LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR LH40M 101800-1215 - Hydraulic System

Sample No: LH06042079

Oil Type: NOT GIVEN

DIEHL AND NUEMAIER
5466 NORWAY GROVE SCHOOL RD
DE FOREST, WI
US 53532
Contact: ELLIOT DIEHL
diehlneumaier@yahoo.com
T: (608)846-4824
F: (608)846-2077

SAMPLE INFORMATION

Sample Number		**LH06042079**	LH05687099	LHMC98629	---
Sample Date		**20 Dec 2023**	06 Nov 2022	20 Nov 2019	---
Machine Hours		**6013**	0	2034	---
Oil Hours		**0**	5008	0	---
Oil Changed		**N/A**	Not Changd	Not Changd	---
Sample Status		**ABNORMAL**	NORMAL	NORMAL	---

OIL CONDITION

Visc @ 40°C	cSt	**42.0**	42.4	43.7	---
Acid Number (AN)	mg KOH/g	**1.10**	1.21	1.135	---

CONTAMINATION

Water	%	**NEG**	NEG	NEG	---
Particles >4µm		**44347**	6322	8748	---
Particles >6µm		**3674**	972	1018	---
Particles >14µm		**59**	53	15	---
ISO 4406:1999 (c)		**23/19/13**	20/17/13	20/17/11	---
Silicon	ppm	**1**	2	<1	---
Sodium	ppm	**2**	1	2	---
Potassium	ppm	**0**	<1	0	---

WEAR METALS

Iron	ppm	**12**	12	10	---
Copper	ppm	**6**	5	4	---
Lead	ppm	**<1**	<1	0	---
Tin	ppm	**0**	0	0	---
Aluminum	ppm	**0**	0	0	---
Chromium	ppm	**2**	2	1	---
Molybdenum	ppm	**0**	0	0	---
Nickel	ppm	**0**	0	0	---
Titanium	ppm	**0**	0	0	---
Silver	ppm	**0**	0	0	---
Manganese	ppm	**0**	0	<1	---
Vanadium	ppm	**<1**	0	0	---

ADDITIVES

Calcium	ppm	**671**	984	1270	---
Magnesium	ppm	**5**	6	6	---
Zinc	ppm	**829**	881	732	---
Phosphorus	ppm	**697**	704	623	---
Barium	ppm	**0**	0	<1	---
Boron	ppm	**0**	<1	<1	---

Diagnosis

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Depot: DIEDEF
Unique No: 10802687
Signed: Wes Davis
Report Date: 22 Dec 2023

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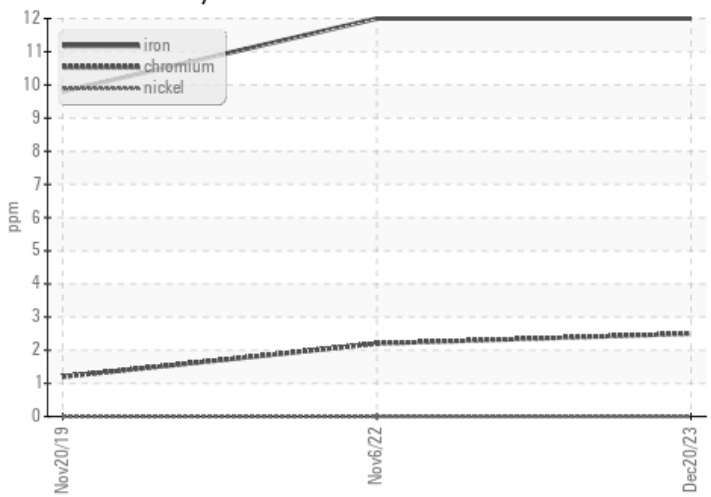
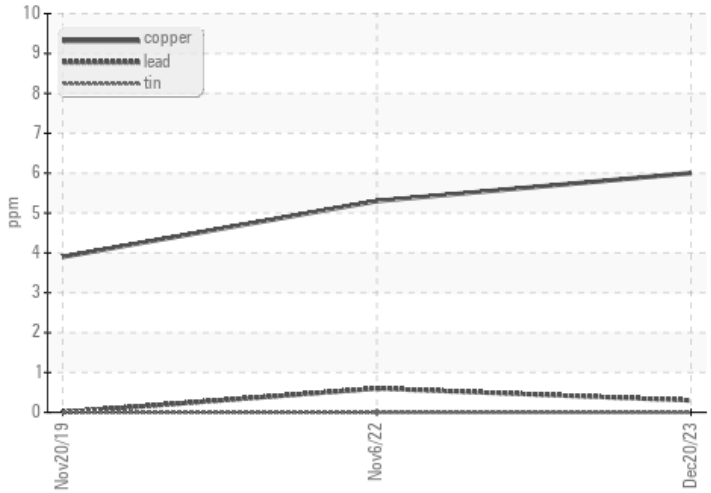
GRAPHS

