

LIEBHERR

CONSTRUCTION EQUIPMENT



[[CLEVELAND CLIFF]] LIEBHERR LH60 107739-1217 - Hydraulic

Sample No: LH0268101

Oil Type: LIEBHERR HYDRAULIC HVI



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SAMPLE INFORMATION

Sample Number	LH0268101	LH0244211	LH0200132	LHMC141264
Sample Date	22 Jan 2024	26 Jan 2023	14 Jul 2022	15 Nov 2019
Machine Hours	8998	7471	6544	1922
Oil Hours	0	0	0	0
Oil Changed	Changed	N/A	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 40°C	cSt	42.5	42.5	42.8	43.5
Acid Number (AN)	mg KOH/g	0.77	0.62	0.60	0.989



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		1469	13261	4905	11229
Particles >6µm		158	1429	827	1278
Particles >14µm		10	7	91	36
ISO 4406:1999 (c)		18/14/10	21/18/10	19/17/14	21/17/12
Silicon	ppm	1	1	2	1
Sodium	ppm	2	3	3	2
Potassium	ppm	2	0	0	<1



WEAR METALS

Iron	ppm	10	13	11	9
Copper	ppm	3	3	3	2
Lead	ppm	0	<1	<1	<1
Tin	ppm	<1	0	<1	1
Aluminum	ppm	<1	<1	<1	<1
Chromium	ppm	2	3	2	<1
Molybdenum	ppm	0	<1	<1	0
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	<1	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	789	562	659	1332
Magnesium	ppm	<1	6	7	4
Zinc	ppm	557	558	616	650
Phosphorus	ppm	483	440	555	567
Barium	ppm	0	0	0	0
Boron	ppm	0	0	3	<1

Diagnosis

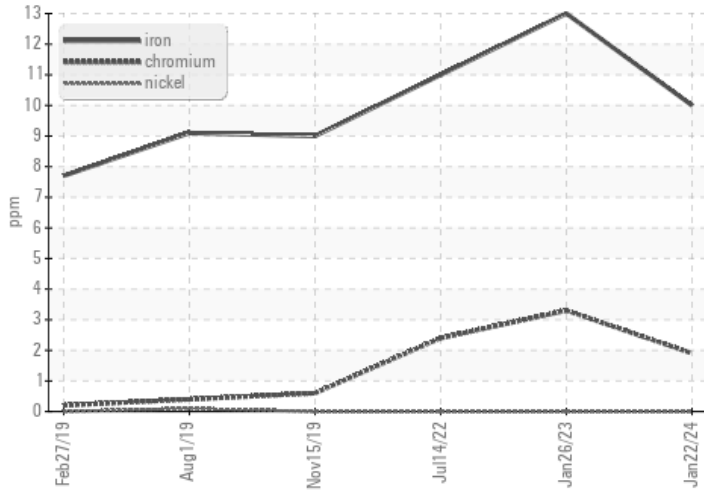
Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Depot: LEC0033
Unique No: 10883810
Signed: Wes Davis
Report Date: 16 Feb 2024

