LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR LH60M 119208-1217 - Hydraulic System

Sample No: LH0267392

Oil Type: LIEBHERR HYDRAULIC HVI

TT & E IRON
1529 WEST GARNER RD
GARNER, NC
US 27529
Contact: MICHAEL STANCIL
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F:

SAMPLE INFORMATION

Sample Number		**LH0267392**	LH0257451	LH0200263	---
Sample Date		**04 Jan 2024**	05 Jul 2023	30 Nov 2022	---
Machine Hours		**4478**	3275	1762	---
Oil Hours		**0**	3000	0	---
Oil Changed		**Not Changd**	Not Changd	Not Changd	---
Sample Status		**ABNORMAL**	ABNORMAL	NORMAL	---

OIL CONDITION

Visc @ 40°C	cSt	**41.1**	42.6	44.6	---
Acid Number (AN)	mg KOH/g	**0.88**	1.00	1.063	---

CONTAMINATION

Water	%	**NEG**	NEG	NEG	---
Particles >4µm		**12428**	939	468	---
Particles >6µm		**4628**	270	144	---
Particles >14µm		**453**	36	11	---
ISO 4406:1999 (c)		**21/19/16**	17/15/12	16/14/11	---
Silicon	ppm	**3**	2	2	---
Sodium	ppm	**0**	0	2	---
Potassium	ppm	**2**	2	0	---

WEAR METALS

Iron	ppm	**106**	71	22	---
Copper	ppm	**13**	12	4	---
Lead	ppm	**2**	2	<1	---
Tin	ppm	**<1**	<1	0	---
Aluminum	ppm	**2**	1	<1	---
Chromium	ppm	**3**	3	<1	---
Molybdenum	ppm	**1**	<1	<1	---
Nickel	ppm	**<1**	0	0	---
Titanium	ppm	**<1**	0	0	---
Silver	ppm	**0**	0	0	---
Manganese	ppm	**2**	1	<1	---
Vanadium	ppm	**0**	0	0	---

ADDITIVES

Calcium	ppm	**508**	577	1042	---
Magnesium	ppm	**8**	3	6	---
Zinc	ppm	**580**	596	559	---
Phosphorus	ppm	**453**	468	475	---
Barium	ppm	**8**	0	0	---
Boron	ppm	**0**	0	<1	---

Diagnosis

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. Resample at the next service interval to monitor.The iron level is abnormal. All other 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 acceptable for the time in service.

Depot: TTENEW
Unique No: 10819681
Signed: Don Baldridge
Report Date: 09 Jan 2024

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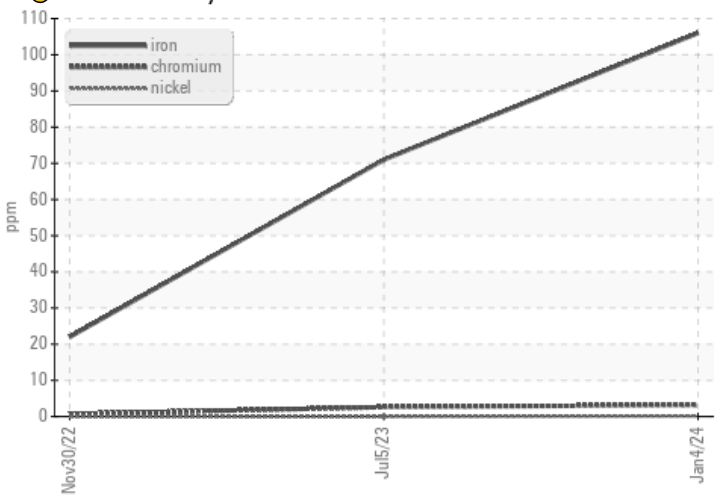
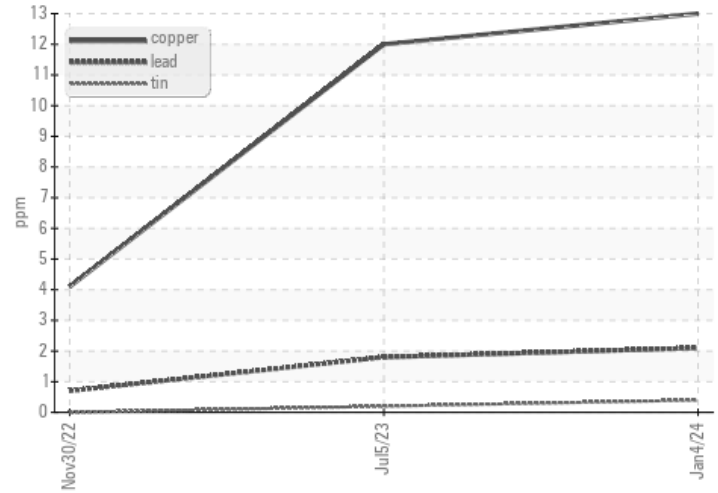
GRAPHS

