

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH30M 121854-1253 - Diesel Engine

Sample No: LH0263824

Oil Type: CHEVRON DELO LE 5W40



**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	LH0263824	LH0254774	LH0207792	LH0220802
Sample Date	08 Aug 2023	02 Jun 2023	27 Feb 2023	05 Dec 2022
Machine Hours	6007	5547	4659	3975
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



#### OIL CONDITION

Visc @ 100°C	cSt	13.1	12.5	12.4	13.2
Base Number (BN)	mg KOH/g	6.7	5.7	7.7	8.0
Oxidation (PA)	%	57	74	58	59



#### CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	73	78	81	78
Sulfation (PA)	%	53	61	54	57
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	1.9	<1.0
Silicon	ppm	8	8	7	8
Sodium	ppm	2	1	3	<1
Potassium	ppm	3	5	1	3



#### WEAR METALS

Iron	ppm	5	7	5	4
Copper	ppm	3	5	4	4
Lead	ppm	<1	1	0	0
Tin	ppm	<1	<1	0	<1
Aluminum	ppm	<1	1	1	<1
Chromium	ppm	0	0	0	0
Molybdenum	ppm	13	23	3	4
Nickel	ppm	0	<1	0	0
Titanium	ppm	72	58	75	94
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	<1	<1



#### ADDITIVES

Calcium	ppm	1383	1233	1770	1389
Magnesium	ppm	760	699	542	609
Zinc	ppm	1239	1150	1124	1148
Phosphorus	ppm	1002	949	948	1000
Barium	ppm	0	2	0	0
Boron	ppm	70	34	143	131

#### Diagnosis

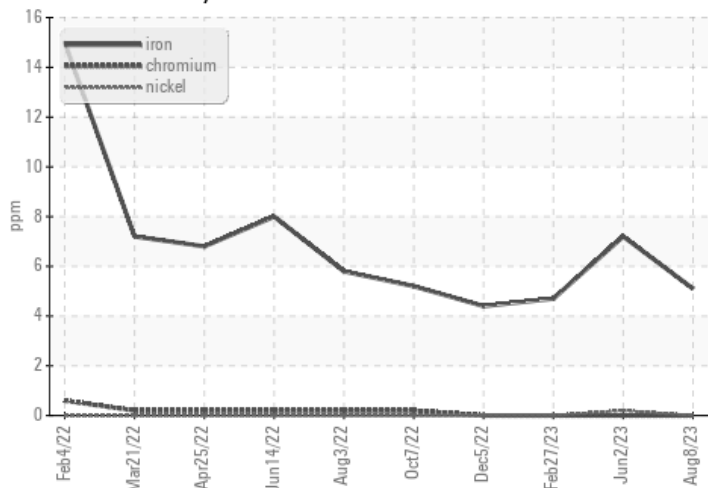
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: LEC0008  
 Unique No: 10603860  
 Signed: Wes Davis  
 Report Date: 15 Aug 2023

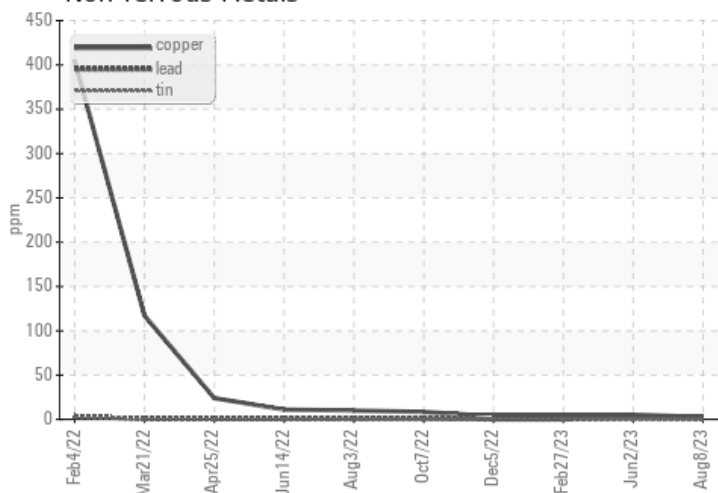


### GRAPHS

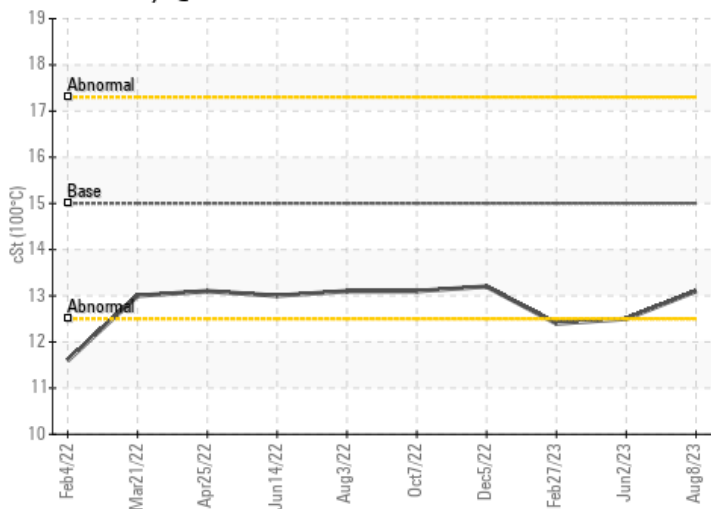
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

