LIEBHERR
CONSTRUCTION EQUIPMENT

[(370850)] LIEBHERR L526 048566-1558 - Diesel Engine

Sample No: LH

Oil Type: SAE 5W30

CEDRE C. MEILLEUR
1 RANG 7
KIAMIKA, QC
CA J0W 1G0
Contact: Service Manager

T:
F:

SAMPLE INFORMATION

Sample Number		**LH**	LH0250787	LH0213604	---
Sample Date		**29 Nov 2023**	08 Feb 2023	17 Nov 2021	---
Machine Hours		**632**	2005	1371	---
Oil Hours		**0**	0	0	---
Oil Changed		**Changed**	Changed	Not Changd	---
Sample Status		**SEVERE**	SEVERE	ABNORMAL	---

OIL CONDITION

Visc @ 100°C	cSt	**8**	7.3	24.2	---
Oxidation (PA)	%	**78**	83	75	---

CONTAMINATION

Water	%	**NEG**	NEG	0.290	---
Soot %	%	**0.1**	0	0	---
Nitration (PA)	%	**104**	100	67	---
Sulfation (PA)	%	**53**	60	51	---
Glycol	%	**NEG**	NEG	0.0	---
Fuel	%	**17.1**	23	<1.0	---
Silicon	ppm	**4**	6	8	---
Sodium	ppm	**4**	4	5	---
Potassium	ppm	**6**	8	4	---

WEAR METALS

Iron	ppm	**14**	30	17	---
Copper	ppm	**4**	17	90	---
Lead	ppm	**1**	6	6	---
Tin	ppm	**<1**	<1	<1	---
Aluminum	ppm	**4**	6	8	---
Chromium	ppm	**<1**	1	<1	---
Molybdenum	ppm	**43**	8	57	---
Nickel	ppm	**<1**	<1	1	---
Titanium	ppm	**0**	<1	0	---
Silver	ppm	**<1**	0	<1	---
Manganese	ppm	**0**	<1	3	---
Vanadium	ppm	**0**	0	0	---

ADDITIVES

Calcium	ppm	**717**	1518	1325	---
Magnesium	ppm	**821**	90	925	---
Zinc	ppm	**969**	792	884	---
Phosphorus	ppm	**819**	758	797	---
Barium	ppm	**<1**	0	1	---
Boron	ppm	**32**	29	139	---

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.Metal levels are typical for a new component breaking in. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is a high amount of fuel present in the oil. 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 due to the presence of contaminants.

Depot: CEDKIA
Unique No: 5685518
Signed: Wes Davis
Report Date: 05 Dec 2023

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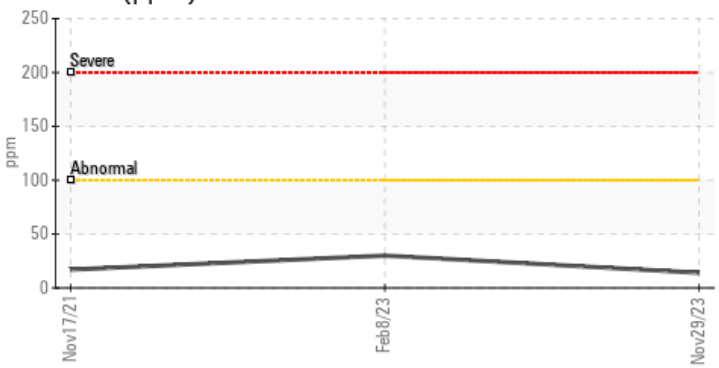
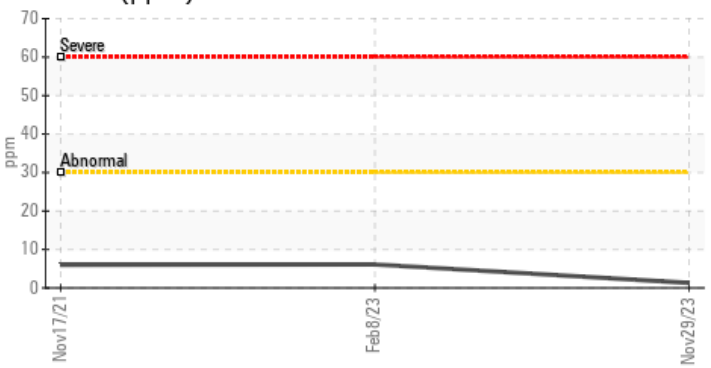
GRAPHS

