



Date: 14-May-2019
 LUBRICATION SPECIALTIES INC
 3975 MORROW MEADOWS DR
 Mount Gilead
 UNITED STATES
 43338

Certificate of Analysis: CT19-01180

The results shown in this test report specifically refer to the sample(s) tested as received unless otherwise stated. All tests have been performed using the latest revision of the methods indicated, unless specifically marked otherwise on the report. Precision parameters apply in the determination of the above results. Users of analytical results, when establishing conformance with commercial or regulatory requirements should note the full provisions of ASTM D3244, IP 367 and ISO 4259 in that context, the default confidence level of petroleum testing having been set at the 95% confidence level. Your attention is specifically drawn to Sections 7.3.6., 7.3.7 and 7.3.8 of ASTM D3244. With respect to the UOP methods listed in the report below the user is referred to the method and the statement within it specifying that the precision statements were determined using UOP Method 999. This Test Report is issued under the Company's General Conditions of Service (copy available upon request or on the company website at <https://www.sgs.com/en/terms-and-conditions>). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. This report shall not be reproduced except in full, without the written approval of the laboratory.

The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

JOB DETAILS		SAMPLE NO.:	001	002	003	004	005	
SGS ORDER NO.:	4469534	CLIENT ID :	As Supplied	As Supplied	As Supplied	As Supplied	As Supplied	
SAMPLED :	12-Feb-2019 - 14-May-2019	SAMPLE DETAILS :	Baseline-Pu mp Diesel Fuel After Treatment Ultra Low Sulphur Diesel	Optilube XL 1:1280 (781.25ppm) After Treatment Ultra Low Sulphur Diesel	Optilube XL 1:512 (1953.125pp m) After Treatment Ultra Low Sulphur Diesel	Hot Shot's Secret Lubricity Extreme LX4 After Treatment Ultra Low Sulphur Diesel	Hot Shot's Secret Lubricity Extreme LX4 After Treatment Ultra Low Sulphur Diesel	
RECEIVED	10-May-2019 - 14-May-2019							
ANALYSED :	14-May-2019							
COMPLETED :	14-May-2019							
PROPERTY	UNITS							
Major Axis Diameter - ASTM D6079	µm		399	390	369	261	225
Minor Axis Diameter - ASTM D6079	µm		327	319	308	212	164
Wear scar diameter at 60°C - ASTM D6079	µm		363.0	354.5	338.5	236.5	194.5
** End of Analytical Results **								
SAMPLE COMMENT : Sample: 001 Baseline-Pump Diesel Fuel Sample: 002 Baseline Diesel + Optilube XL 1:1280 (781.25ppm) Sample: 003 Baseline Diesel + Optilube XL 1:512 (1953.125ppm) Sample: 004 Baseline Diesel + Hot Shot's Secret Lubricity Extreme LX4 1:1280 (781.25ppm) Sample: 005 Baseline Diesel + Hot Shot's Secret Lubricity Extreme LX4 1:512 (1953.125ppm)								

AUTHORISED SIGNATORY

Goce Paunovski
 Chemist

1405201913000000076455

Page 1 of 1

OGC-EN_Report_MultiSamp_Port-2015-09-19_v17b

SGS North America Inc.

Oil, Gas & Chemicals Services 900 Milik Street, Carteret, NJ, 07008, U.S.A Tel: +1-(732)-366-7200 Fax: +1-(732)-802-0010

Member of the SGS Group (Société Générale de Surveillance)