



# PERRY JOHNSON LABORATORY ACCREDITATION, INC.

## Certificate of Accreditation

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

***Tri State Scale Systems and Calibration Services, Inc.***  
***191 Ontario Street, Frankfort, IL 60423***

*(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):

***Calibration of Mass, Force & Weighing, Mechanical, Dimensional, Thermodynamic, Time & Frequency and Electrical***  
***(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

*Initial Accreditation Date:*

June 07, 2005

*Issue Date:*

September 10, 2024

*Expiration Date:*

November 30, 2026

*Accreditation No.:*

59187

*Certificate No.:*

L24-689

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.pjilabs.com](http://www.pjilabs.com)*



# Certificate of Accreditation: Supplement

## Tri State Scale Systems and Calibration Services, Inc.

191 Ontario Street, Frankfort, IL 60423  
 Contact Name: Robert Schoenau Phone: 815-464-0099

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

### Mass, Force, and Weighing Devices

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Analytical Balances <sup>o</sup>	Up to 400 g Res = 0.1 mg	$(5.7 \times 10^{-5} + 1.6 \times 10^{-5}Wt)$ g	Class 1 Weight	P-2
Precision Balances <sup>o</sup>	Up to 10 000 g Res = 0.01 g	$(6.5 \times 10^{-3} + 2.0 \times 10^{-5}Wt)$ g		
High Capacity Balances <sup>o</sup>	Up to 75 000 g Res = 1 g	$(4.8 \times 10^{-2} + 1.9 \times 10^{-5}Wt)$ g	Class F Weights	
Bench Scales <sup>o</sup>	Up to 500 lb Res = 0.001 lb	$(1.3 \times 10^{-4} + 1.8 \times 10^{-5}Wt)$ lb		
Floor Scales <sup>o</sup>	Up to 100 000 lb Res = 0.1 lb	$(1.8 \times 10^{-2} + 2.2 \times 10^{-4}Wt)$ lb		
Tank Scales <sup>o</sup>	Up to 100 000 lb Res = 0.1 lb	$(1.8 \times 10^{-2} + 2.2 \times 10^{-4}Wt)$ lb		
Crane Scales <sup>o</sup>	Up to 100 000 lb Res = 0.1 lb	$(1.8 \times 10^{-2} + 2.2 \times 10^{-4}Wt)$ lb		
Vehicle Scales <sup>o</sup>	100 lb to 200 000 lb Res = 20 lb	$(12 + 2.5 \times 10^{-4}Wt)$ lb		
Class F Test Weights <sup>F</sup>	50 mg	0.09 mg	Class 1 Weights Analytical Balance	
	100 mg	0.11 mg		
	200 mg	0.11 mg		
	500 mg	0.11 mg		
	1 g	0.11 mg		
	2 g	0.12 mg		
	3 g	0.13 mg		
	5 g	0.16 mg		
	10 g	0.26 mg		
	20 g	0.48 mg		
	50 g	1.2 mg		
	100 g	2.3 mg		
	200 g	4.6 mg		
	500 g	15 mg	Class 1 Weights Balance	
	1 kg	27 mg		
	2 kg	53 mg		
	3 kg	80 mg		
	5 kg	130 mg		
	10 kg	250 mg		
	20 kg	430 mg		
0.001 lb	$2.9 \times 10^{-7}$ lb	Class 2 Weights Balance		
0.002 lb	$3.1 \times 10^{-7}$ lb			



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Class F Test Weights <sup>F</sup>	0.005 lb	$4.0 \times 10^{-7}$ lb	Class 2 Weights Balance	P-2
	0.01 lb	$5.1 \times 10^{-7}$ lb		
	0.02 lb	$6.8 \times 10^{-7}$ lb		
	0.05 lb	$1.7 \times 10^{-6}$ lb		
	0.1 lb	$3.6 \times 10^{-6}$ lb		
	0.2 lb	$7.1 \times 10^{-6}$ lb		
	0.5 lb	$1.8 \times 10^{-5}$ lb		
	1 lb	$3.6 \times 10^{-5}$ lb		
	2 lb	$6.1 \times 10^{-5}$ lb		
	3 lb	$8.7 \times 10^{-5}$ lb		
	5 lb	$1.5 \times 10^{-4}$ lb		
	10 lb	$2.8 \times 10^{-4}$ lb		
	20 lb	$4.2 \times 10^{-4}$ lb		
	25 lb	$5.0 \times 10^{-4}$ lb		
	50 lb	$1.3 \times 10^{-3}$ lb		
100 lb	$2.3 \times 10^{-3}$ lb			
500 lb	$4.7 \times 10^{-3}$ lb			
Force Gauge: Tension <sup>FO</sup>	Up to 250 lbf	$(7.70 \times 10^{-2} + 7.70 \times 10^{-3} F)$ lbf	Class F Weights	CP-049
Force Gauge: Compression <sup>FO</sup>	10 lbf to 10 000 lbf	$(2.50 + 1.80 \times 10^{-3} F)$ lbf	Digital Readout Load Cell Class F Weights	

