

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A944 038730-194 - Hydraulic System

Sample No: LH0258746

Oil Type: LIEBHERR HYDRAULIC HVI



SAMPLE INFORMATION

Sample Number	LH0258746	LH0263827	LH0217654	LH0185265
Sample Date	14 Feb 2024	28 Jun 2023	07 Aug 2022	29 Jan 2021
Machine Hours	30984	29970	28573	27384
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	Changed
Sample Status	ABNORMAL	NORMAL	ABNORMAL	ATTENTION

ALTER METAL

2080 SPINDT DR
WAUPACA, WI
US 54981
Contact: BRAD DORMADY
brad.dormady@altertrading.com
T:
F:



OIL CONDITION

Visc @ 40°C	cSt	44.5	43.4	42.7	43.7
Acid Number (AN)	mg KOH/g	0.52	0.44	0.47	0.326



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		416830	19303	132371	37695
Particles >6µm		124071	478	8894	4048
Particles >14µm		20	9	44	147
ISO 4406:1999 (c)		26/24/11	21/16/10	24/20/13	22/19/14
Silicon	ppm	1	<1	2	0
Sodium	ppm	0	0	0	0
Potassium	ppm	1	<1	1	0

Diagnosis

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	6	5	8	4
Copper	ppm	2	2	3	4
Lead	ppm	<1	<1	<1	<1
Tin	ppm	<1	0	0	0
Aluminum	ppm	<1	0	<1	0
Chromium	ppm	3	2	3	3
Molybdenum	ppm	2	2	5	<1
Nickel	ppm	<1	<1	0	0
Titanium	ppm	2	0	0	<1
Silver	ppm	<1	0	0	<1
Manganese	ppm	<1	0	0	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

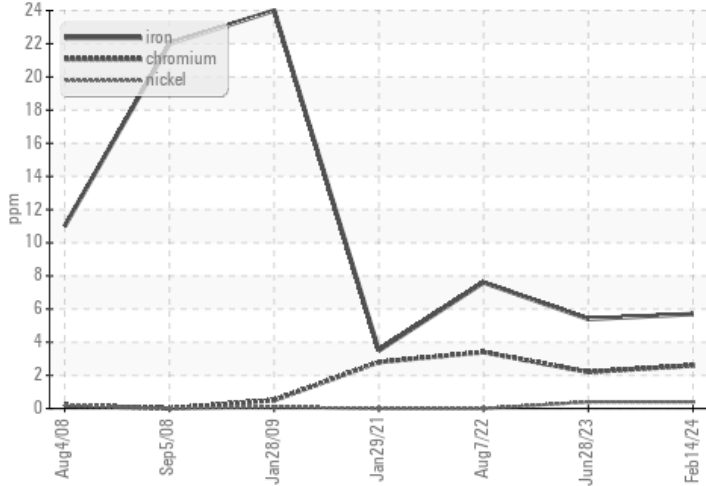
Calcium	ppm	157	115	148	58
Magnesium	ppm	20	17	32	1
Zinc	ppm	451	449	493	351
Phosphorus	ppm	339	354	381	336
Barium	ppm	5	0	0	0
Boron	ppm	8	5	14	<1

Depot: ALTWAUWI
Unique No: 10896541
Signed: Jonathan Hester
Report Date: 29 Feb 2024

