

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1216-118289 - Front Right Wheel Hub

Sample No: LH06135806

Oil Type: GEAR OIL SAE 80W90



KOVALCHICK CORP
1060 WAYNE AVENUE
INDIANA, PA
US 15701
Contact: Service Manager



Sample Information

Sample Number	LH06135806	LH05693569	LH05370572	---
Sample Date	31 Mar 2024	13 Nov 2022	10 Oct 2021	---
Machine Hours	5050	0	1635	---
Oil Hours	0	0	0	---
Oil Changed	Not Changd	N/A	N/A	---
Sample Status	SEVERE	ABNORMAL	SEVERE	---



Oil Condition

Visc @ 40°C	cSt	78.6	155	158	---
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Contamination

Water	%	NEG	NEG	NEG	---
Silicon	ppm	642	214	1138	---
Sodium	ppm	24	11	26	---
Potassium	ppm	8	0	9	---



Wear Metals

Iron	ppm	1062	574	985	---
Copper	ppm	46	46	62	---
Lead	ppm	0	0	<1	---
Tin	ppm	<1	0	<1	---
Aluminum	ppm	39	14	74	---
Chromium	ppm	7	3	7	---
Molybdenum	ppm	0	1	2	---
Nickel	ppm	2	0	2	---
Titanium	ppm	2	<1	4	---
Silver	ppm	<1	0	<1	---
Manganese	ppm	11	6	11	---
Vanadium	ppm	<1	0	<1	---



Additives

Calcium	ppm	638	211	219	---
Magnesium	ppm	15	5	17	---
Zinc	ppm	385	82	152	---
Phosphorus	ppm	1188	1975	1767	---
Barium	ppm	0	0	<1	---
Boron	ppm	2	4	9	---

T:
F:

Diagnosis

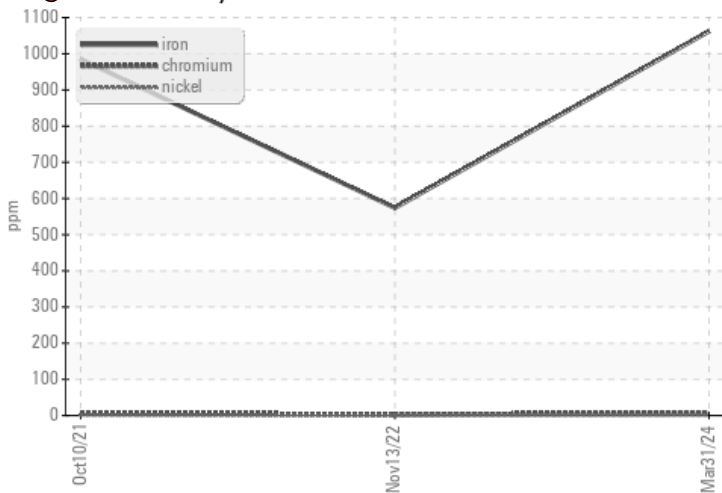
We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil viscosity is lower than normal. The oil is no longer serviceable due to the presence of contaminants.

Depot: KOVIND
Unique No: 10955271
Signed: Sean Felton
Report Date: 04 Apr 2024

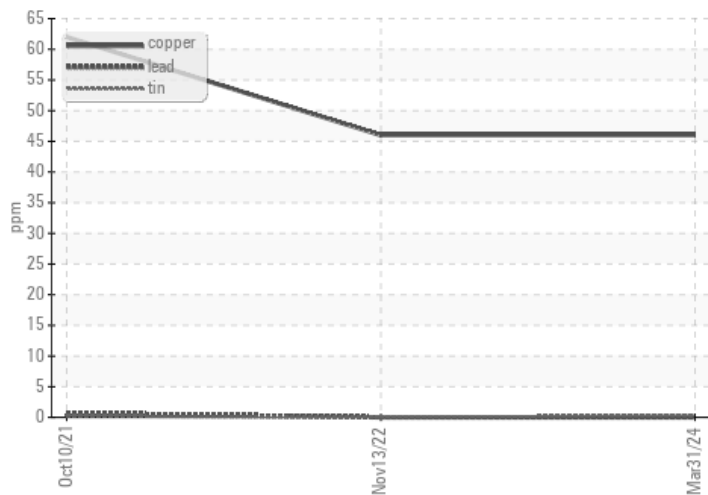


Graphs

● Ferrous Alloys



Non-ferrous Metals



● Viscosity @ 40°C

