

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH22M 142190-1250 - Hydraulic System

Sample No: LH0296506

Oil Type: {unknown}



**Combined Metals Industries**  
8470 Keele Street  
Concord, ON  
CA L4K 2S1  
Contact: Service Manager



#### Sample Information

Sample Number	LH0296506	LH0291305	LH0285130	LH0278909
Sample Date	07 Jul 2024	02 May 2024	29 Jan 2024	20 Nov 2023
Machine Hours	3473	2979	2241	1772
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Changed	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	ATTENTION



#### Oil Condition

Visc @ 40°C	cSt	42.2	42.2	42.5	47.0
		●	●	●	●

T:  
F:



#### Contamination

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		● 3811	● 9226	● 7644	● 19097
Particles >6µm		● 986	● 2392	● 1871	● 5310
Particles >14µm		● 75	● 180	● 120	● 199
ISO 4406:1999 (c)		19/17/13	20/18/15	20/18/14	21/20/15
Silicon	ppm	● 3	● 2	● 3	● <1
Sodium	ppm	● 2	● 2	● 2	● <1
Potassium	ppm	● 2	● <1	● 1	● 0

#### Diagnosis

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. 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 condition of the oil is acceptable for the time in service.



#### Wear Metals

Iron	ppm	● 7	● 6	● 6	● 0
Copper	ppm	● 3	● 3	● 2	● <1
Lead	ppm	● <1	● 0	● <1	● 0
Tin	ppm	● 0	● 0	● 0	● 0
Aluminum	ppm	● 1	● <1	● <1	● 0
Chromium	ppm	● 1	● <1	● <1	● 0
Molybdenum	ppm	0	0	0	0
Nickel	ppm	● <1	● 0	● <1	● 0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	0	0	0	0
Vanadium	ppm	0	0	0	0



#### Additives

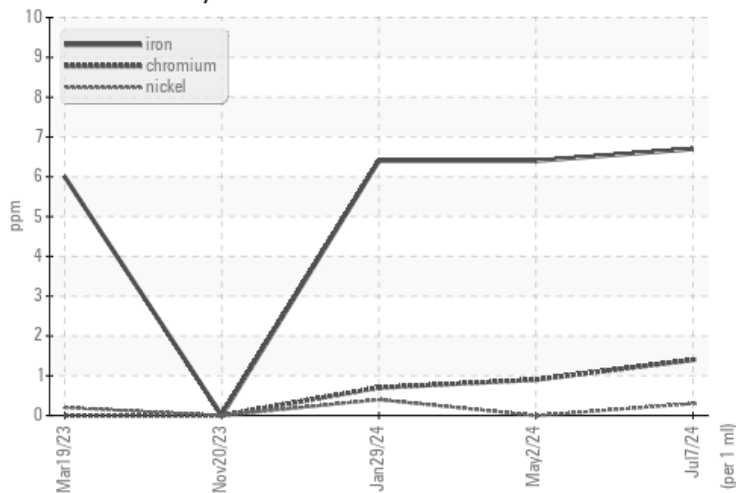
Calcium	ppm	1024	1059	1104	100
Magnesium	ppm	4	4	4	<1
Zinc	ppm	733	723	710	841
Phosphorus	ppm	604	610	600	642
Barium	ppm	<1	0	0	<1
Boron	ppm	10	<1	<1	<1

Depot: COM847CON  
Unique No: 5811862  
Signed: Wes Davis  
Report Date: 09 Jul 2024

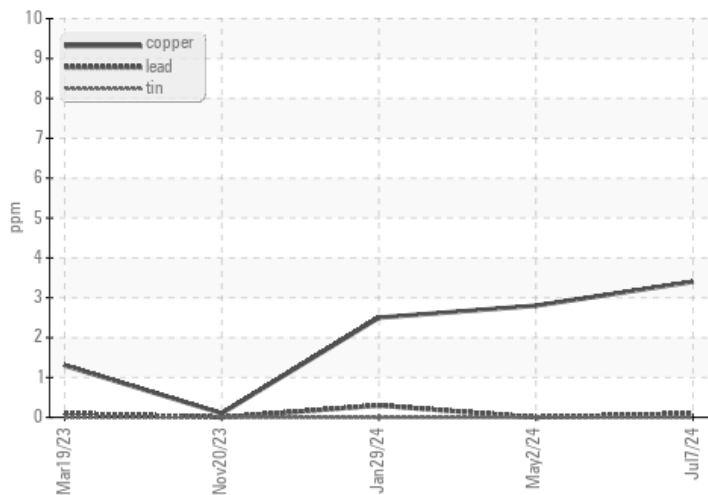


### Graphs

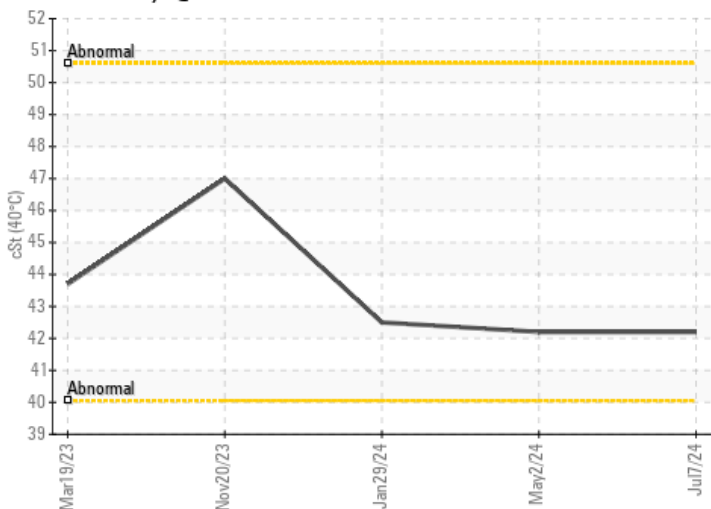
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C



#### Particle Count

