LIEBHERR
CONSTRUCTION EQUIPMENT

[[SEAGATE TERMINALS]] LIEBHERR LH110CP LH0273458 (S/N 129731-1228) - Hydrau

Sample No: LH0273457

Oil Type: LIEBHERR HYDRAULIC HVI

LIEBHERR EQUIPMENT SOURCE
10119 RESIDENCY ROAD
MANASSAS, VA
US 20110
Contact: TOM HEINEY
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T: (703)392-0111
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Sample Information

Sample Number		**LH0273457**	LH0200585	---	---
Sample Date		**10 May 2024**	02 Mar 2022	---	---
Machine Hours		**1901**	415	---	---
Oil Hours		**0**	415	---	---
Oil Changed		**Not Changd**	Not Changd	---	---
Sample Status		**ABNORMAL**	NORMAL	---	---

Oil Condition

Visc @ 40°C	cSt	**42.8**	45.3	---	---
Acid Number (AN)	mg KOH/g	**1.08**	1.17	---	---

Contamination

Water	%	**0.272**	NEG	---	---
Particles >4µm		**797**	8615	---	---
Particles >6µm		**434**	1802	---	---
Particles >14µm		**74**	127	---	---
ISO 4406:1999 (c)		**17/16/13**	20/18/14	---	---
Silicon	ppm	**7**	5	---	---
Sodium	ppm	**2**	0	---	---
Potassium	ppm	**<1**	0	---	---

Wear Metals

Iron	ppm	**7**	5	---	---
Copper	ppm	**2**	1	---	---
Lead	ppm	**<1**	0	---	---
Tin	ppm	**0**	0	---	---
Aluminum	ppm	**<1**	<1	---	---
Chromium	ppm	**1**	<1	---	---
Molybdenum	ppm	**0**	0	---	---
Nickel	ppm	**0**	0	---	---
Titanium	ppm	**0**	0	---	---
Silver	ppm	**0**	<1	---	---
Manganese	ppm	**<1**	<1	---	---
Vanadium	ppm	**0**	0	---	---

Additives

Calcium	ppm	**1356**	1428	---	---
Magnesium	ppm	**0**	3	---	---
Zinc	ppm	**648**	637	---	---
Phosphorus	ppm	**548**	626	---	---
Barium	ppm	**0**	0	---	---
Boron	ppm	**0**	0	---	---

Diagnosis

We advise that you check for the source of water entry. 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 light concentration of water present 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.

Depot: LIEBHERRVA
Unique No: 11044320
Signed: Jonathan Hester
Report Date: 31 May 2024

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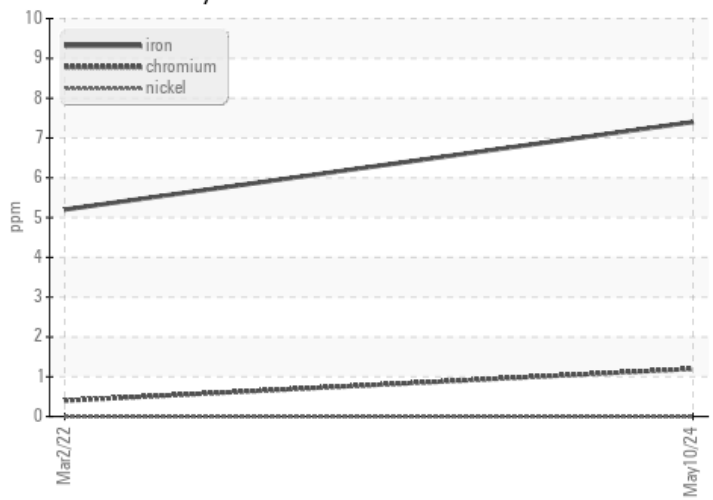
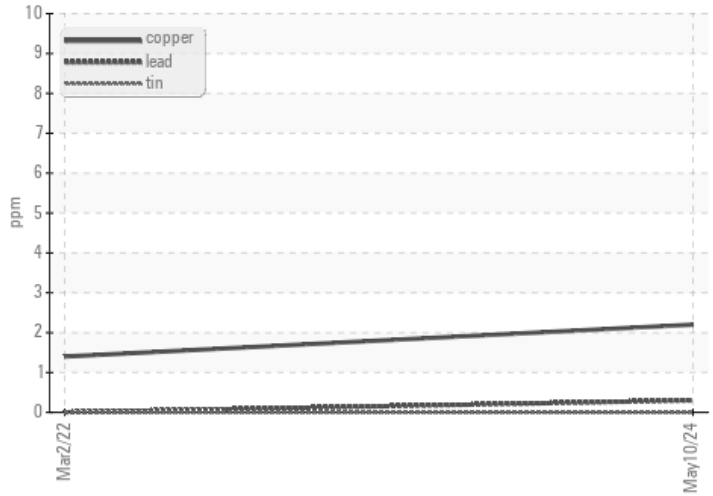
Graphs

