

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LTM1120-4.1 081556 - Diesel Engine

Sample No: LH0259079

Oil Type: LIEBHERR MOTOROIL 10W-40



SAMPLE INFORMATION

Sample Number	LH0259079	---	---	---
Sample Date	22 Jan 2024	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

LIEBHERR USA CO - MOBILE AND CRAWLER CRANES
 4100 CHESTNUT AVENUE
 NEWPORT NEWS, VA
 US 23607
 Contact: TERENCE VANDERLENDE
 TERENCE.VANDERLENDE@LIEBHERR.COM
 T:
 F:



OIL CONDITION

Visc @ 100°C	cSt	● 11.9	---	---	---
Oxidation (PA)	%	105	---	---	---



CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	● 0.1	---	---	---
Nitration (PA)	%	68	---	---	---
Sulfation (PA)	%	65	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	● 0.9	---	---	---
Silicon	ppm	● 7	---	---	---
Sodium	ppm	● 3	---	---	---
Potassium	ppm	● 13	---	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



WEAR METALS

Iron	ppm	● 4	---	---	---
Copper	ppm	● 4	---	---	---
Lead	ppm	● <1	---	---	---
Tin	ppm	● 1	---	---	---
Aluminum	ppm	● 1	---	---	---
Chromium	ppm	● 0	---	---	---
Molybdenum	ppm	● 7	---	---	---
Nickel	ppm	● 0	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	● 0	---	---	---
Manganese	ppm	● <1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

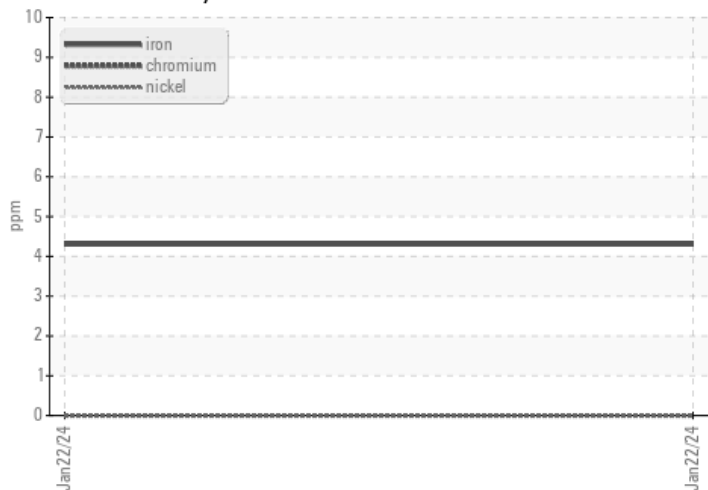
Calcium	ppm	● 2138	---	---	---
Magnesium	ppm	● 195	---	---	---
Zinc	ppm	● 759	---	---	---
Phosphorus	ppm	● 704	---	---	---
Barium	ppm	● 2	---	---	---
Boron	ppm	● 18	---	---	---

Depot: LIENEW
 Unique No: 10846518
 Signed: Don Baldrige
 Report Date: 26 Jan 2024

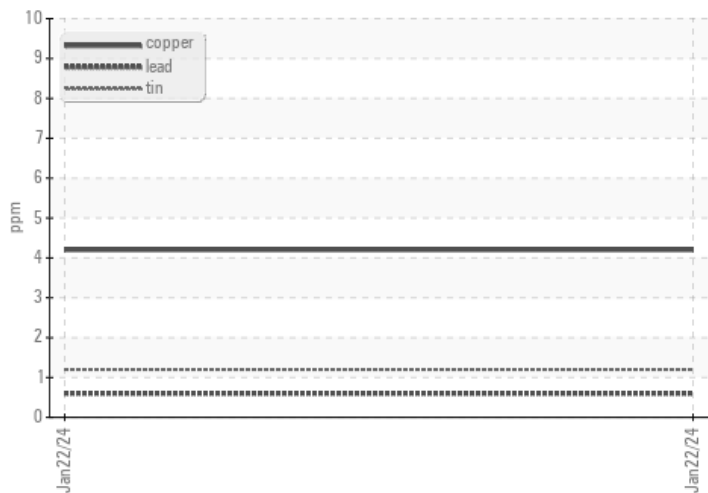


GRAPHS

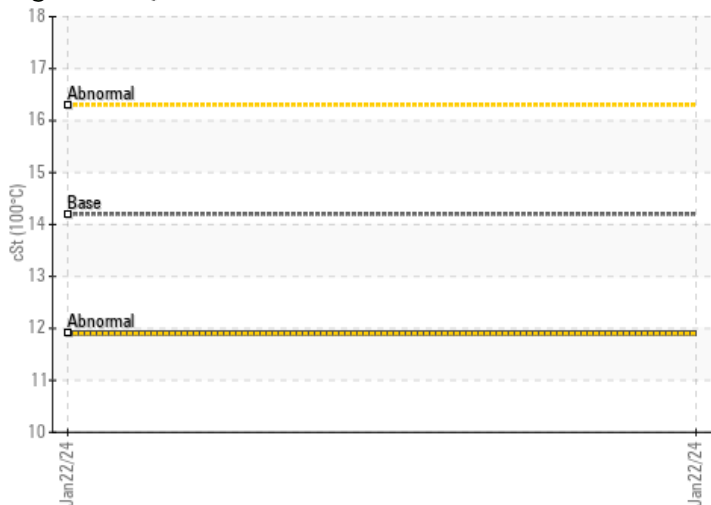
Ferrous Alloys



Non-ferrous Metals



● Viscosity @ 100°C



Base Number

