

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Insight Services, Inc. DBA Eurofins TestOil

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TESTING

Valid to: **January 26, 2023**

Certificate Number: **L2221**

Chemical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Acid Number	ASTM D974 Modified	Lubricants	Titration
Base Number	ASTM D4739	Lubricants	Titration
Base Number	IWI-390	Lubricants	FTIR
Boiling Point	Calculation	Coolants	Refractive Index
Chlorine in Used Petroleum Products	ASTM D5384 Test Method B	Lubricants	Clor-D-Tect Titration
Color	ASTM D1500	Lubricants	Colorimeter
Copper Corrosion	ASTM D130	Hydrocarbon Fluids	
Crackle Test	IWI-130	Lubricants	
Demulsibility	ASTM D1401	Lubricants	
Elemental Analysis	ASTM D5185 Modified	Lubricants	ICP
Aluminum	ASTM D5185 Modified	Lubricants	ICP
Barium	ASTM D5185 Modified	Lubricants	ICP
Boron	ASTM D5185 Modified	Lubricants	ICP
Calcium	ASTM D5185 Modified	Lubricants	ICP
Chromium	ASTM D5185 Modified	Lubricants	ICP

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Copper	ASTM D5185 Modified	Lubricants	ICP
Iron	ASTM D5185 Modified	Lubricants	ICP
Lead	ASTM D5185 Modified	Lubricants	ICP
Lithium	ASTM D5185 Modified	Lubricants	ICP
Magnesium	ASTM D5185 Modified	Lubricants	ICP
Molybdenum	ASTM D5185 Modified	Lubricants	ICP
Nitrite	ASTM D5185 Modified	Lubricants	ICP
Phosphate	ASTM D5185 Modified	Lubricants	ICP
Potassium	ASTM D5185 Modified	Lubricants	ICP
Silicon	ASTM D5185 Modified	Lubricants	ICP
Silver	ASTM D5185 Modified	Lubricants	ICP
Sodium	ASTM D5185 Modified	Lubricants	ICP
Tin	ASTM D5185 Modified	Lubricants	ICP
Titanium	ASTM D5185 Modified	Lubricants	ICP
Vanadium	ASTM D5185 Modified	Lubricants	ICP
Zinc	ASTM D5185 Modified	Lubricants	ICP
Ferrous Wear Concentration	IWI-160	Lubricants	
Flash Point (open cup)	ASTM D92	Lubricants	Open Cup Flash Point Tester
Foam	ASTM D892-IP146 (Alternative, Sequence I)	Lubricants	
Foam	ASTM D892-IP146 (Alternative, Sequences II & III)	Lubricants	
Freeze Point	Calculation	Coolants	Refractive Index
Fuel Dilution	ASTM D7593	Lubricants	Gas Chromatography
Glycol	ASTM D2982 Modified	Lubricants	Hach Test Kit
Glycol Concentration	Calculation	Coolants	Refractive Index

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Hardness as CaCO ₃	Calculation	Coolants	ICP
High Pressure Liquid Chromatography	IWI-510	Coolants	HPLC
2-Ethylhexanoic Acid	IWI-510	Coolants	HPLC
4-tBu-Benzonic Acid	IWI-510	Coolants	HPLC
Adipic Acid	IWI-510	Coolants	HPLC
Benzoic Acid	IWI-510	Coolants	HPLC
Octanoic Acid	IWI-510	Coolants	HPLC
p-Toluic Acid	IWI-510	Coolants	HPLC
Sebacic Acid	IWI-510	Coolants	HPLC
Benzotriazole	IWI-510	Coolants	HPLC
Mercaptobenzothiazole	IWI-510	Coolants	HPLC
Tolytriazole	IWI-510	Coolants	HPLC
Ion Chromatography	ASTM D5827 Modified	Coolants	Chromatograph
Acetate	ASTM D5827 Modified	Coolants	Chromatograph
Chloride	ASTM D5827 Modified	Coolants	Chromatograph
Fluoride	ASTM D5827 Modified	Coolants	Chromatograph
Formate	ASTM D5827 Modified	Coolants	Chromatograph
Glycolate	ASTM D5827 Modified	Coolants	Chromatograph
Nitrate	ASTM D5827 Modified	Coolants	Chromatograph
Nitrite	ASTM D5827 Modified	Coolants	Chromatograph
Oxalate	ASTM D5827 Modified	Coolants	Chromatograph
Phosphate	ASTM D5827 Modified	Coolants	Chromatograph
Sulfate	ASTM D5827 Modified	Coolants	Chromatograph
Membrane Patch Colorimetry	ASTM D7843	Lubricants	Colorimeter

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Nitrite Test	IWI-321	Coolants	UV-VIS
Particle Count	IWI-150	Lubricants	Pore Blockage
Particle Count	IWI-151	Lubricants	Optical
pH	IWI-142	Lubricants, Coolants	pH Meter
Refractive Index	IWI-134	Coolants	Refractometer
Reserve Alkalinity	IWI-143	Lubricants, Coolants	pH Meter
Resistivity	ASTM D1169 (Routine)	Lubricants, Insulating Liquids	Resistivity Tester
RPVOT	ASTM D2272	Lubricants	
RULER (Linear Sweep Voltammetry)	ASTM D6971	Lubricants	
Rust	ASTM D665	Lubricants	
SCA Number	Calculation	Coolants	IC + ICP
Specific Conductance	IWI-480	Coolants	Conductivity Meter
Sugar	IWI-200	Fuel, Lubricants	
Oxidation	ASTM E2412 ASTM D7414	Lubricants	FTIR
Nitration, Glycol, Soot, Fuel Dilution, Other Fluid	ASTM E2412	Lubricants	FTIR
Antiwear	ASTM E2412 ASTM D7412	Lubricants	FTIR
Sulfate	ASTM E2412 ASTM D7415	Lubricants	FTIR
24KT method	IWI-110	Lubricants	FTIR
Turbine Parameters	IWI-110	Lubricants	FTIR
Polyol Ester Alcohol	IWI-110	Lubricants	FTIR
Phosphate Ester Alcohol, Phosphate Ester Oxidation	IWI-110	Phosphate Esters	FTIR
Total Dissolved Solids	Calculation	Coolants	Conductivity Meter
Varnish Potential	IWI-251	Lubricants	Ultra Centrifuge

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Viscosity 40°C	ASTM D445 Modified	Lubricants	Viscometer
Viscosity 100°C	ASTM D445 Modified	Lubricants	Viscometer
Visual Analysis	IWI-520	Coolants	
Water by Karl Fischer	ASTM D6304	Lubricants	Coulometric Titration

Note:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. L2221.



R. Douglas Leonard Jr., VP, PILR SBU

