

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50 1117942-1216 - Diesel Engine

Sample No: LH0197973

Oil Type: MOBIL DELVAC 1300 SUPER15W40



#### SAMPLE INFORMATION

Sample Number	LH0197973	LH06061834	LH0197960	LH0197959
Sample Date	26 Feb 2024	02 Jan 2024	03 Nov 2023	14 Jul 2023
Machine Hours	11804	11286	10779	9732
Oil Hours	0	0	0	0
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

**PACKAGING CORP. OF AMERICA**  
 N9090 COUNTY RD E  
 TOMAHAWK, WI  
 US 54487  
 Contact: ROSS RICHARD  
 rossrichards@packagingcorp.com  
 T: (715)453-2131  
 F: (715)453-0430



#### OIL CONDITION

Visc @ 100°C	cSt	12.9	12.9	12.7	13.1
Base Number (BN)	mg KOH/g	9.2	9.0	8.4	9.5
Oxidation (PA)	%	86	88	87	86



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.2
Nitration (PA)	%	68	71	67	71
Sulfation (PA)	%	59	58	59	59
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	8	8	8
Sodium	ppm	3	2	2	3
Potassium	ppm	0	0	0	<1

#### 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.



#### WEAR METALS

Iron	ppm	3	2	1	3
Copper	ppm	<1	<1	2	1
Lead	ppm	0	0	<1	<1
Tin	ppm	0	0	0	0
Aluminum	ppm	1	<1	<1	2
Chromium	ppm	0	0	0	0
Molybdenum	ppm	45	46	40	42
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	0	<1



#### ADDITIVES

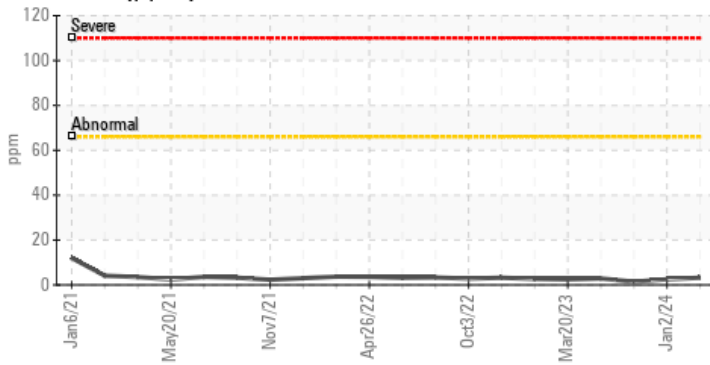
Calcium	ppm	1709	1721	1677	1816
Magnesium	ppm	486	516	512	537
Zinc	ppm	861	936	915	944
Phosphorus	ppm	713	768	767	778
Barium	ppm	0	0	0	0
Boron	ppm	45	40	40	40

**Depot:** PACTOM  
**Unique No:** 10915371  
**Signed:** Wes Davis  
**Report Date:** 08 Mar 2024

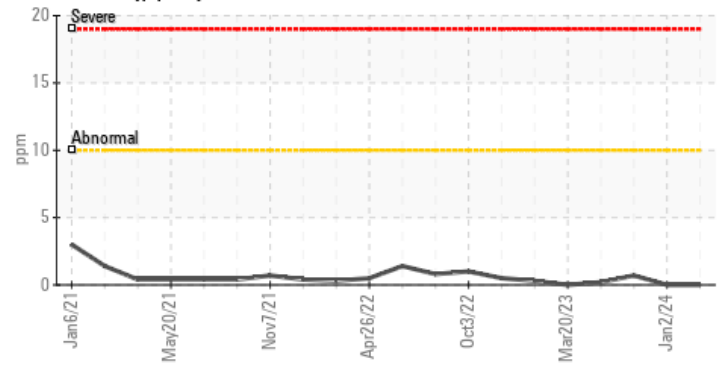


### GRAPHS

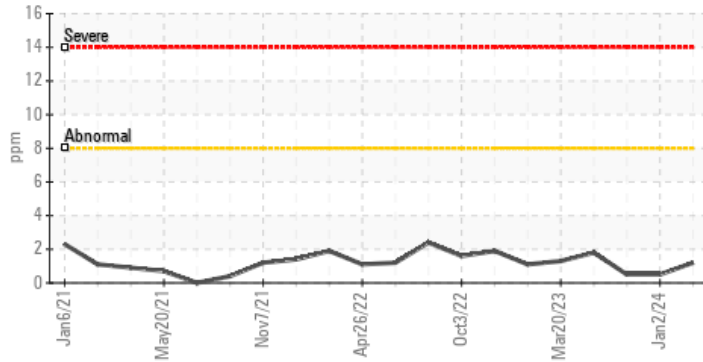
Iron (ppm)



