N, O, P, R -SAE User's Manual HIII 95th Test Dummy Engineering Aid(EA-26) -SAE User's Manual HIII 10YO Test Dummy Engineering Aid(EA-34)	Velocity: 0.80 m/s to 6.22 m/s Acceleration: 0 m/s^2 to 215.7 m/s^2 (0.0 g to 22.0 g) Time: 0 ms to 174 ms Angle: 70.0° to 114.0° Moment: 0 Nm to 84 Nm Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %

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Mechanical [F]	Hybrid-III 95th, 50th, 5th, 10YO, 6YO, 3YO, CRABI Neck Flexion Test	Neck Pendulum Test Stand (TS-2) Phototube, Acceleration Meter, Angle Gauge, Load Cell	HIII Dummy Calibration Procedure (TT-ID-TM-10001) On basis of: -49 CFR Part 572 – Subpart E, N, O, P, R -SAE User's Manual HIII 95th Test Dummy Engineering Aid(EA-26) -SAE User's Manual HIII 10YO Test Dummy Engineering Aid(EA-34)	Velocity: 1.20 m/s to 7.13 m/s Acceleration: 0 m/s^2 to 284.4 m/s^2 (0.0 g to 29.0 g) Time: 34 ms to 128 ms Angle: 64° to 92° Moment: 0 Nm to 130 Nm Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %
	Side Impact Dummy ES-1, ES-2/2re Lumbar Flexion Test	Neck Pendulum Test Stand (TS-2) Phototube, Acceleration Meter, Angle Gauge, Load Cell	Euro SID Calibration Procedure (TT-ID-TM-10002) On basis of: -49 CFR(Part 572) – Subpart U -ECE Addendum 94: Regulation 95 -User's Manual – ES-2 50th Percentile Side Impact Crash Test Dummy -Euro NCAP_TRANS-WP29	Velocity: 5.95 m/s to 6.15 m/s Acceleration: 0 m/s^2 to 334.4 m/s^2 (0 g to 34.1 g) Deceleration: 0 m/s to 6.5 m/s Time: 0 ms to 31.8 ms Angle: 0° to 55° Moment: 37 Nm to 57 Nm Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %
	Side Impact Dummy ES-1, ES-2/2re, SID-II s (SBL-C&D) Neck Flexion Test	Neck Pendulum Test Stand (TS-2) Phototube, Acceleration Meter, Angle Gauge, Load Cell	Euro SID Calibration Procedure (TT-ID-TM-10002), SID-IIs Calibration Procedure (TT-ID-TM-10003) On basis of: -49 CFR Part 572 – Subpart U, V -ECE Addendum 94: Regulation 95 -User's Manual – ES-2 50th Percentile Side Impact Crash Test Dummy -Euro NCAP_TRANS-WP29	Velocity: 3.3 m/s to 5.63 m/s Acceleration: 0 m/s^2 to 362.8 m/s^2 (0 g to 37 g) Deceleration: 0 m/s to 6.4 m/s Time: 0 ms to 60 ms Angle: 46° to 82° Moment: 36 Nm to 44 Nm Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %

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Mechanical [F]	Hybrid-III 95th, 50th, 5th, 10YO, 6YO Knee Impact Test	Knee Impact Test Stand (TS-3) Phototube, Accelerometer, Load Cell, Displacement Gauge	HIII Dummy Calibration Procedure(TT-ID-TM-10001) On basis of: -49 CFR(Part 572)— Subpart E, N, O -SAE User's Manual H III 95th Test Dummy Engineering Aid(EA-26) -SAE User's Manual H III 10YO Test Dummy Engineering Aid(EA-34)	Velocity: 2.07 m/s to 2.13 m/s Force: 2.0 N to 6.0 N Temperature: 19 °C to 26 °C Humidity: 10 % to 70 %
	Hybrid-III 95th, 50th, 5th Knee Slider Test	Knee Impact Test Stand (TS-3) Phototube, Accelerometer, Load Cell, Displacement Gauge	HIII Dummy Calibration Procedure(TT-ID-TM-10001) On basis of: -SAE User's Manual HIII 50th Test Dummy Engineering Aid(EA-23) -SAE User's Manual HIII 5th Test Dummy Engineering Aid(EA-25) -SAE User's Manual HIII 95th Test Dummy Engineering Aid (EA-26) -J2876 HIII 50th Low Speed Ball Knee Slider Test	Velocity: 2.70 m/s to 2.80 m/s Force: 1.26 kN to 3.10 kN Displacement: 10 mm to 18.3 mm Temperature: 19 °C to 26 °C Humidity: 10 % to 70 %
	Hybrid-III 95th, 50th, 5th, 10YO, 6YO, 3YO, CRABI Thorax Impact Test	Thorax Impact Test Stand (TS-4) Phototube, Accelerometer, Load Cell, Displacement Gauge	HIII Dummy Calibration Procedure(TT-ID-TM-10001) On basis of: -49 CFR(Part 572) — Subpart E, N, O, P, R -SAE User's Manual H III 95th Test Dummy Engineering Aid(EA-26) -SAE User's Manual H III 10YO Test Dummy Engineering Aid(EA-34) -J2878 HIII 5th Low Speed Thorax Impact Test	Velocity: 4.90 m/s to 6.83 m/s Force: 680 N to 5 900 N Displacement: 12.5 mm to 76.0 mm Hysteresis: 65 % to 85 % Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %

