

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH40 ML13 - Swing Drive

Sample No: LHMC122781

Oil Type: GEAR OIL SAE 80W90



SAMPLE INFORMATION

Sample Number	LHMC122781	LHMC103210	---	---
Sample Date	04 Aug 2023	11 May 2023	---	---
Machine Hours	12105	11583	---	---
Oil Hours	0	0	---	---
Oil Changed	Not Changd	Not Changd	---	---
Sample Status	SEVERE	ABNORMAL	---	---

OSCAR WINSKI CO. INC

2407 N. 9TH STREET

LAFAYETTE, IN

US 47904

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OIL CONDITION

Visc @ 40°C	cSt	224	199	---	---
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CONTAMINATION

Water	%	0.598	0.364	---	---
Silicon	ppm	4	3	---	---
Sodium	ppm	4	1	---	---
Potassium	ppm	1	<1	---	---



WEAR METALS

Iron	ppm	1458	779	---	---
Copper	ppm	539	314	---	---
Lead	ppm	5	0	---	---
Tin	ppm	10	6	---	---
Aluminum	ppm	2	0	---	---
Chromium	ppm	16	9	---	---
Molybdenum	ppm	2	2	---	---
Nickel	ppm	2	1	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	12	7	---	---
Vanadium	ppm	<1	0	---	---



ADDITIVES

Calcium	ppm	37	35	---	---
Magnesium	ppm	21	15	---	---
Zinc	ppm	82	83	---	---
Phosphorus	ppm	2150	1846	---	---
Barium	ppm	0	0	---	---
Boron	ppm	<1	3	---	---

Diagnosis

We advise that you check for the source of water entry. 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. Please specify the brand, type, and viscosity of the oil on your next sample. Copper and iron ppm levels are severe. Tin and chromium ppm levels are abnormal. Gear wear is indicated. Bearing and/or bushing wear is indicated. There is a moderate concentration of water present in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: OSCLAF

Unique No: 10615828

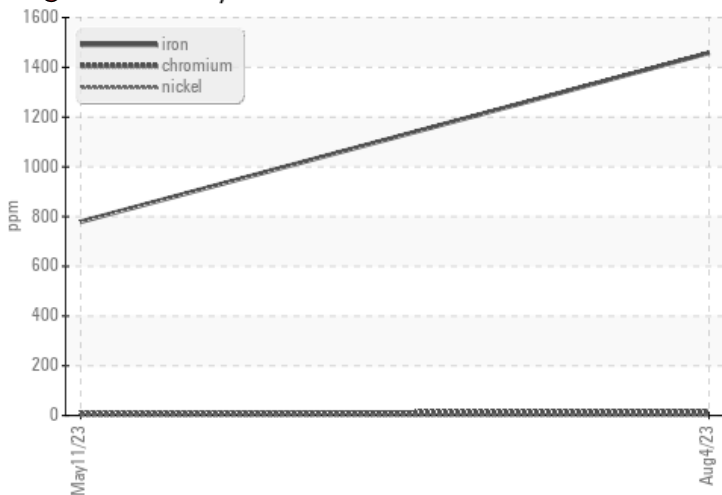
Signed: Sean Felton

Report Date: 23 Aug 2023

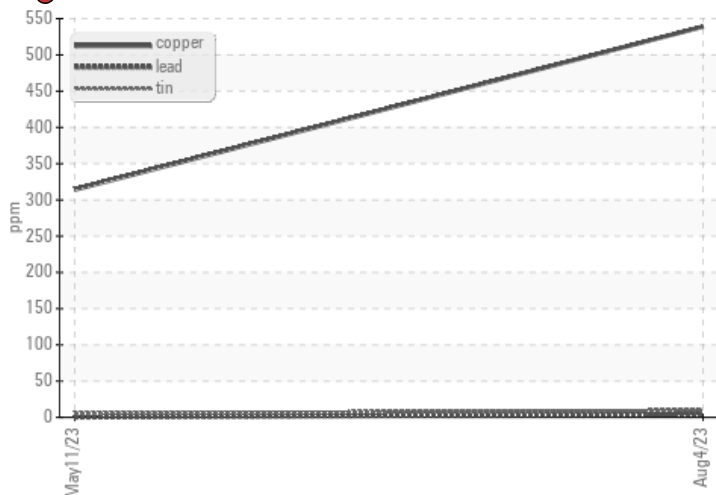


GRAPHS

● Ferrous Alloys



● Non-ferrous Metals



Viscosity @ 40°C

