LIEBHERR
CONSTRUCTION EQUIPMENT

[(348643)] LIEBHERR NO UNIT WC0904887 - Hydraulic Syste

Sample No: LH0199306

Oil Type: AW HYDRAULIC OIL ISO 32

COUNTY OF ST. PAUL NO. 19
5015 - 49 AVENUE
ST. PAUL, AB
CA T0A 3A4
Contact: DD SKAWRONSKI-MUNRO
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T: (780)645-3006
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Sample Information

Sample Number		**LH0199306**	LH0199298	LH0199290	---
Sample Date		**29 Apr 2024**	06 Feb 2023	06 Dec 2021	---
Machine Hours		**3004**	1978	1074	---
Oil Hours		**0**	0	0	---
Oil Changed		**Not Changd**	Changed	Not Changd	---
Sample Status		**ABNORMAL**	ATTENTION	ATTENTION	---

Oil Condition

Visc @ 40°C	cSt	**32.7**	44.2	45.7	---
Acid Number (AN)	mg KOH/g	**0.85**	1.09	1.49	---

Contamination

Water	%	**NEG**	NEG	NEG	---
Particles >4µm		**53700**	26374	35168	---
Particles >6µm		**12985**	924	2715	---
Particles >14µm		**899**	74	60	---
ISO 4406:1999 (c)		**23/21/17**	22/17/13	22/19/13	---
Silicon	ppm	**2**	4	3	---
Sodium	ppm	**5**	6	4	---
Potassium	ppm	**1**	2	2	---

Wear Metals

PQ		**---**	0	---	---
Iron	ppm	**14**	22	14	---
Copper	ppm	**8**	10	7	---
Lead	ppm	**<1**	1	1	---
Tin	ppm	**0**	0	0	---
Aluminum	ppm	**2**	2	<1	---
Chromium	ppm	**0**	<1	<1	---
Molybdenum	ppm	**<1**	3	3	---
Nickel	ppm	**0**	<1	<1	---
Titanium	ppm	**0**	<1	0	---
Silver	ppm	**0**	0	<1	---
Manganese	ppm	**<1**	<1	<1	---
Vanadium	ppm	**0**	0	0	---

Additives

Calcium	ppm	**748**	1367	1379	---
Magnesium	ppm	**4**	6	7	---
Zinc	ppm	**502**	657	667	---
Phosphorus	ppm	**425**	614	605	---
Barium	ppm	**0**	0	0	---
Boron	ppm	**2**	4	4	---

Diagnosis

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.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: COU501STP
Unique No: 5776464
Signed: Kevin Marson
Report Date: 15 May 2024

Report Id: COU501STP [WCAMIS] 02635311 (Generated: 05/15/2024 15:49:56) Rev: 1

Submitted By: ?

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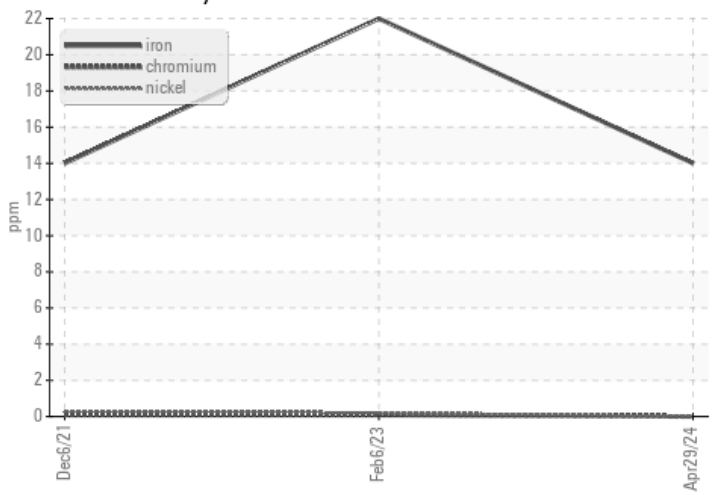
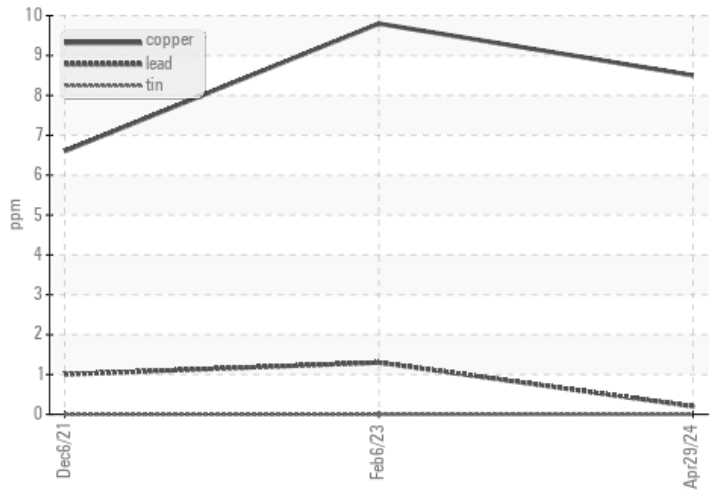
Graphs