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Mechanical [F]	Side Impact Dummy ES-1, ES-2/2re, SID-II s (SBL-C&D) Shoulder Impact Test	Thorax Impact Test Stand (TS-4) Phototube, Accelerometer, Load Cell, Displacement Gauge	Euro SID Calibration Procedure(TT-ID-TM-10002), SID-IIs Calibration Procedure (TT-ID-TM-10003) On basis of: -49 CFR(Part 572)— Subpart U, V -ECE Addendum 94: Regulation 95 -User's Manual – ES-2 50th Percentile Side Impact Crash Test Dummy -Euro NCAP_TRANS-WP29	Velocity: 4.20 m/s to 4.59 m/s Acceleration: 73.5 m/s^2 to 186.3 m/s^2 (7.5 g to 19 g) Force: 1.6 kN to 2.4 kN Displacement: 27 mm to 39 mm Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %
	Side Impact Dummy ES-1, ES-2/2re, SID-II s (SBL-C&D) Thorax Impact Test (With Arm and Without Arm)	Thorax Impact Test Stand (TS-4) Phototube, Accelerometer, Load Cell, Displacement Gauge	Euro SID Calibration Procedure(TT-ID-TM-10002), SID-IIs Calibration Procedure (TT-ID-TM-10003) On basis of: -49 CFR(Part 572)— Subpart U, V -ECE Addendum 94: Regulation 95 -User's Manual – ES-2 50th Percentile Side Impact Crash Test Dummy -Euro NCAP_TRANS-WP29	Velocity: 4.20 m/s to 6.84 m/s Acceleration: 68 m/s^2 to 470 m/s^2 (7 g to 48 g) Force: 1.8 kN to 6.2 kN Displacement: 23 mm to 51 mm Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %
	Side Impact Dummy ES-1, ES-2/2re, SID-II s (SBL-C&D) Abdominal Impact Test	Thorax Impact Test Stand (TS-4) Phototube, Accelerometer, Load Cell, Displacement Gauge	Euro SID Calibration Procedure(TT-ID-TM-10002), SID-IIs Calibration Procedure (TT-ID-TM-10003) On basis of: -49 CFR (Part 572) — Subpart U, V -ECE Addendum 94: Regulation 95 -User's Manual – ES-2 50th Percentile Side Impact Crash Test Dummy -Euro NCAP_TRANS-WP29	Velocity: 3.9 m/s to 6.4 m/s Acceleration: 49 m/s^2 to 157 m/s^2 (5 g to 16 g) Force: 1.3 kN to 9.5 kN Time: 8.5 ms to 13 ms Displacement: 33 mm to 56 mm Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %