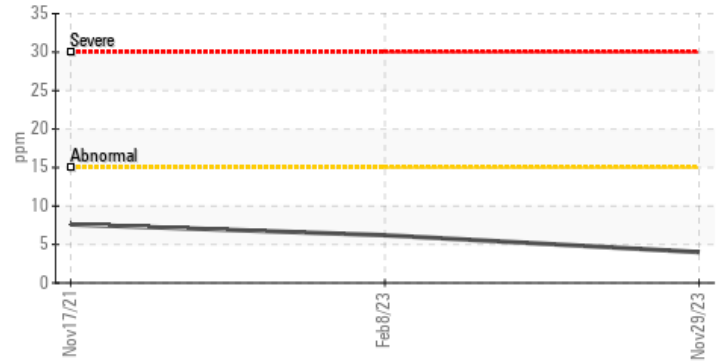
Iron (ppm)



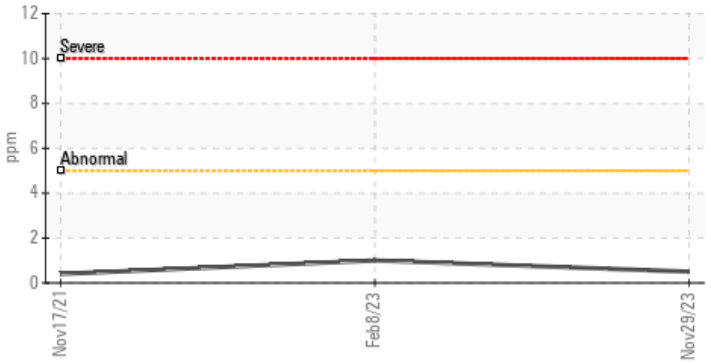
Lead (ppm)



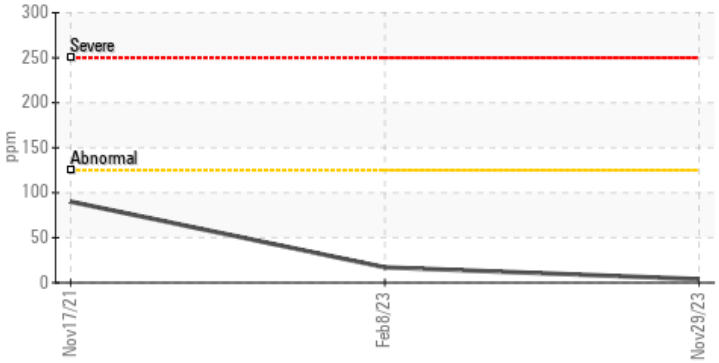
Aluminum (ppm)



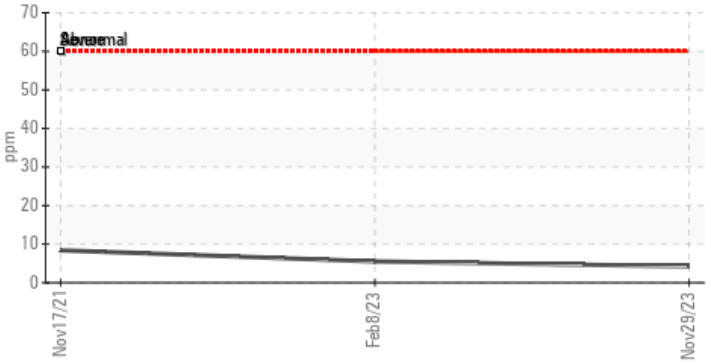
Chromium (ppm)



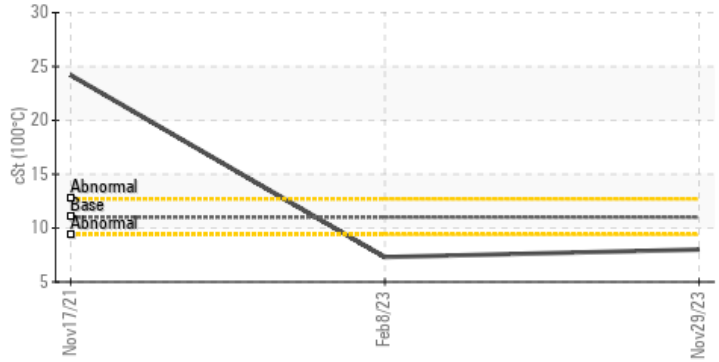
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Fuel Dilution