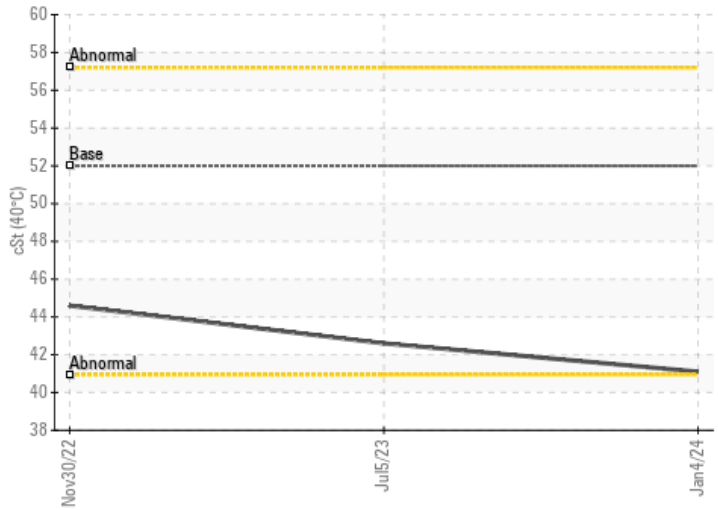
Ferrous Alloys



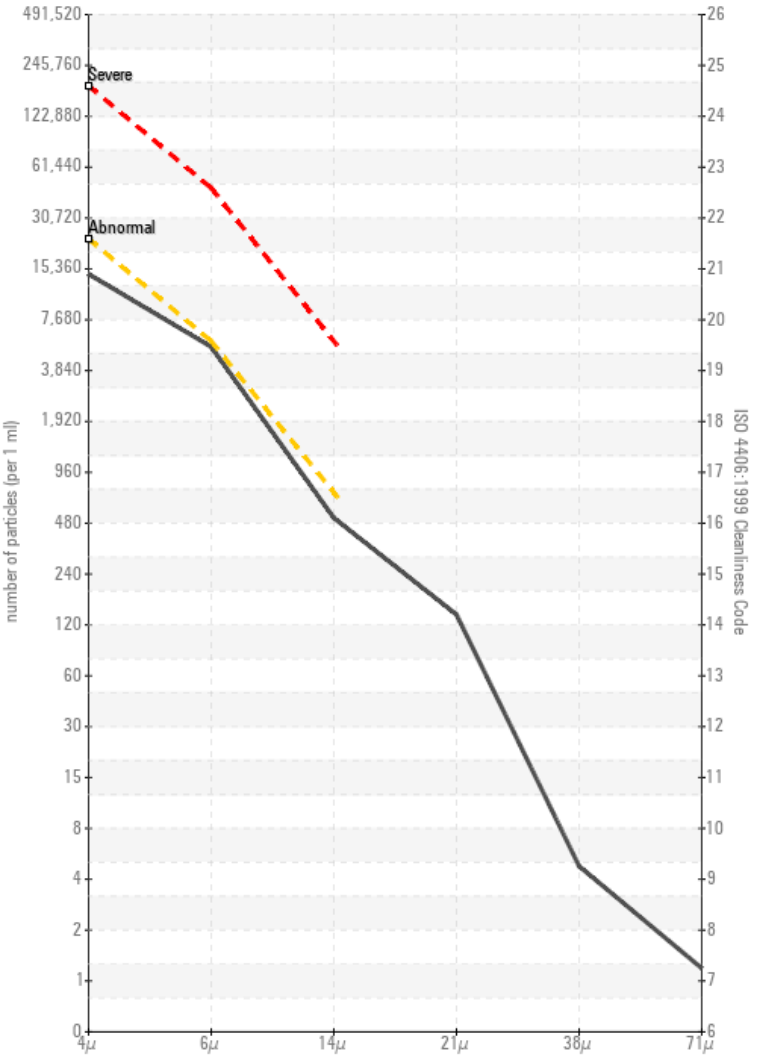
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number