

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50M 1216-109299 - Diesel Engine

Sample No: LH0263960

Oil Type: CHEVRON DELO LE 5W40



#### SAMPLE INFORMATION

Sample Number	LH0263960	LH0263866	LH0254769	LH0243143
Sample Date	19 Oct 2023	27 Jul 2023	20 Apr 2023	21 Dec 2022
Machine Hours	8565	8027	7653	7018
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

#### ALTER METAL

2900 SHERMAN STREET  
WAUSAU, WI  
US 54401  
Contact: Service Manager



#### OIL CONDITION

Visc @ 100°C	cSt	13.2	13.3	12.9	13.3
Base Number (BN)	mg KOH/g	6.8	7.1	6.2	6.3
Oxidation (PA)	%	55	57	61	56

T:  
F:

#### 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.



#### CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	72	73	70	73
Sulfation (PA)	%	53	53	51	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	7	7	7
Sodium	ppm	2	0	2	2
Potassium	ppm	4	3	1	3



#### WEAR METALS

Iron	ppm	4	4	5	4
Copper	ppm	<1	<1	2	<1
Lead	ppm	<1	<1	0	<1
Tin	ppm	<1	<1	0	<1
Aluminum	ppm	2	<1	<1	1
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	9	17	38	4
Nickel	ppm	<1	0	<1	0
Titanium	ppm	86	73	26	84
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	<1	<1	<1	<1



#### ADDITIVES

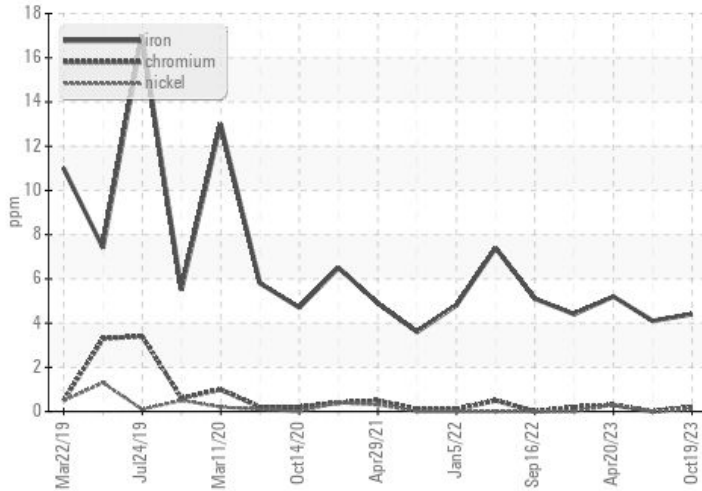
Calcium	ppm	1227	1352	1070	1460
Magnesium	ppm	685	722	801	658
Zinc	ppm	1169	1199	1132	1249
Phosphorus	ppm	1009	984	927	973
Barium	ppm	0	0	0	0
Boron	ppm	87	69	26	103

Depot: ALTWAAUS  
Unique No: 10716138  
Signed: Wes Davis  
Report Date: 31 Oct 2023

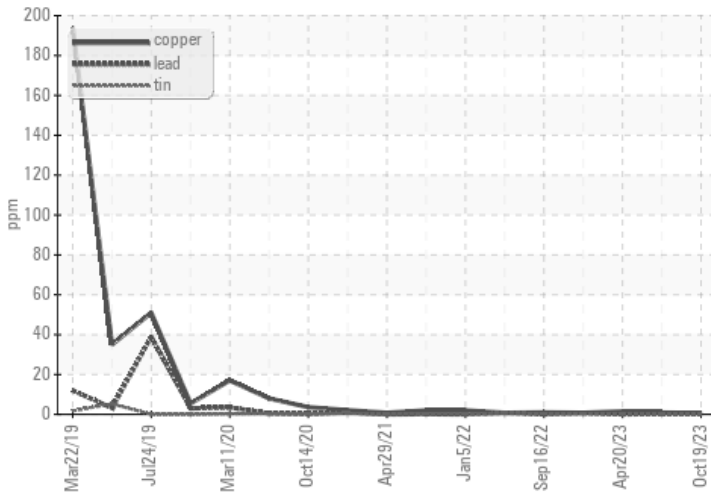


### GRAPHS

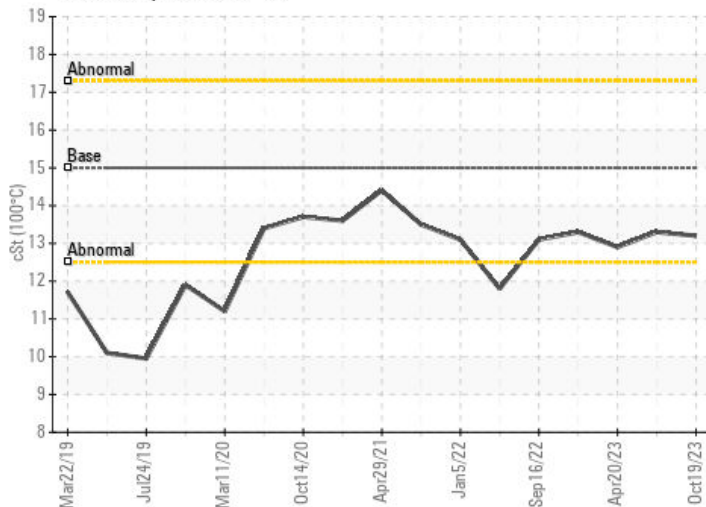
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

