LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR LH30M 107069-1253 - Hydraulic System

Sample No: LH0229078

Oil Type: LIEBHERR HYDRAULIC HVI

MIDWEST IRON
461 HOMESTEAD AVE
DAYTON, OH
US 45417
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SAMPLE INFORMATION

Sample Number		**LH0229078**	LH0258316	LHMC164133	LHMC164157
Sample Date		**19 Jan 2024**	15 Aug 2023	26 Dec 2019	24 Jul 2019
Machine Hours		**9670**	8925	2207	1453
Oil Hours		**0**	0	650	0
Oil Changed		**Not Changd**	Not Changd	N/A	N/A
Sample Status		**NORMAL**	ABNORMAL	ABNORMAL	ABNORMAL

OIL CONDITION

Visc @ 40°C	cSt	**42.0**	41.9	43.2	43.9
Acid Number (AN)	mg KOH/g	**0.77**	0.89	0.973	1.057

CONTAMINATION

Water	%	**NEG**	NEG	NEG	0.142
Particles >4µm		**2629**	---	56227	---
Particles >6µm		**794**	---	14329	---
Particles >14µm		**77**	---	590	---
ISO 4406:1999 (c)		**19/17/13**	---	23/21/16	---
Silicon	ppm	**1**	2	5	2
Sodium	ppm	**4**	6	2	3
Potassium	ppm	**3**	1	0	6

WEAR METALS

Iron	ppm	**23**	33	19	17
Copper	ppm	**7**	8	4	4
Lead	ppm	**2**	2	1	2
Tin	ppm	**<1**	0	<1	0
Aluminum	ppm	**1**	<1	1	<1
Chromium	ppm	**<1**	<1	<1	<1
Molybdenum	ppm	**<1**	<1	<1	<1
Nickel	ppm	**<1**	0	0	0
Titanium	ppm	**0**	0	0	<1
Silver	ppm	**0**	0	0	0
Manganese	ppm	**1**	<1	<1	<1
Vanadium	ppm	**0**	0	0	0

ADDITIVES

Calcium	ppm	**999**	1326	1317	1262
Magnesium	ppm	**13**	9	6	6
Zinc	ppm	**595**	681	655	642
Phosphorus	ppm	**489**	530	558	492
Barium	ppm	**0**	0	0	0
Boron	ppm	**0**	0	<1	<1

Diagnosis

Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Depot: MIDDAY
Unique No: 10863390
Signed: Wes Davis
Report Date: 07 Feb 2024

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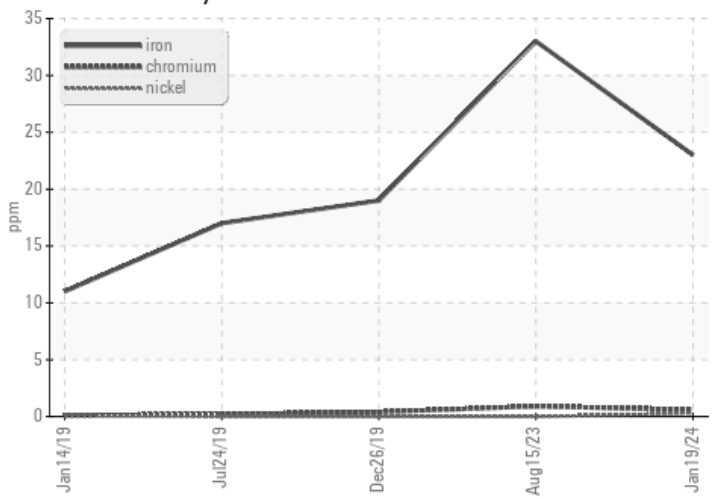
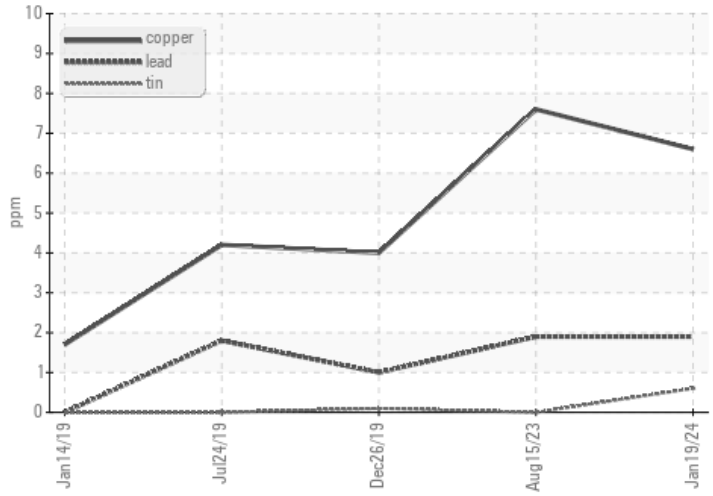
GRAPHS

