



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

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

Trico Corporation

1235 Hickory Street, Pewaukee, WI 53072

(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):

Lubricating Oil, Grease and Fuel Testing Laboratory Specializing in Utilizing Wear Particle and Used Oil Analysis in the Diagnosis of the Condition of Industrial Equipment
(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:

March 7, 2007

Revision Date:

March 5, 2022

Issue Date:

February 5, 2021

Accreditation No.:

59419

Expiration Date:

May 31, 2023

Certificate No.:

L21-96-R1

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

Trico Corporation

1235 Hickory Street, Pewaukee, WI 53072
 Contact name: Kemberlee Snelling Phone: 262-691-9336

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	Lube Oils and Greases	ICP-Inductively Coupled Plasma	ASTM D5185	Varies by Element
		DR Ferrograph	Trico Method	D.L. = 90 before dilution
		Analytical Ferrography	ASTM D7690	N/A
	Lube Oils	Karl Fisher Water Titration	ASTM D6304	D.L. = 10 000 mg/kg
		Acid Number	ASTM D664	D.L. = 10 mg KOH/g
		Base Number	ASTM D4739	D.L. = 70 mg KOH/g
		FTIR Water, Soot, Ethylene Glycol, Fuel, Sulfur, Pentane Insolubles, Chlorine	ASTM E2412	Varies by item tested
		Varnish Test	ASTM D7843	N/A
		Glycol Contamination	ASTM D2982	Up to 150 mg/L
		Chlorine Concentration	ASTM D5384	200 mg/kg to 4 000 mg/kg
		Viscosity	ASTM D445 ASTM D2270	Up to 1 000 cSt @ 40 °C Up to 100 cSt @ 100 °C
		Water Separability	ASTM D1401	Visual
		Optical Particle Count	ISO 4406 ASTM D7596	D.L. = 3 000 000 particles/ml
		Soot Percentage	ASTM D7686	Up to 12 %
		Flash and Fire Point Cleveland Open Cup Flash Point	ASTM D92	Visual Flash and Fire Up to 450 °C
		Penske Martin Flash Point	ASTM 93	Up to 450 °C
		Oxidation Stability RPVOT	ASTM D2272 Method B	2 500 minutes (plus)
		Foam	ASTM D892	Up to 1000 mL
		Resistivity	ISO 60247	10 V: 0.5 Ω to 20X10 ⁶ Ω
		Color	In House Method	0.5 to 8 on scale
		Pour Point	In House Method	Minimum -50 °C
		Diesel Fuel Concentration	ASTM D8004	Up to 5%
		Oxidation by Ruler	ASTM D6971	Up to 100% Amine, Phenol, and/or ZDDP
	Patch	In-House Method	N/A	
	Varnish	ASTM D7843	N/A	
	Pentane Insolubles	ASTM D4055	Up to 100%	



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Chemical ^F		Oil Compatibility	FED-STD-791D ASTM D7155	Pass/Fail
		RPVOT	ASTM D2272 Method B	N/A
		Resistivity	ISO 60247	0.5 Ω to 20 x 10 ⁶ Ω
	Lube Oils and Fuels	Water and Sediment by Centrifuge	ASTMD1796	Up to 100%
	Lube Oils and Fuels	Bacteria Concentration	Sani-Check BF Test Kit	Bacteria: <100 cfu/mL to 10 ⁷ cfu/mL
		Fungus		Fungus: < 60 cfu/mL to 10 ⁵ cfu/mL
	Lube Oils & Antifreeze	Refractometer	ASTM D3321	Freeze Point 0 °C to -51 °C (32 °F to -60 °F) Contamination of Glycol 0 % to 63 %
	Lube Oils and Coolant	Crackle	In-Hiuse Method - Visual	Positive/Negative - Varies by material
	Engine Coolant	Myron L Meter	Myron L Meter Method	Up to 10 000 mg/kg
Engine Coolant	Nitrate, Freeze Point, pH, Molybdate, Glychol %, SCA	Accustrip Test Kit	Varies by test	

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.