

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-131051 - Hydraulic System

Sample No: LH0272180

Oil Type: LIEBHERR HYDRAULIC HVI



SAMPLE INFORMATION

Sample Number	LH0272180	LH0213093	LH0213023	LH0213107
Sample Date	18 Dec 2023	30 Aug 2023	25 Apr 2023	24 Jan 2023
Machine Hours	10742	9786	0	7995
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	ATTENTION

BOISE WHITE PAPER

3RD AVE AND HWY 11, 400 2ND ST
INTERNATIONAL FALLS, MN
US 56649
Contact: GARY MANN
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T:
F: (218)285-5860



OIL CONDITION

Visc @ 40°C	cSt	31.3	30.6	31.9	31.2
Acid Number (AN)	mg KOH/g	0.41	0.39	0.35	0.35



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		2820	2275	7098	18498
Particles >6µm		493	616	2207	5564
Particles >14µm		26	43	201	399
ISO 4406:1999 (c)		19/16/12	18/16/13	20/18/15	21/20/16
Silicon	ppm	0	<1	<1	<1
Sodium	ppm	0	0	0	0
Potassium	ppm	<1	<1	<1	<1

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	1	3	2	4
Copper	ppm	<1	<1	<1	<1
Lead	ppm	0	<1	0	0
Tin	ppm	<1	0	0	0
Aluminum	ppm	2	0	0	0
Chromium	ppm	<1	0	0	0
Molybdenum	ppm	<1	<1	<1	<1
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	0	0	0
Vanadium	ppm	0	0	0	0



ADDITIVES

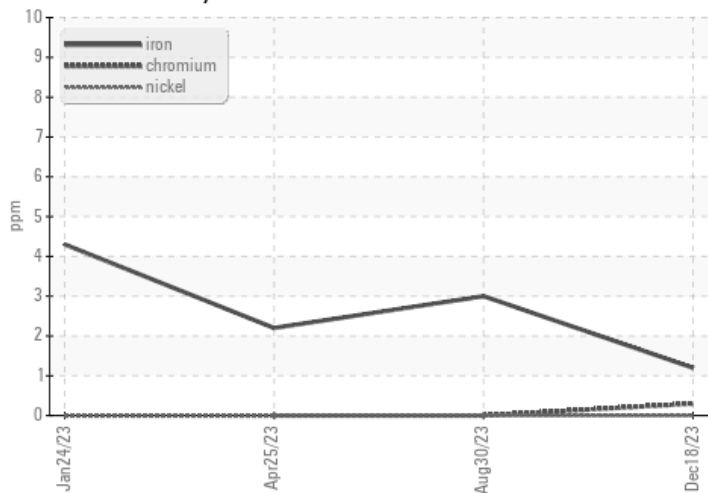
Calcium	ppm	57	61	65	79
Magnesium	ppm	0	4	4	6
Zinc	ppm	434	434	449	402
Phosphorus	ppm	341	327	327	310
Barium	ppm	0	2	0	<1
Boron	ppm	0	0	0	0

