

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50M 107076-1216 - Diesel Engine

Sample No: LH0254809

Oil Type: DIESEL ENGINE OIL SAE 15W40



**AMERICAN STATE EQUIPMENT CO.**  
 2400 NORTH 14TH AVENUE  
 WAUSAU, WI  
 US 54401  
 Contact: CHRIS BARTNIK  
 cbartnik@amstate.com  
 T: (715)675-6900  
 F: (715)675-9748



#### SAMPLE INFORMATION

Sample Number	LH0254809	LH0245015	LH0236229	LH0207879
Sample Date	08 Jun 2023	10 Mar 2023	17 Oct 2022	20 Apr 2022
Machine Hours	0	9953	9029	8173
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	ATTENTION	NORMAL	NORMAL



#### OIL CONDITION

Visc @ 100°C	cSt	12.6	12.1	10.6	11.3
Base Number (BN)	mg KOH/g	6.6	5.1	6.0	6.5
Oxidation (PA)	%	70	73	79	83



#### CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	83	83	93	97
Sulfation (PA)	%	60	63	68	66
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	2.5	<1.0	<1.0
Silicon	ppm	8	8	7	7
Sodium	ppm	2	4	2	3
Potassium	ppm	2	3	1	0



#### WEAR METALS

Iron	ppm	6	4	6	6
Copper	ppm	<1	2	2	2
Lead	ppm	0	<1	2	2
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	1	<1	1	1
Chromium	ppm	<1	<1	<1	0
Molybdenum	ppm	25	13	17	11
Nickel	ppm	<1	0	0	<1
Titanium	ppm	55	58	<1	1
Silver	ppm	0	0	<1	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	0	0



#### ADDITIVES

Calcium	ppm	1301	1392	1344	1412
Magnesium	ppm	750	635	639	613
Zinc	ppm	1240	1090	853	784
Phosphorus	ppm	986	857	747	706
Barium	ppm	0	0	0	0
Boron	ppm	38	48	24	42

#### Diagnosis

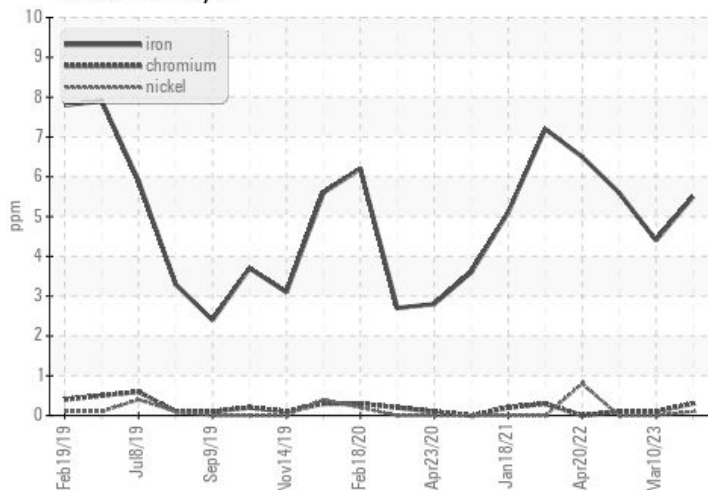
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: LEC0008  
 Unique No: 10535450  
 Signed: Wes Davis  
 Report Date: 30 Jun 2023

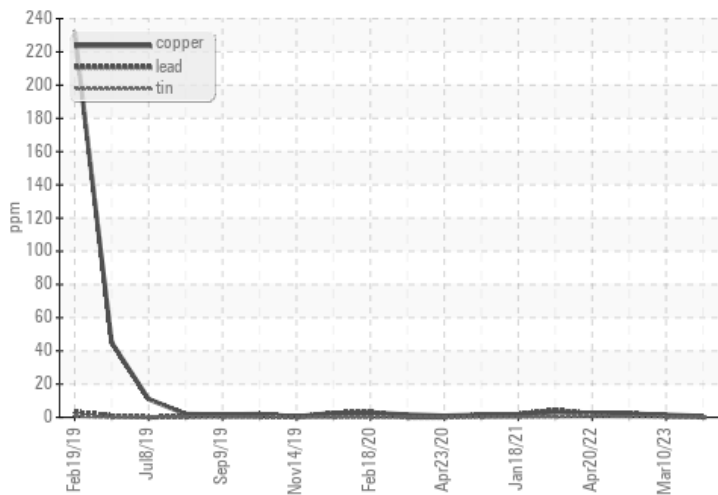


### GRAPHS

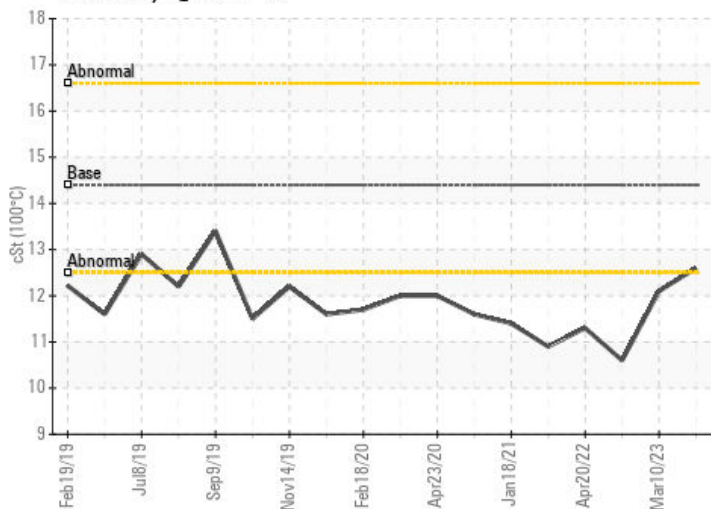
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

