



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

ALS TRIBOLOGY
4943 NW Front Avenue
Portland, OR 97210
Christie Ashbay Phone: 503-286-9845

CHEMICAL

Valid To: March 31, 2023

Certificate Number: 5681.05

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on Lubricants and Oils:

<u>Test:</u>	<u>Test Method(s):</u>
Acid Number by Potentiometric Titration	ASTM D664 (Modified); ALS SOP 6003
Acid Number by Colorimetric Titration	ASTM D974
Base Number by Potentiometric Titration	ASTM D4739 (Modified); ALS SOP 6004
Wear, Additive, and Contaminant metals by ICP/OES Ag, Al, Ba, B, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Si, Sn, Ti, V, Zn	ASTM D5185 (Modified); ALS SOP 3006
FTIR (general setup and use)	ASTM D7418, E2412
Oxidation	ASTM D7414, E2412
Sulphation	ASTM D7415, E2412
Nitration	ASTM E2412
Soot	ASTM D7844, E2412; ALS SOP 2005
Particle Count by Light Extinction	ASTM D7647 (Modified); ALS SOP 5003; ISO 4406
Viscosity, Kinematic	ASTM D445 (Modified); ALS SOP 5011
Water by Karl Fischer Oven, Volumetric Titration	ASTM E203 (Modified); ALS SOP 6001
Water by Hot Plate (Crackle)	ALS SOP 5015
Fuel Soot by ATR / IR	ASTM D7686; ALS SOP 5013
Fuel Dilution by Gas Chromatography	ASTM D7593



Accredited Laboratory

A2LA has accredited

ALS TRIBOLOGY

Portland, OR

for technical competence in the field of

Chemical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 24th day of March 2021.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 5681.05
Valid to March 31, 2023

For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.