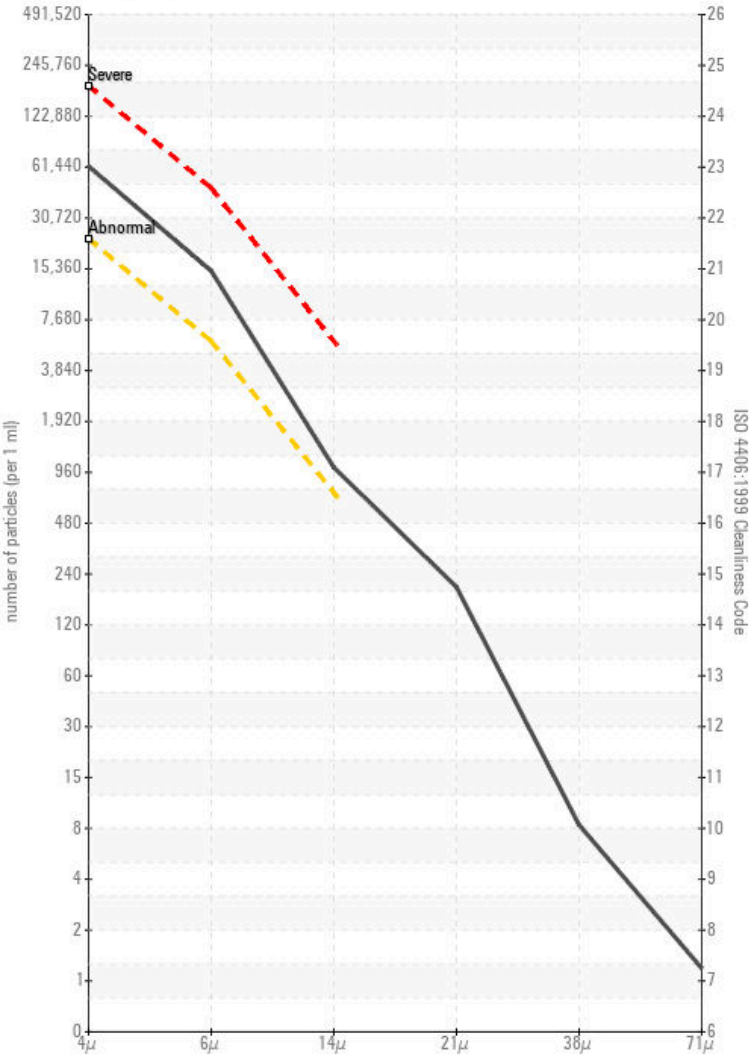
Ferrous Alloys



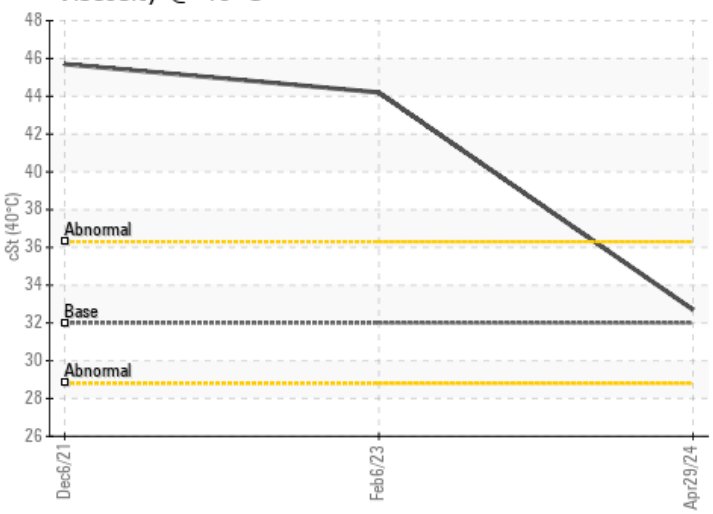
Non-ferrous Metals



Particle Count



Viscosity @ 40°C



Acid Number