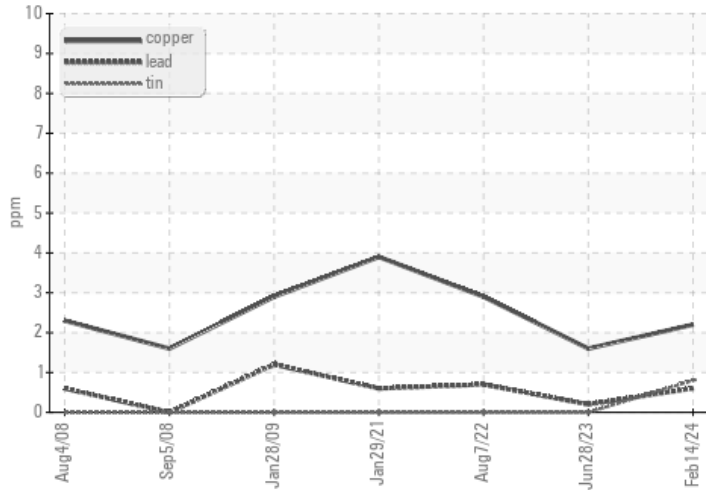


GRAPHS

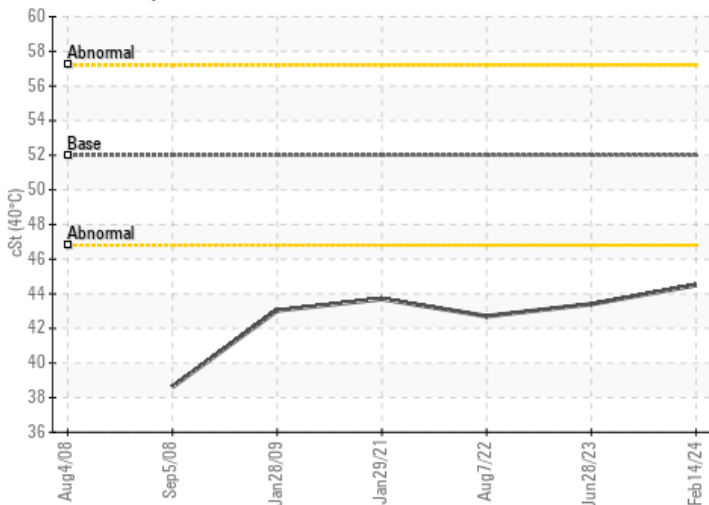
Ferrous Alloys



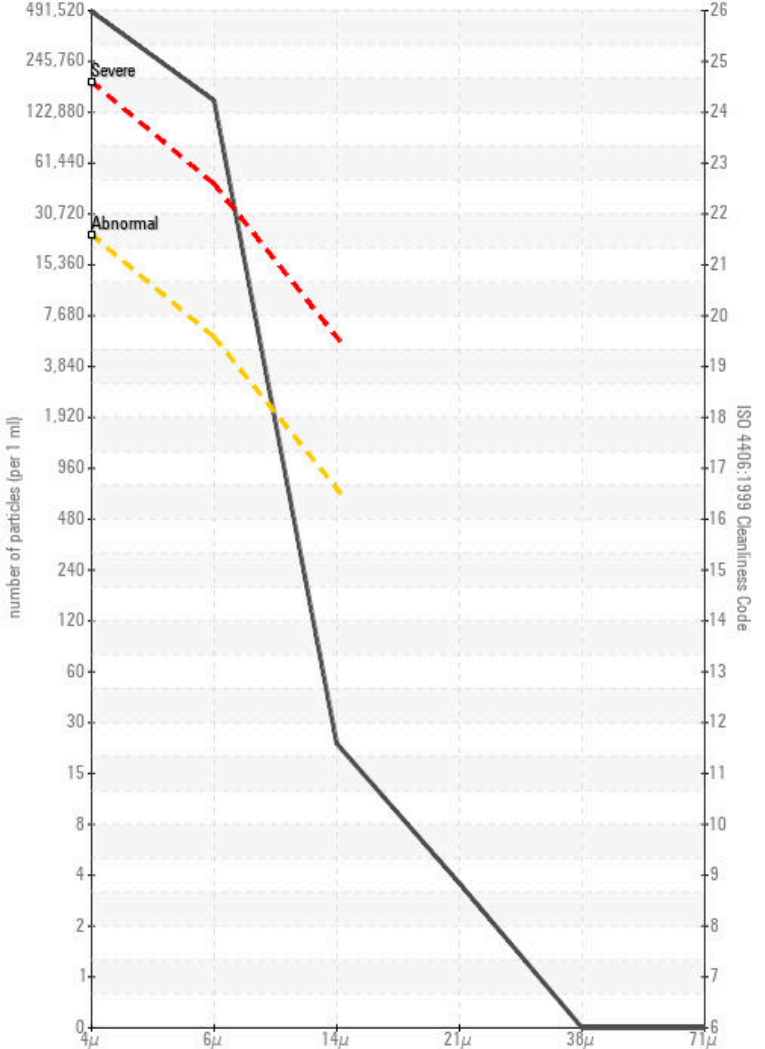
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

