

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH30M 121854-1253 - Diesel Engine

Sample No: LH0272577

Oil Type: CHEVRON DELO LE 5W40



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

Sample Number	LH0272577	LH0263824	LH0254774	LH0207792
Sample Date	27 Oct 2023	08 Aug 2023	02 Jun 2023	27 Feb 2023
Machine Hours	6481	6007	5547	4659
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



#### OIL CONDITION

Visc @ 100°C	cSt	12.9	13.1	12.5	12.4
Base Number (BN)	mg KOH/g	6.8	6.7	5.7	7.7
Oxidation (PA)	%	59	57	74	58



#### CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	75	73	78	81
Sulfation (PA)	%	56	53	61	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	1.9
Silicon	ppm	9	8	8	7
Sodium	ppm	1	2	1	3
Potassium	ppm	3	3	5	1



#### WEAR METALS

Iron	ppm	3	5	7	5
Copper	ppm	2	3	5	4
Lead	ppm	1	<1	1	0
Tin	ppm	<1	<1	<1	0
Aluminum	ppm	1	<1	1	1
Chromium	ppm	0	0	0	0
Molybdenum	ppm	5	13	23	3
Nickel	ppm	<1	0	<1	0
Titanium	ppm	80	72	58	75
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	1	<1	<1	<1



#### ADDITIVES

Calcium	ppm	1267	1383	1233	1770
Magnesium	ppm	722	760	699	542
Zinc	ppm	1242	1239	1150	1124
Phosphorus	ppm	974	1002	949	948
Barium	ppm	0	0	2	0
Boron	ppm	79	70	34	143

#### Diagnosis

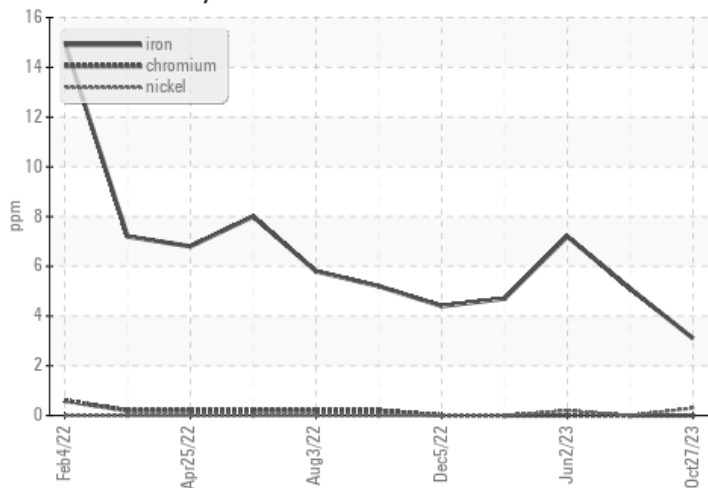
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: LEC0008  
 Unique No: 10726705  
 Signed: Wes Davis  
 Report Date: 06 Nov 2023

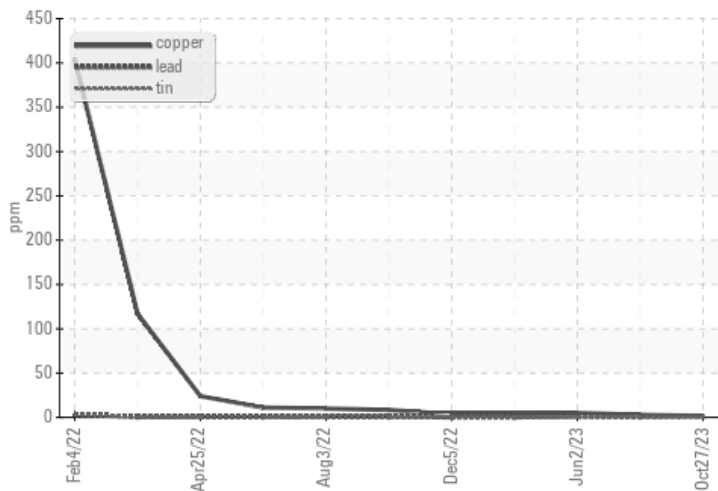


### GRAPHS

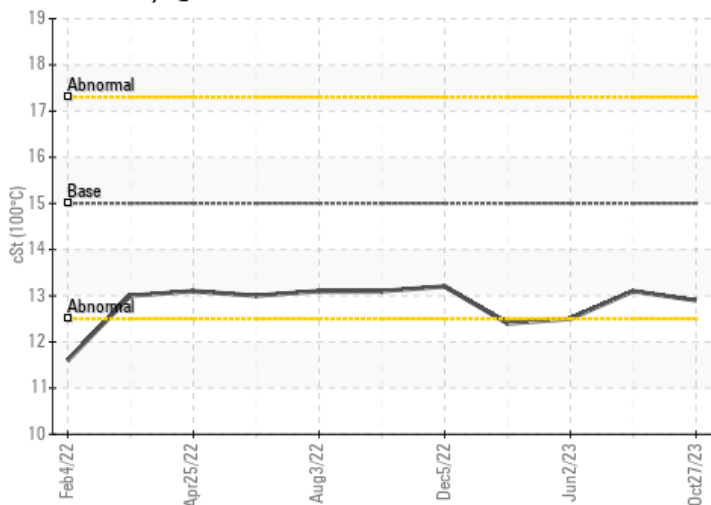
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

