

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH30M 121854-1253 - Diesel Engine

Sample No: LH0272748

Oil Type: CHEVRON DELO LE 5W40



**AMERICAN STATE EQUIPMENT CO.**  
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#### SAMPLE INFORMATION

Sample Number	LH0272748	LH0272577	LH0263824	LH0254774
Sample Date	02 Jan 2024	27 Oct 2023	08 Aug 2023	02 Jun 2023
Machine Hours	6976	6481	6007	5547
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



#### OIL CONDITION

Visc @ 100°C	cSt	13.0	12.9	13.1	12.5
Base Number (BN)	mg KOH/g	6.0	6.8	6.7	5.7
Oxidation (PA)	%	59	59	57	74



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	73	75	73	78
Sulfation (PA)	%	56	56	53	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	9	8	8
Sodium	ppm	3	1	2	1
Potassium	ppm	2	3	3	5



#### WEAR METALS

Iron	ppm	4	3	5	7
Copper	ppm	2	2	3	5
Lead	ppm	<1	1	<1	1
Tin	ppm	2	<1	<1	<1
Aluminum	ppm	2	1	<1	1
Chromium	ppm	0	0	0	0
Molybdenum	ppm	6	5	13	23
Nickel	ppm	0	<1	0	<1
Titanium	ppm	85	80	72	58
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	2	1	<1	<1



#### ADDITIVES

Calcium	ppm	1292	1267	1383	1233
Magnesium	ppm	712	722	760	699
Zinc	ppm	1196	1242	1239	1150
Phosphorus	ppm	967	974	1002	949
Barium	ppm	0	0	0	2
Boron	ppm	101	79	70	34

#### Diagnosis

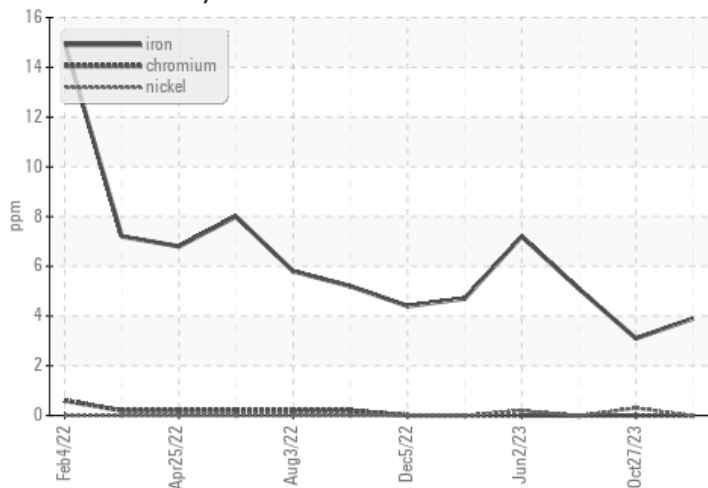
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: LEC0008  
 Unique No: 10833228  
 Signed: Wes Davis  
 Report Date: 17 Jan 2024

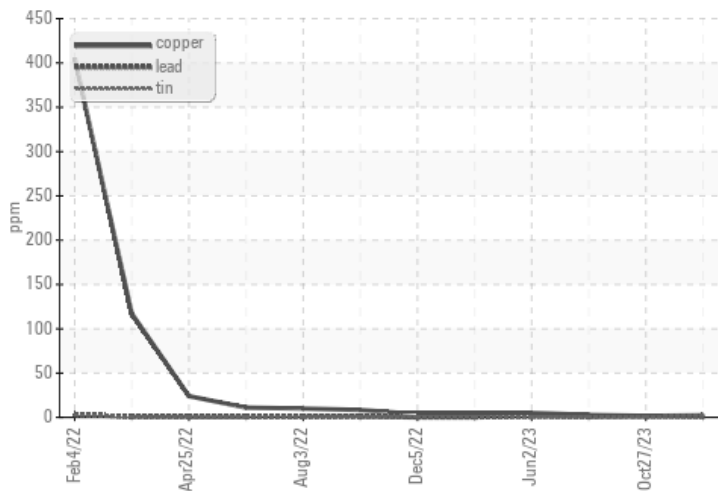


### GRAPHS

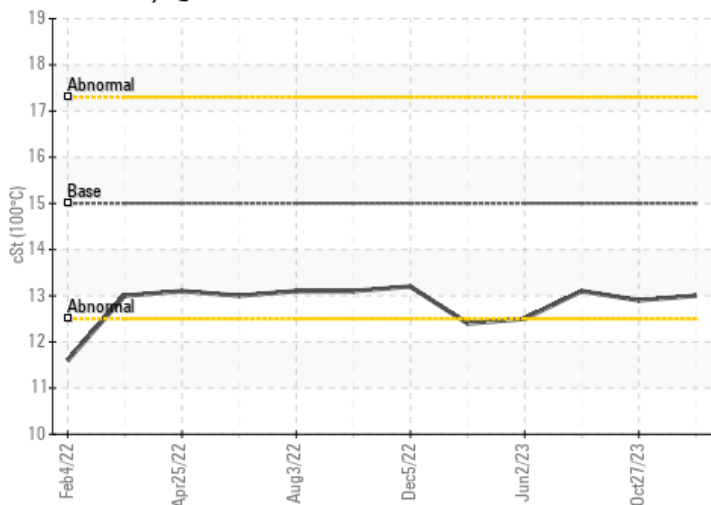
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

