



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Lindstrom, LLC DBA Metallurgent Test Lab
21555 Drake Road, Suite 200, Strongsville, OH 44149

*(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):

Chemical, Dimensional Inspection and 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

Initial Accreditation Date:

November 13, 2023

Issue Date:

November 13, 2023

Expiration Date:

January 31, 2026

Accreditation No.:

120039

Certificate No.:

L23-824

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*



Certificate of Accreditation: Supplement

Lindstrom, LLC DBA Metallurgent Test Lab

21555 Drake Road, Suite 200, Strongsville, OH 44149
 Contact Name: Mrs. Darlene Collis Phone: 440-973-7449

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
Dimensional Inspection ^F	Fasteners	Dimensional, caliper	Customer &/or product specified, SOP Caliper Measurement	Up to 6" detection limit 0.000 5"
		Dimensional, micrometer	Customer &/or product specified, SOP Thread Pitch Micrometer Measurement	0 to 2" detection limit 0.000 5"
		Dimensional, Optical Comparator	Customer &/or product specified, SOP Using the Optical Comparator	10"x4" travel detection limit 0.000 1" 10X Lens
		Thread Gauging	ASME B1.3 System 21, customer specified requirements	Go/No-Go
Mechanical ^F		Tensile Strength	ASTM F606/F606M, customer specified requirements	Up to 120.000 psi
		Full Size Yield Strength	ASTM F606/F606M, customer specified requirements	Up to 120.000 psi
		Proof Load	ASTM F606/F606M, customer specified requirements	Up to 120.000 psi
		Drive Test	ASME B18.6.3, customer specified requirements	Not applicable
		Rockwell Hardness B	ASTM E18, customer specified requirements	HRB 30 to 100, detection limit 0.1 HRB
		Rockwell Hardness C	ASTM E18, customer specified requirements	HRC 20 m to 68 m, detection limit 0.1 HRC
		Microhardness (Vickers)	ASTM E92, E384, ASTM E3, customer specified requirements	100 HV to 940 HV, detection limit 1 HV
		Microhardness (Knoop)	ASTM E92, E384, ASTM E3, customer specified requirements	87 HK to 920 HK, detection limit 1 HK
		Hydrogen Embrittlement	ASTM F606/F606M, NASM 1312-5, ISO 15330, customer specified requirements	Pass/Fail
		Socket Strength Torque Test	ASTM F912, customer specified requirements	Pass/Fail



Certificate of Accreditation: Supplement

Lindstrom, LLC DBA Metallurgent Test Lab

21555 Drake Road, Suite 200, Strongsville, OH 44149
Contact Name: Mrs. Darlene Collis Phone: 440-973-7449

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	Fasteners	Coating thickness - microscope examination	ASTM B487/B487M, ASTM E3, customer specified requirements	Up to 1.25"
		Coating thickness – magnetic induction/eddy current	ASTM B499, customer specified requirements	µm, Mils
		Prevailing Torque	IFI 124, 125, 524 and 525, Customer Specified Requirements	Pass/Fail
		Coating Adhesion	ASTM D3359, customer specified requirements	Pass/Fail
		Case Depth	SAE J423, customer specified requirements	100 HV to 940 HV, detection limit 1 HK
		Decarburization/Carburization	ASTM E1077, ASTM F2328, customer specified requirements	Up to 1.25"
		Metallographic Sample Preparation	ASTM E3, customer specified requirements	Not applicable
Chemical ^F		Optical Emission Spectroscopy (Al, As, B, Bi, C, Ca, Co, Cr, Cu, Fe, La, Mn, Mo, N, Nb, Ni, P, Pb, S, Sb, Se, Si, Sn, Ti, V, W, Zn, Zr)	ASTM E415, ASTM E1086, customer specified requirements	Not applicable

1. The presence of a superscript F means that the laboratory performs testing of the indicated parameter at its fixed location.