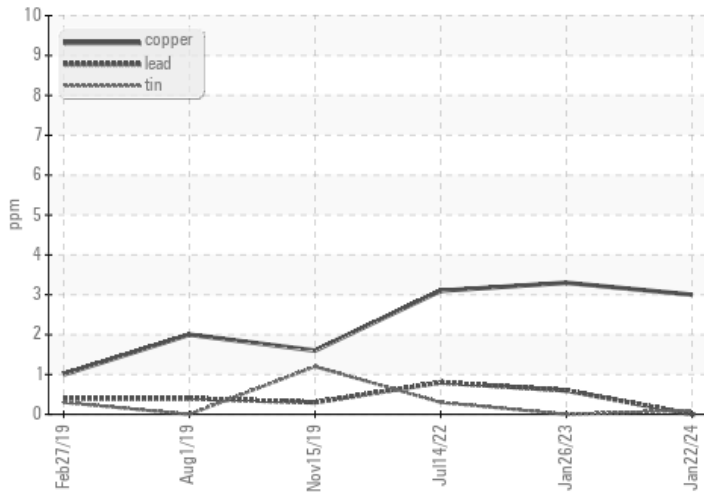


GRAPHS

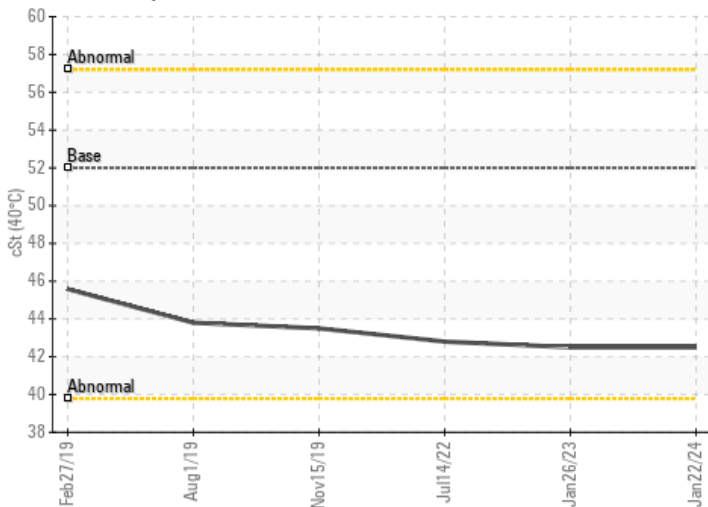
Ferrous Alloys



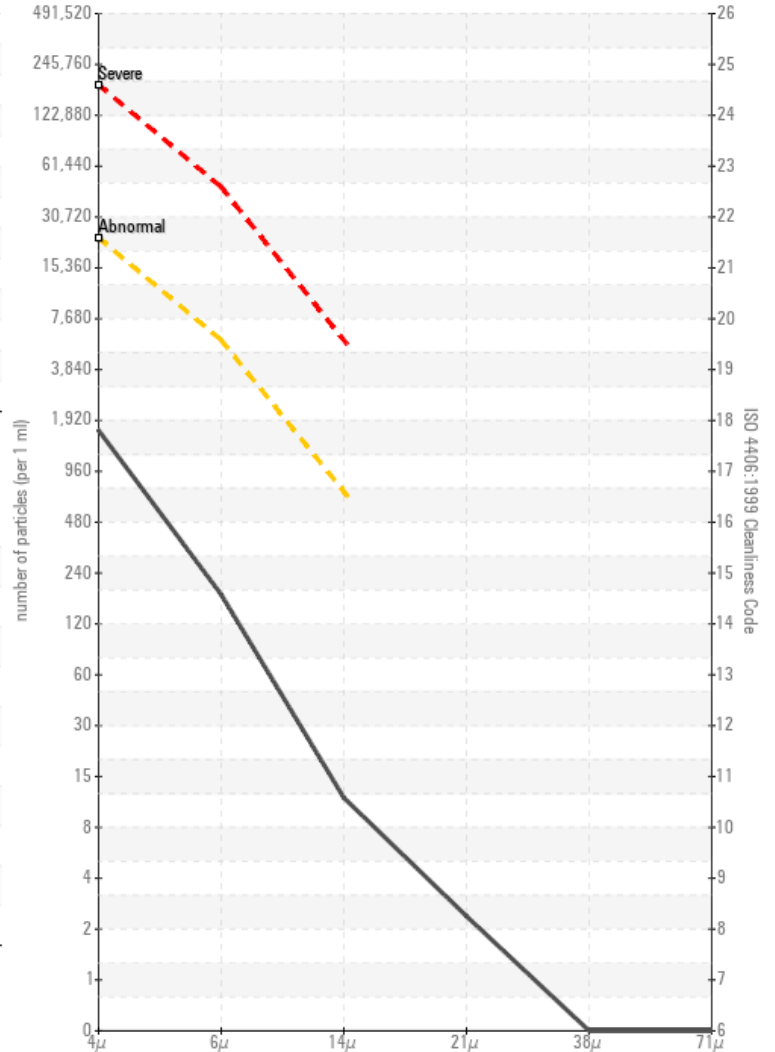
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