Depot: BOIINT
Unique No: 10833283
Signed: Don Baldrige
Report Date: 17 Jan 2024

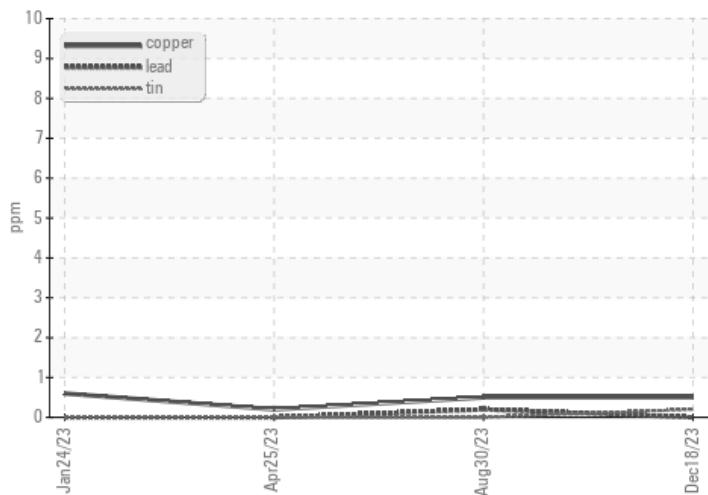


GRAPHS

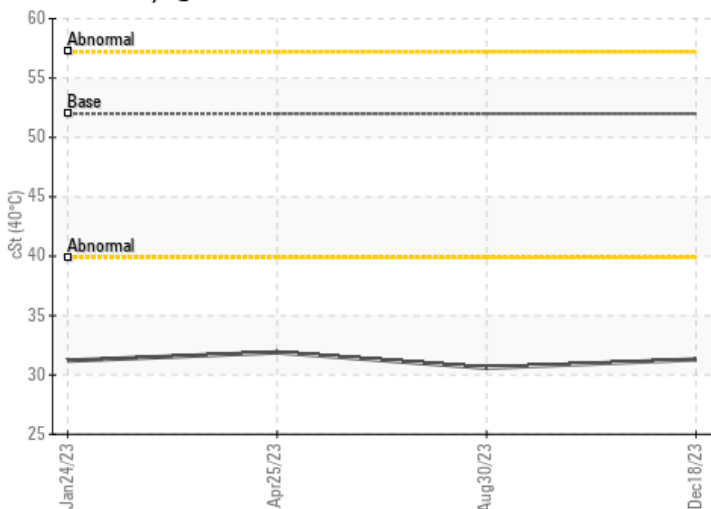
Ferrous Alloys



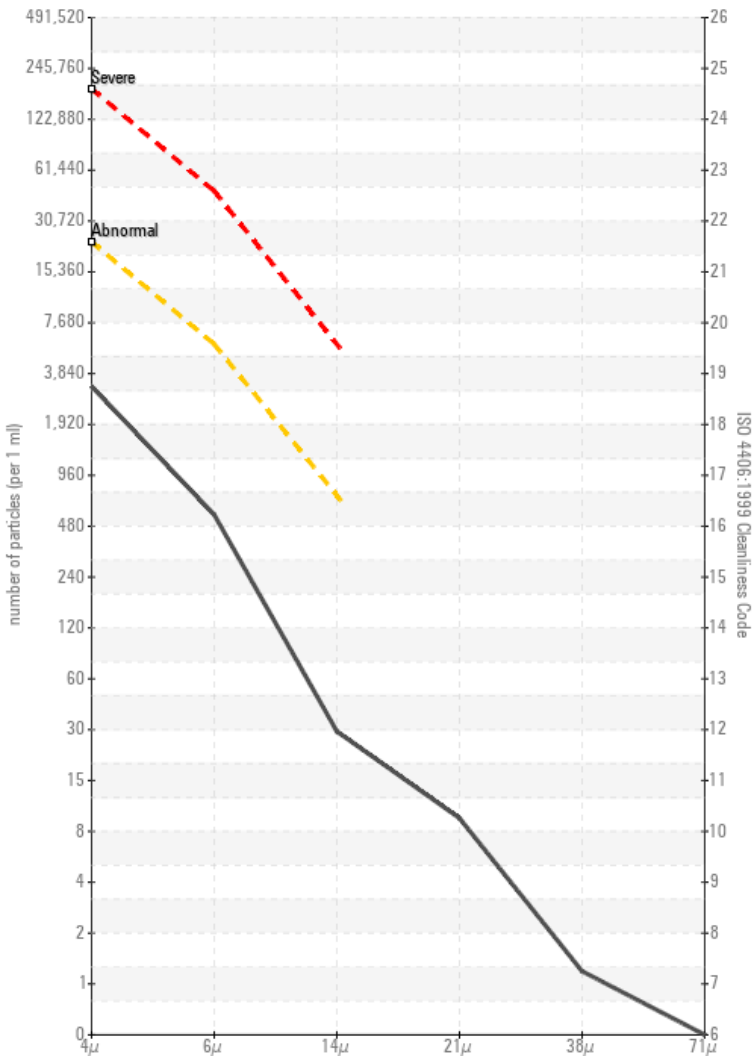
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