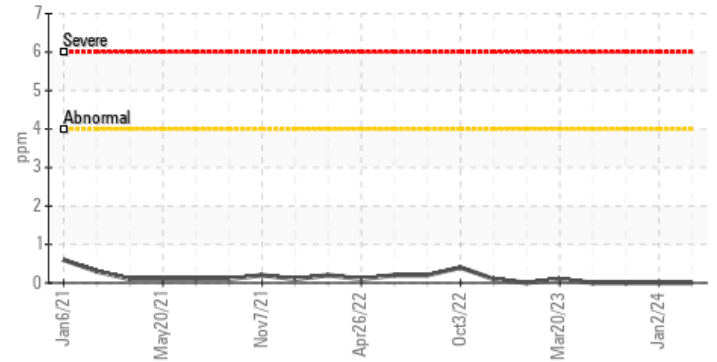
Lead (ppm)



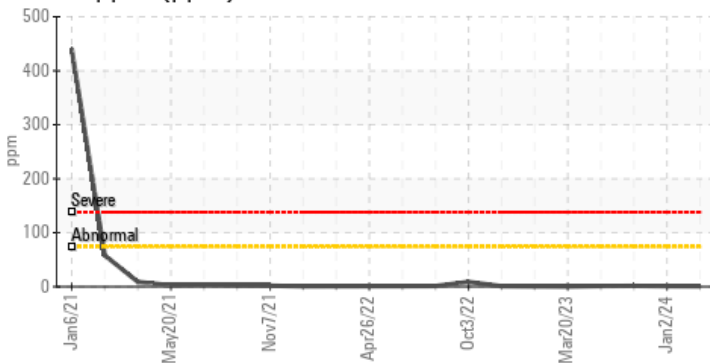
Aluminum (ppm)



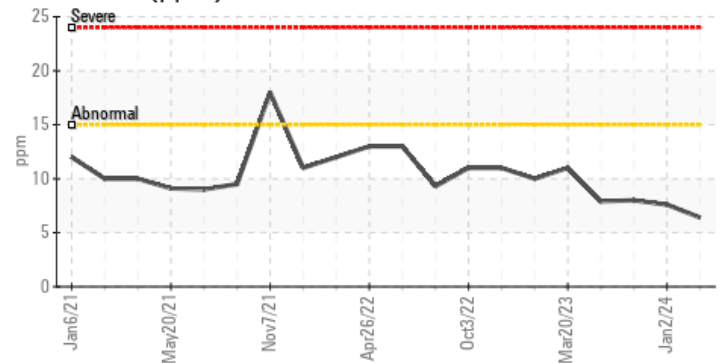
Chromium (ppm)



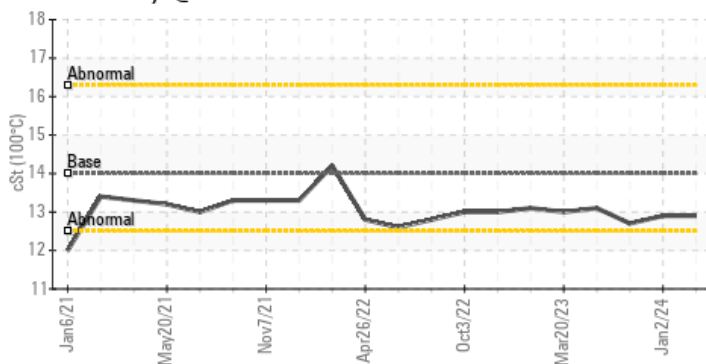
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