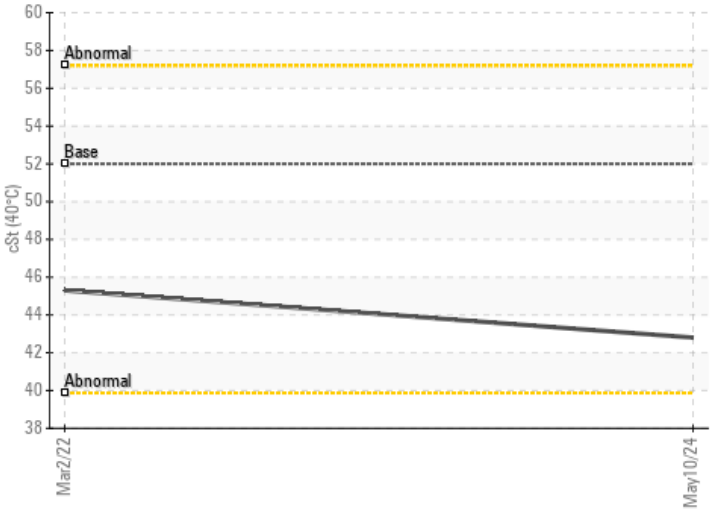
Ferrous Alloys



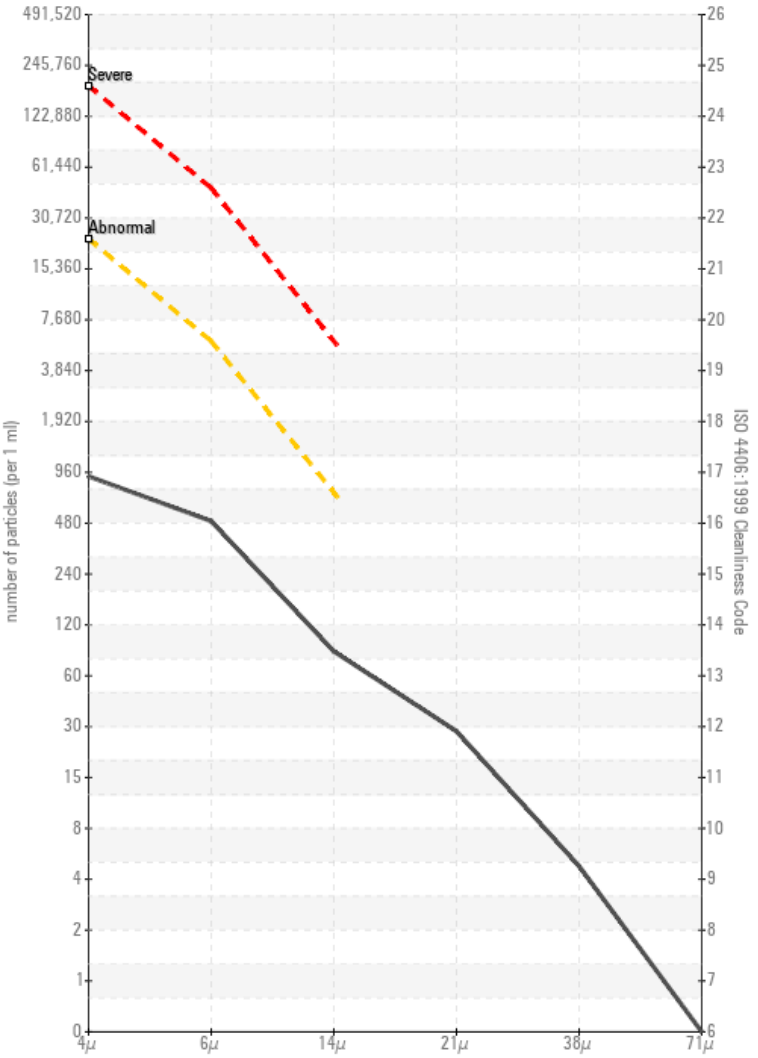
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number