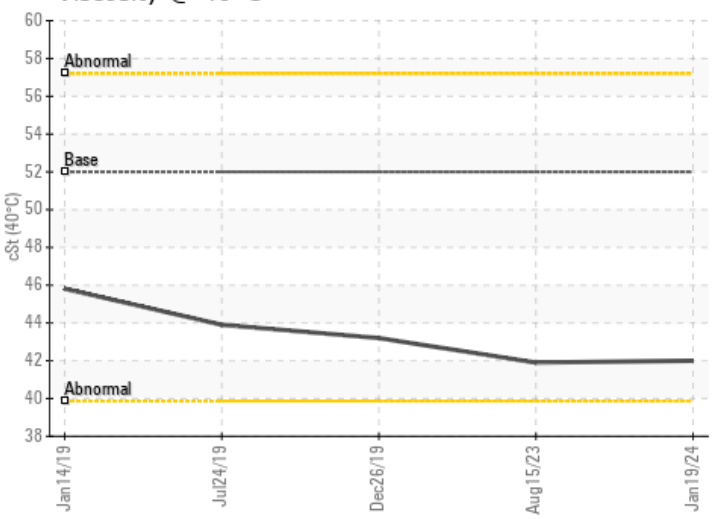
Ferrous Alloys



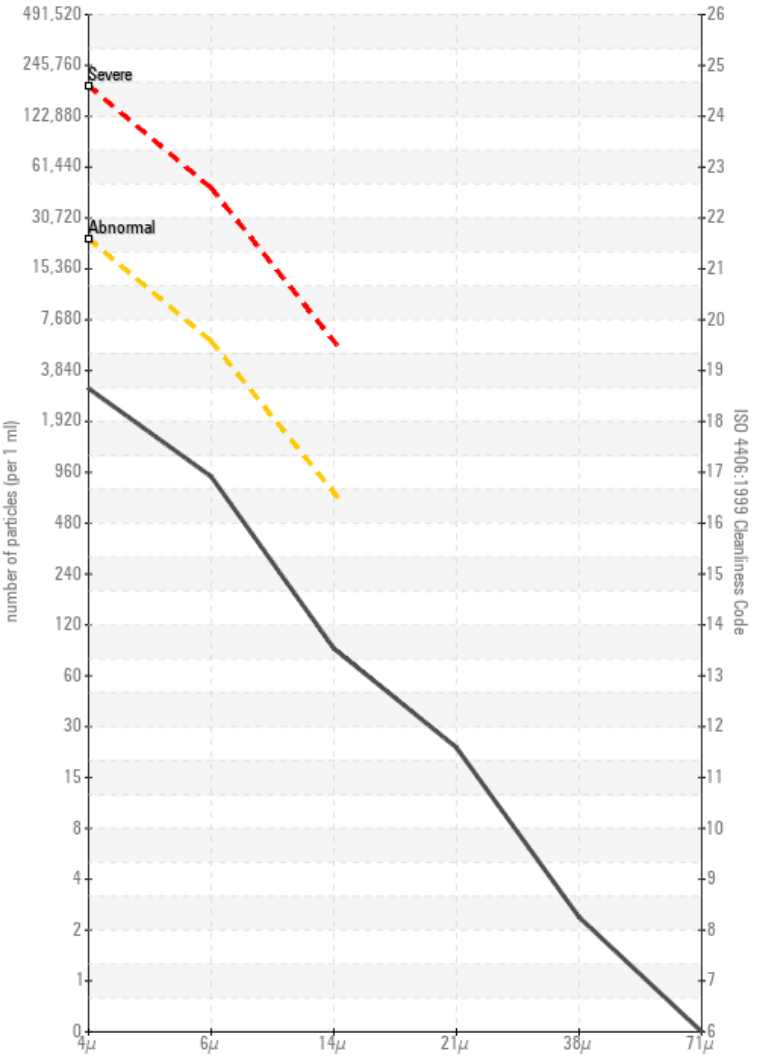
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number