



**LABORATORY
ACCREDITATION
BUREAU** a division of **A-S-B**

Certificate of Accreditation

ISO/IEC 17025:2005

Certificate Number L2255.02

ALS Tribology
3319 W. Earll Drive
Phoenix AZ 85017

has met the requirements set forth in L-A-B's policies and procedures, all requirements of ISO/IEC 17025:2005 "General Requirements for the competence of Testing and Calibration Laboratories".*

The accredited lab has demonstrated technical competence to a defined "Scope of Accreditation" and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

Accreditation valid through: **June 27, 2017**

R. Douglas Leonard, Jr., President, COO
Laboratory Accreditation Bureau
Presented the 27th of June 2014

*See the laboratory's Scope of Accreditation for details of accredited parameters

**Laboratory Accreditation Bureau is found to be in compliance with ISO/IEC 17011:2004 and recognized by ILAC (International Laboratory Accreditation Cooperation) and NACLA (National Cooperation for Laboratory Accreditation).

Scope of Accreditation For ALS Tribology

3319 West Earll Drive
Phoenix, AZ 85017
Quenton Beals
800-445-7930

In recognition of a successful assessment to ISO/IEC 17025:2005, accreditation is granted to **ALS Tribology** to perform the following tests:

Accreditation granted through: **June 27, 2017**

Testing - Chemical

Technology	Range	Methods Used	Product Types	Remarks
Acid Number by Colorimetric Titration		ASTM D974	Lubricants/Oils	
Acid Number by Potentiometric Titration		ASTM D664	Lubricants/Oils	
Base Number by Potentiometric Titration		ASTM D4739	Lubricants/Oils	
Metals by ICP/AES		ASTM D5185 (Modified)	Lubricants/Oils	
Nitration, Oxidation, Sulphation by FTIR		ASTM D7418 ASTM D7414 ASTM D7415 ASTM D7624	Lubricants/Oils	
Particle Count by Light Extinction		ASTM D7647 (Modified)	Lubricants/Oils	
Viscosity, Kinematic by TriVisc		ASTM D445	Lubricants/Oils	
Water by Karl Fischer Oven, Volumetric Titration		ASTMD 1744 (Modified) ASTM E203 (Modified)	Lubricants/Oils	
Water by Hot Plate (Crackle)		ALS SOP 204	Lubricants/Oils	



Technology	Range	Methods Used	Product Types	Remarks
Fuel Soot by ATR/IR		ASTM D7686	Lubricants/Oils	
Fuel Dilution by Viscosity / Setaflash		ALS SOP 5004	Lubricants/Oils	Based on: ASTM D445, ASTM D7279, ASTM D3828

Notes:

- 1) This laboratory offers commercial testing service.

Approved by: _____



R. Douglas Leonard
Chief Technical Officer

Date: May 28, 2015