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Mechanical [F]	Side Impact Dummy ES-1, ES-2/2re, SID-II s (SBL-C&D) Pelvis Impact Test	Thorax Impact Test Stand (TS-4) Phototube, Accelerometer, Load Cell, Displacement Gauge	Euro SID Calibration Procedure(TT-ID-TM-10002), SID-IIs Calibration Procedure (TT-ID-TM-10003) On basis of: -49 CFR(Part 572)— Subpart U, V -ECE Addendum 94: Regulation 95 -User's Manual – ES-2 50th Percentile Side Impact Crash Test Dummy -Euro NCAP_TRANS-WP29	Velocity: 4.2 m/s to 6.84 m/s Acceleration: 333 m/s^2 to 588 m/s^2 (34 g to 60 g) Force: 1.04 kN to 7.2 kN Time: 9.9 ms to 15.9 ms Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %
	Side Impact Dummy SID-II s (SBL-D) Iliac Wing Impact Test	Thorax Impact Test Stand (TS-4) Phototube, Accelerometer, Load Cell, Displacement Gauge	SID-IIs Calibration Procedure(TT-ID-TM-10003) On basis of: -49 CFR(Part 572) – Subpart V	Velocity: 4.2 m/s to 4.4 m/s Acceleration: 274 m/s^2 to 441 m/s^2 (28 g to 45 g) Force: 4.1 kN to 5.1 kN Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %
	BioRID-II Mini Sled Test	Thorax Impact Test Stand (TS-4) Phototube, Accelerometer, Load Cell, Displacement Gauge	Bio RID-II Dummy Calibration Procedure (TT-ID-TM-10004) On basis of: Denton BioRID-II Users Manual	Velocity: 4.7 m/s to 4.8 m/s Acceleration: 117.6 m/s^2 to 1 755.4 m/s^2 (12.0 g to 179.0 g) Force: 4.70 kN to 5.20 kN Time: 4.0 ms to 24.0 ms Temperature: 19.0 °C to 25.0 °C Humidity: 10 % to 70 %

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Mechanical [F]	Hybrid-III 95th, 5th, 10YO, 6YO, 3YO Torso Flexion Test	Torso Flexion Test Stand (TS-5) Load Cell, Angle Gauge	HIII Dummy Calibration Procedure(TT-ID-TM-10001) On basis of: -49 CFR(Part 572) – Subpart N, O, P -SAE User's Manual H III 95th Test Dummy Engineering Aid (EA-26) -SAE User's Manual H III 10YO Test Dummy Engineering Aid(EA-34)	Angular Velocity: 0.5 °/s to 1.5 °/s Force: 130 N to 550 N Angle: 0.0° to 45.5° Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %
	Hybrid-III 50th, 5th Hip Range Motion Test	Hip Range Motion Test Stand (TS-6) Load Cell, Angle Gauge	HIII Dummy Calibration Procedure(TT-ID-TM-10001) On basis of: -49 CFR(Part 572)– Subpart E -SAE User's Manual H III 5th Test Dummy Engineering Aid (EA-25)	Angle: 0° to 50° Moment: 0 Nm to 203 Nm Angular Velocity: 5 °/s to 10 °/s Temperature: 19 °C to 26 °C Humidity: 10 % to 70 %
	Side Impact Dummy ES-1, ES-2/2re Damper Module Test	Drop Tower Test Stand (TS-7) Phototube, Accelerometer, Displacement Gauge	Euro SID Calibration Procedure(TT-ID-TM-10002) On basis of: -49 CFR(Part 572)– Subpart U -ECE Addendum 94: Regulation 95 -User's Manual – ES-2 50th Percentile Side Impact Crash Test Dummy -Euro NCAP_TRANS-WP29	Velocity: 0.98 m/s to 4.10 m/s Displacement: 10.0 mm to 51.0 mm Temperature: 20.6 °C to 22.2 °C Humidity: 10 % to 70 %

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Mechanical [F]	Hybrid-III 50th – Eurofoot Lower Foot Heel Impact Test	Foot Impact Test Stand (TS-8) Phototube, Accelerometer, Load Cell	HIII Dummy Calibration Procedure(TT-ID-TM-10001) On basis of: ECE Addendum 93: Regulation 94	Velocity: 4.3 m/s to 4.5 m/s Acceleration: 2 402 m/s^2 to 3 383 m/s^2 (245 g to 345 g) Temperature: 19 °C to 25 °C Humidity: 10 % to 70 %
	Hybrid-III 50th – Eurofoot Upper Foot Impact Test			Velocity: 6.6 m/s to 6.8 m/s Moment: 95 Nm to 145 Nm Temperature: 19 °C to 25 °C Humidity: 10 % to 70 %
	Hybrid-III 50th – Eurofoot Heel Impact with Shoe Test			Velocity: 6.6 m/s to 6.8 m/s Force: 2.8 N to 3.8 N Temperature: 19 °C to 25 °C Humidity: 10 % to 70 %

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.