

LIEBHERR

CONSTRUCTION EQUIPMENT



[CNRL] 2210 - Diesel Engine

Sample No: LH0265161

Oil Type: DIESEL ENGINE OIL SAE 15W40



Sample Information

Sample Number	LH0265161	LH0238066	---	---
Sample Date	26 Jun 2024	27 Jun 2023	---	---
Machine Hours	25320	23538	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	NORMAL	---	---

Liebherr-Canada Ltd.

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 Fort McMurray, AB
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Oil Condition

Visc @ 100°C	cSt	13.4	14.5	---	---
Oxidation (PA)	%	90	74	---	---



Contamination

Water	%	NEG	NEG	---	---
Soot %	%	0.4	0.2	---	---
Nitration (PA)	%	95	72	---	---
Sulfation (PA)	%	58	57	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	2	6	---	---
Sodium	ppm	2	3	---	---
Potassium	ppm	2	<1	---	---



Wear Metals

Iron	ppm	8	12	---	---
Copper	ppm	5	2	---	---
Lead	ppm	0	<1	---	---
Tin	ppm	<1	0	---	---
Aluminum	ppm	1	1	---	---
Chromium	ppm	<1	<1	---	---
Molybdenum	ppm	47	63	---	---
Nickel	ppm	0	0	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	0	0	---	---



Additives

Calcium	ppm	1365	1115	---	---
Magnesium	ppm	904	1066	---	---
Zinc	ppm	905	1285	---	---
Phosphorus	ppm	757	1111	---	---
Barium	ppm	<1	0	---	---
Boron	ppm	80	5	---	---

Diagnosis

Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: LIEFTM
 Unique No: 5802920
 Signed: Kevin Marson
 Report Date: 09 Jul 2024



Graphs

