



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Engineered Lubricants Co.
11525 Rock Island Court, Maryland Heights, MO 63043

*(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 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

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

Initial Accreditation Date:

August 16, 2018

Issue Date:

September 24, 2020

Expiration Date:

December 31, 2022

Accreditation No.:

98864

Certificate No.:

L20-568

*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

Engineered Lubricants Co.

11525 Rock Island Court, Maryland Heights, MO 63043
 Contact Name: Annette Salvagno Phone: 314-872-9540

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
Chemical ^F	Lubricants- Lubricating Fluids, Oils, Greases, Glycols	Kinematic Viscosity	ASTM D445 ASTM D2270	0.2 m ² /s (cSt) to 300 000 m ² /s (cSt)
		Water Content	ASTM E203	0.001 % to 100 %
			ASTM D6304	10 mg/kg (ppm) to 1 500 mg/kg (ppm)
		Particle Count by Light Extinction	PSC.HIAC ISO4406 NAS CM SAE AS4059	ISO code: 1-28 NAS class: 00-12 CM class: 00-10 SAE AS4059 class: 000-12
		Cooling Characteristics of Quench Fluids	ASTM D6200	Time/Temperature Graph from 850 °C to 200 °C for 60 s
		Pour Point	ASTM D6749	Room Temperature to -48 °C
		Wear Preventative Characteristics (4-Ball method)	ASTM D2266 ASTM D4172	20 kg and 40 kg
		Extreme Pressure Properties (4-Ball method)	ASTM D2783 ASTM D2596	13 kgf to 800 kgf
		Copper Strip Corrosion Test	ASTM D130	Qualitative/Visual 1A to 4C classification
		Elemental Content by Energy Dispersive X-Ray Fluorescence	ASTM D4294	Sulfur: 150 mg/kg (ppm) to 50 000 mg/kg (ppm)
			PSC.XRF	Range/Detection Limit varies by element and matrix.
		Amount of Volatile Material in a Sample	ASTM E1868 SCAQMD Rule #1144	0 % VOC to 100 % VOC
		Foaming Tendencies of Fluids Sequence I, II, III	ASTM D892	0 mL to 1 000 mL
Specific Gravity	ASTM D7777	0.75 to 1.25 Relative Density at 60 °F		
Elemental Content by ICP	ASTM D5185	D.L. = 5 mg/kg (ppm)		



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Chemical ^F	Lubricants- Lubricating Fluids, Oils, Greases, Glycols	Ferrography Analysis of Wear and Contaminant Particles in Oils and Greases	ASTM D7684 ASTM D7690	Qualitative/Visual
		Energy Dispersive Spectroscopy with a Scanning Electron Microscope	PSC.SEM	0.1 % to 100 %
		Oxidation Stability of Oils by RPVOT	ASTM D2272 Method B	Minutes to 25.4 psi drop at 150 °C
		Flashpoint	ASTM D92-16b ASTM D93-16a Method A	Room Temperature to 400 °C
Mechanical ^F	Lubricants- Lubricating Fluids, Oils, Greases, Glycols	Penetration Cone (Worked or Unworked)	ASTM D217	8.5 mm to 47.5 mm
		Penetration Cone (½ scale or ¼ scale)	ASTM D1403	

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.