

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50M 1216-109092 - Diesel Engine

Sample No: LH0254662

Oil Type: MOBIL DELVAC 1 5W40



**AHLSTROM-MUNKSJO NA SPECIALTY**  
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#### Sample Information

Sample Number	LH0254662	LHMC149920	LHMC149928	LHMC154039
Sample Date	15 May 2024	01 Mar 2024	29 Nov 2023	13 Apr 2023
Machine Hours	16447	15879	15226	14565
Oil Hours	500	653	660	522
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



#### Oil Condition

Visc @ 100°C	cSt	13.1	13.2	12.9	13.0
Base Number (BN)	mg KOH/g	8.1	4.1	3.5	4.6
Oxidation (PA)	%	84	195	193	180



#### Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.6	0.1	0.1	0.1
Nitration (PA)	%	73	94	94	83
Sulfation (PA)	%	61	109	109	100
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	12	11	12	15
Sodium	ppm	<1	2	0	<1
Potassium	ppm	4	1	2	1



#### Wear Metals

Iron	ppm	5	3	4	4
Copper	ppm	1	2	3	<1
Lead	ppm	<1	1	<1	0
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	4	2	2	0
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	45	40	45	50
Nickel	ppm	0	0	<1	<1
Titanium	ppm	<1	0	1	0
Silver	ppm	<1	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	<1	0	0	0



#### Additives

Calcium	ppm	1068	878	947	1047
Magnesium	ppm	880	798	835	936
Zinc	ppm	1262	1126	1129	1326
Phosphorus	ppm	1175	923	957	1117
Barium	ppm	0	0	12	2
Boron	ppm	89	76	83	110

#### 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 suitable for further service.

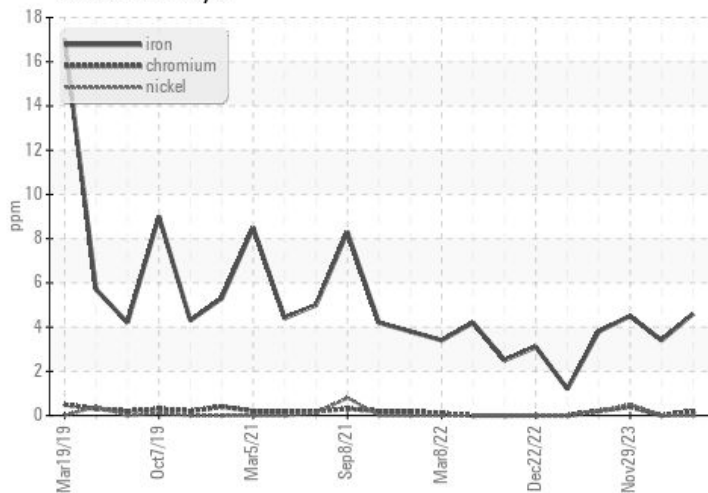
Depot: AHLKAU  
 Unique No: 11036863  
 Signed: Wes Davis  
 Report Date: 22 May 2024

Contact/Location: JOE SEITZ - AHLKAU

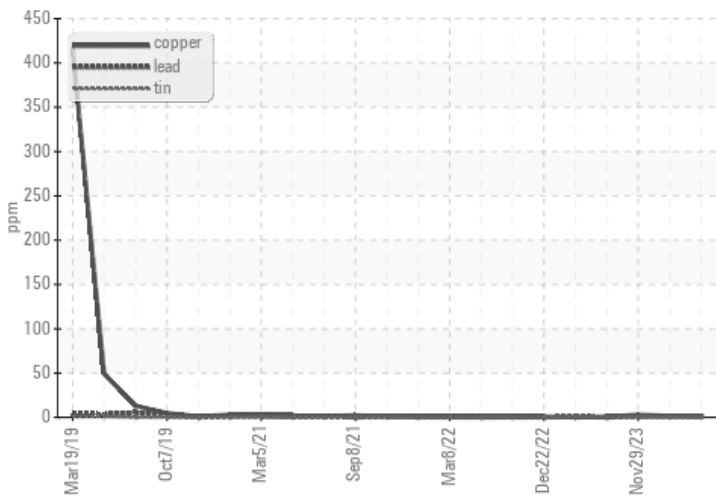


### Graphs

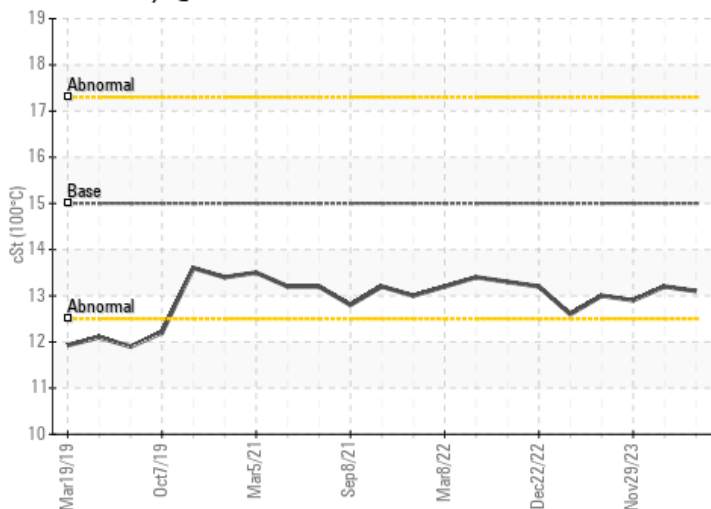
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