### Mechanical

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Indirect Verification of Rockwell Hardness Testers HRB <sup>O</sup>	30 HRB to 44 HRB	2.2 HRB	Rockwell Hardness Test Blocks	CP-020 ASTM E 18
	44 HRB to 70 HRB	1.7 HRB		
	70 HRB to 100 HRB	1.6 HRB		
Indirect Verification of Rockwell Hardness Testers HRC <sup>O</sup>	20 HRC to 39 HRC	1.4 HRC		
	Indirect Verification of Rockwell Hardness Testers HRC <sup>O</sup>	39 HRC to 60 HRC		
		60 HRC to 70 HRC		
Pressure Gauges Transducers and Transmitters <sup>FO</sup>	-14.5 psi to 300 psi	0.35 psi	Pressure Transducer	CP-038
	300 psi to 3 000 psi	1.2 psi		
Torque Wrenches / Drivers <sup>FO</sup>	25 lbf•ft to 250 lbf•ft	0.91 lbf•ft	Torque Tester/Analyzer	CP-031
	250 lbf•ft to 500 lbf•ft	1.9 lbf•ft		



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

### Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Calipers <sup>FO</sup>	Up in to 36 in	(110 + 19L) $\mu$ in	Gauge Blocks, Linear Standards, Ring Master	CP-004
Height Gauges <sup>FO</sup>	Up in to 24 in	(225 + 32L) $\mu$ in	Gauge Blocks Linear Standards	CP-013
Micrometer Outside <sup>FO</sup>	Up in to 24 in	(49 + 37L) $\mu$ in		
Micrometer Inside <sup>FO</sup>	Up in to 2 in	60 $\mu$ in	Ring Master	CP-016
Dial Indicators <sup>FO</sup>	Up in to 2 in	580 $\mu$ in	Gauge Blocks	CP-007
Digital Indicators <sup>FO</sup>	Up in to 2 in	59 $\mu$ in		
Test Indicators <sup>FO</sup>	Up to 0.060 in	120 $\mu$ in		
Pin Gages <sup>F</sup>	0.011 in to 1 in	85 $\mu$ in	Micrometer	CP-019
Rules <sup>FO</sup>	Up to 39 in	(9 400 + 930L) $\mu$ in	Gauge Blocks Linear Standards	CP-046
Tapes <sup>FO</sup>	Up to 360 in	(32 000+ 193L) $\mu$ in		

### Thermodynamic

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Thermometers <sup>FO</sup> Liquid in Glass	0 °C to 300 °C	1.1 °C	Temperature Calibrator, RTD Probe, Dry Block, Ice Bath	CP-037-1
Digital Thermometer with Probe <sup>FO</sup>	0 °C to 300 °C	1.2 °C	Temperature Calibrator, RTD Probe, Dry Block, Ice Bath	CP-037-2
Relative Humidity Indicators <sup>FO</sup>	10 % RH to 95 % RH	1.1 % RH	Humidity Meter	CP-037-3

### Time & Frequency

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE (AND SPECIFICATION WHERE APPROPRIATE)	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY ( $\pm$ )	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED	CALIBRATION MEASUREMENT METHOD OR PROCEDURES USED
Timers/Stopwatches <sup>FO</sup>	Up to 86 400 s	0.7 s/Day	Stopwatch	CP-048
Digital/Mechanical Tachometer Direct or Reflective Pickup <sup>FO</sup>	20 rpm to 3 000 rpm	(9.63 x 10 <sup>-2</sup> + 3.37 x 10 <sup>-4</sup> R) rpm	Digital Tachometer	CP-041
	3 000 rpm to 5 000 rpm	(1.50 + 1.90 x 10 <sup>-4</sup> R) rpm		



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### Electrical

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Temperature Calibration Indication and Control Equipment used with Thermocouple Type E °	-230 °C to 1 000 °C	0.60 °C	Temperature Calibrator	CP-037-2
Temperature Calibration I Indication and Control Equipment used with Thermocouple Type J °	-210 °C to 1 000 °C	0.62 °C		
Temperature Calibration Indication and Control Equipment used with Thermocouple Type K °	-200 °C to 1 371 °C	0.67 °C		
Temperature Calibration Indication and Control Equipment used with Thermocouple Type T °	-200 °C to 400 °C	0.69 °C		
Temperature Calibration Indication and Control Equipment used with RTD 100 $\Omega$ Pt 385 °	-200 °C to 850 °C	0.66 °C		
Temperature Calibration Indication and Control Equipment used with RTD 1 000 $\Omega$ Pt 385 °	-200 °C to 850 °C	0.61 °C		

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor  $k$  (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.
2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.
3. The term Wt represents weight in pounds or grams (including SI multiple and submultiple units) appropriate to the uncertainty statement.
4. The term F represents force in lbf as appropriate to the uncertainty statement.
5. The term R represents rotations per minute as measure in velocity
6. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location.



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*Accreditation is granted to the facility to perform the following calibrations:*

7. The presence of a superscript O means that the laboratory performs calibration of the indicated parameter onsite at customer locations.
8. Measurement uncertainties obtained for calibrations performed at customer sites can be expected to be larger than the measurement uncertainties obtained at the laboratories fixed location for similar calibrations. This is due to the effects of transportation of the standards and equipment and upon environmental conditions at the customer site which are typically not controlled as closely as at the laboratories fixed location.