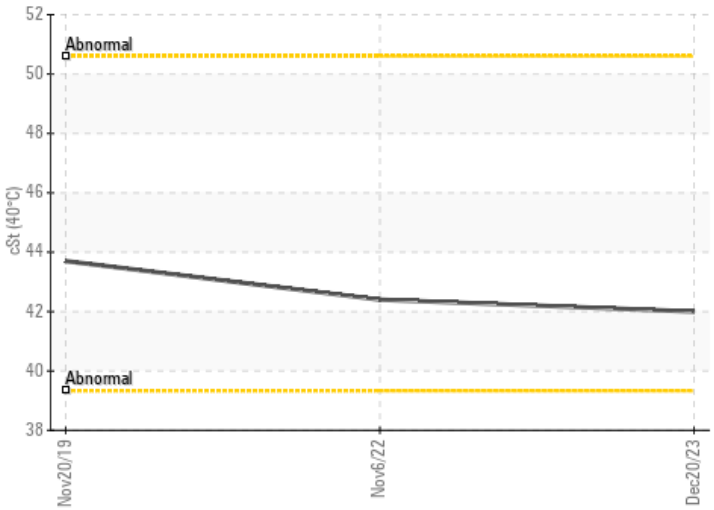
Ferrous Alloys



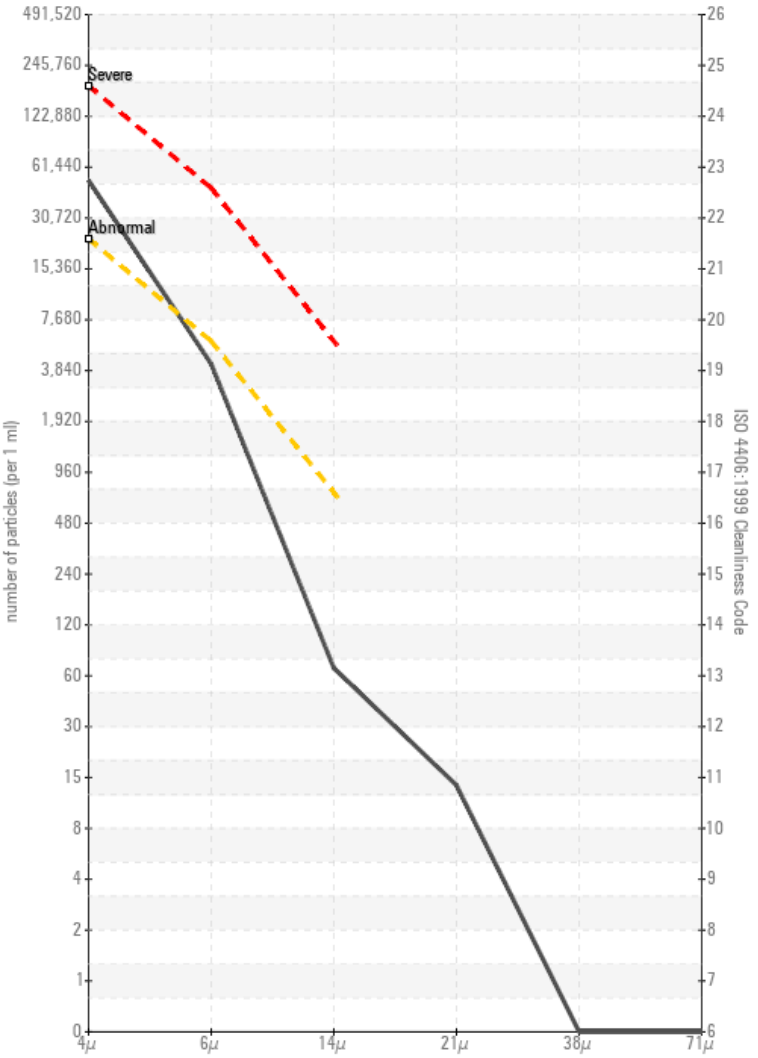
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number