

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 1216-118289 - Rear Differential

Sample No: LH06135809

Oil Type: GEAR OIL SAE 80W90



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



Sample Information

Sample Number	LH06135809	LH05695875	LH05370577	---
Sample Date	01 Apr 2024	15 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	SEVERE	SEVERE	---



Oil Condition

Visc @ 40°C	cSt	87.7	156	170	---
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T:
F:



Contamination

Water	%	NEG	NEG	NEG	---
Silicon	ppm	144	200	115	---
Sodium	ppm	9	10	10	---
Potassium	ppm	4	2	4	---

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.



Wear Metals

Iron	ppm	381	565	394	---
Copper	ppm	38	43	20	---
Lead	ppm	0	2	<1	---
Tin	ppm	0	0	<1	---
Aluminum	ppm	10	15	12	---
Chromium	ppm	2	4	2	---
Molybdenum	ppm	0	1	2	---
Nickel	ppm	<1	2	<1	---
Titanium	ppm	<1	<1	<1	---
Silver	ppm	0	0	0	---
Manganese	ppm	5	6	5	---
Vanadium	ppm	<1	<1	<1	---



Additives

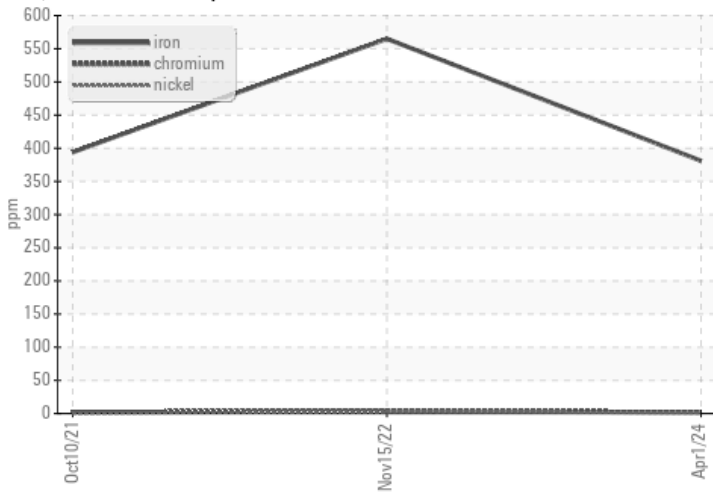
Calcium	ppm	630	197	155	---
Magnesium	ppm	10	5	9	---
Zinc	ppm	370	72	44	---
Phosphorus	ppm	1500	1941	2065	---
Barium	ppm	0	0	1	---
Boron	ppm	2	7	9	---

Depot: KOVIND
Unique No: 10955274
Signed: Don Baldrige
Report Date: 04 Apr 2024

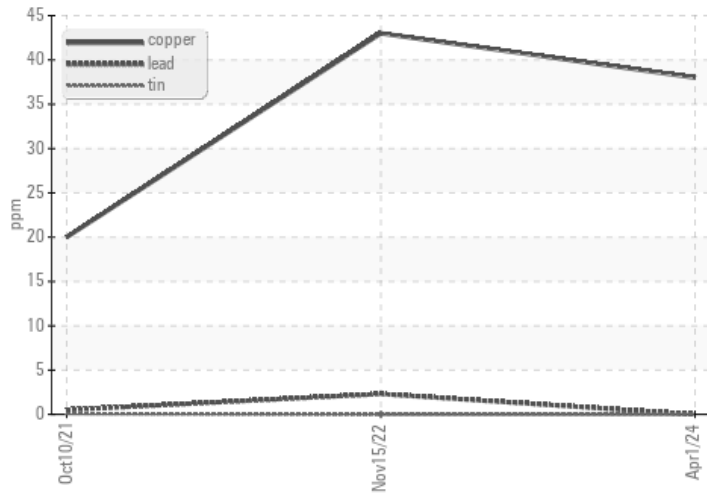


Graphs

● Ferrous Alloys



Non-ferrous Metals



● Viscosity @ 40°C

