

LIEBHERR

CONSTRUCTION EQUIPMENT



[KMC MINING] 25121 - Diesel Engine

Sample No: LH0265077

Oil Type: PETRO CANADA DURON UHP 5W30



SAMPLE INFORMATION

Sample Number	LH0265077	LH0265026	---	---
Sample Date	12 Dec 2023	20 Nov 2023	---	---
Machine Hours	1646	1273	---	---
Oil Hours	0	0	---	---
Oil Changed	N/A	N/A	---	---
Sample Status	NORMAL	SEVERE	---	---

Liebherr-Canada Ltd.

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OIL CONDITION

Visc @ 100°C	cSt	11.7	11.8	---	---
Oxidation (PA)	%	66	65	---	---



CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0	0	---	---
Nitration (PA)	%	54	53	---	---
Sulfation (PA)	%	54	55	---	---
Glycol	%	0.0	0.157	---	---
Fuel	%	<1.0	0.9	---	---
Silicon	ppm	6	10	---	---
Sodium	ppm	33	118	---	---
Potassium	ppm	<1	5	---	---

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. Test for glycol is negative. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	3	3	---	---
Copper	ppm	4	18	---	---
Lead	ppm	<1	<1	---	---
Tin	ppm	0	0	---	---
Aluminum	ppm	1	<1	---	---
Chromium	ppm	0	0	---	---
Molybdenum	ppm	61	59	---	---
Nickel	ppm	0	<1	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	<1	<1	---	---
Manganese	ppm	0	0	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	814	763	---	---
Magnesium	ppm	1120	1020	---	---
Zinc	ppm	1169	1180	---	---
Phosphorus	ppm	994	1031	---	---
Barium	ppm	<1	<1	---	---
Boron	ppm	50	47	---	---

Depot: LIEFTM

Unique No: 5696026

Signed: Kevin Marson

Report Date: 18 Dec 2023



GRAPHS

