

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L580 038365-1170 - Diesel Engine

Sample No: LH0137238

Oil Type: PT



SAMPLE INFORMATION

Sample Number	LH0137238	LH0107626	LH0088069	---
Sample Date	30 Jan 2019	17 Jun 2016	09 Jun 2016	---
Machine Hours	10625	2618	2550	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	SEVERE	SEVERE	ABNORMAL	---

LIEBHERR CANADA LTD.

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OIL CONDITION

Visc @ 100°C	cSt	● 4.9	● 12.1	● 11.9	---
Base Number (BN)	mg KOH/g	---	● 10.21	---	---
Oxidation (PA)	%	● 79	● 94	● 94	---



CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	● 1.1	● 0.3	● 0.2	---
Nitration (PA)	%	● 109	● 94	● 86	---
Sulfation (PA)	%	● 58	● 68	● 67	---
Glycol	%	● 0.0	● 0.10	● 0.0	---
Fuel	%	● 25.1	<1.0	<1.0	---
Silicon	ppm	● 8	● 7	● 6	---
Sodium	ppm	● 62	● 540	● 361	---
Potassium	ppm	● 16	● 49	● 40	---



WEAR METALS

Iron	ppm	● 93	● 10	● 8	---
Copper	ppm	● 5	● 1	● 2	---
Lead	ppm	● 1	● <1	● <1	---
Tin	ppm	● <1	● <1	● <1	---
Aluminum	ppm	● 27	● 3	● 2	---
Chromium	ppm	● 2	● <1	● <1	---
Molybdenum	ppm	● 4	● 25	● 15	---
Nickel	ppm	● <1	● <1	● 0	---
Titanium	ppm	<1	<1	<1	---
Silver	ppm	0	0	0	---
Manganese	ppm	1	<1	<1	---
Vanadium	ppm	0	<1	0	---



ADDITIVES

Calcium	ppm	● 1670	● 2367	2397	---
Magnesium	ppm	● 62	● 79	80	---
Zinc	ppm	● 541	● 767	● 780	---
Phosphorus	ppm	● 475	● 688	● 700	---
Barium	ppm	● <1	● <1	● <1	---
Boron	ppm	● 1	● 16	12	---

Diagnosis

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Aluminum ppm levels are abnormal. Piston wear is indicated. There is a high amount of fuel present in the oil. Test for glycol is negative. Tests confirm the presence of fuel in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: LIEMIS
Unique No: 4821718
Signed: Kevin Marson
Report Date: 11 Feb 2019



GRAPHS

