

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50 119411-1216 - Diesel Engine

Sample No: LH0268841

Oil Type: LIEBHERR MOTOROIL 5W30



#### SAMPLE INFORMATION

Sample Number	LH0268841	LH0264634	LH0253949	LH0172057
Sample Date	28 Jan 2024	18 Jul 2023	01 Mar 2023	23 Mar 2021
Machine Hours	5692	4944	4520	1989
Oil Hours	5692	1000	4520	401
Oil Changed	Changed	Not Changd	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ABNORMAL

#### SIMS METAL MANAGEMENT

3220 DEEPWATER TERMINAL RD  
 RICHMOND, VA  
 US 23234  
 Contact: Service Manager



#### OIL CONDITION

Visc @ 100°C	cSt	10.9	11.2	11.2	11.8
Base Number (BN)	mg KOH/g	4.9	4.6	6.2	---
Oxidation (PA)	%	86	57	59	202

T: (703)392-0111  
 F:



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.2
Nitration (PA)	%	105	77	77	158
Sulfation (PA)	%	67	53	55	107
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	9	9	9	7
Sodium	ppm	4	2	1	2
Potassium	ppm	4	5	2	17

#### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.



#### WEAR METALS

Iron	ppm	6	4	4	34
Copper	ppm	4	2	4	218
Lead	ppm	3	<1	0	21
Tin	ppm	<1	<1	<1	4
Aluminum	ppm	2	2	2	5
Chromium	ppm	<1	0	<1	2
Molybdenum	ppm	4	<1	<1	35
Nickel	ppm	0	0	0	<1
Titanium	ppm	1	<1	<1	2
Silver	ppm	0	0	<1	<1
Manganese	ppm	<1	<1	<1	2
Vanadium	ppm	0	0	0	0



#### ADDITIVES

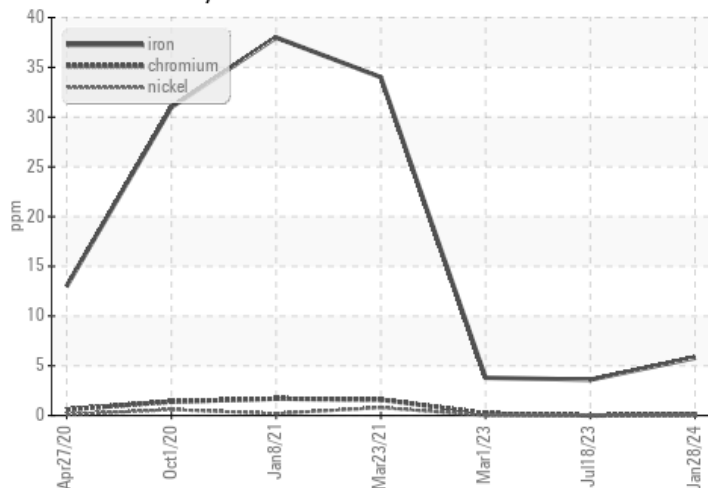
Calcium	ppm	1501	1367	1301	1687
Magnesium	ppm	593	688	645	772
Zinc	ppm	819	814	742	929
Phosphorus	ppm	725	698	643	755
Barium	ppm	0	0	0	17
Boron	ppm	39	46	50	58

Depot: SIMRICLH  
 Unique No: 10903267  
 Signed: Sean Felton  
 Report Date: 04 Mar 2024

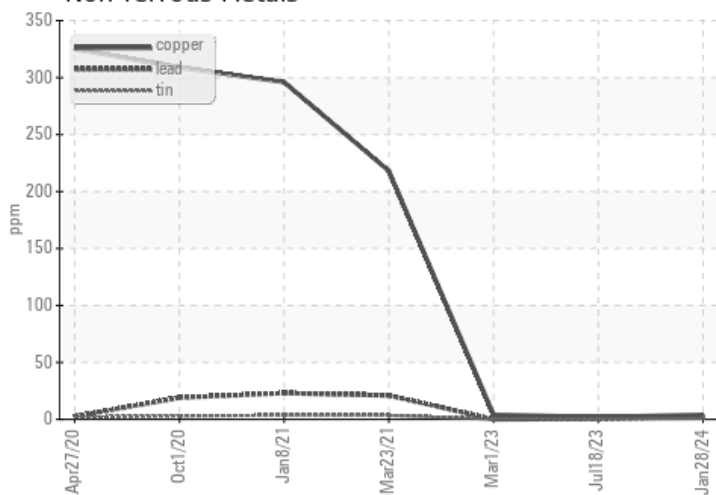


### GRAPHS

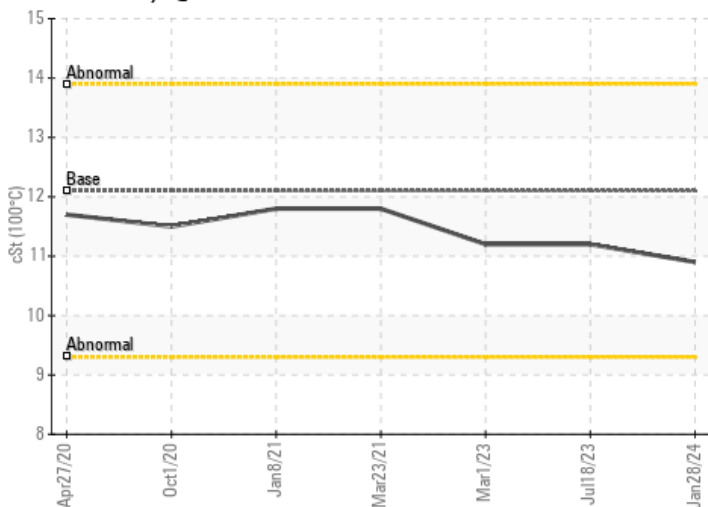
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

