

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH30 119194-1253 - Diesel Engine

Sample No: LH0243134

Oil Type: LIEBHERR MOTOROIL 5W-30 LOW ASH



#### SAMPLE INFORMATION

Sample Number	LH0243134	LH0243133	LH0243135	LH0229305
Sample Date	22 Feb 2024	11 Jan 2024	09 Jun 2023	07 Nov 2022
Machine Hours	6782	7279	6258	5125
Oil Hours	524	1021	1039	1052
Oil Changed	Not Chngd	Changed	Changed	Changed
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL

#### TIMBER PRODUCTS

11256 E STATE HWY M28  
MUNISING, MI  
US 49862  
Contact: RICH ALDRICH  
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T: (906)452-7013  
F:



#### OIL CONDITION

Visc @ 100°C	cSt	11.7	10.9	11.4	12.1
Base Number (BN)	mg KOH/g	6.4	5.3	4.7	9.0
Oxidation (PA)	%	60	77	85	71



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.6
Nitration (PA)	%	80	88	101	73
Sulfation (PA)	%	54	63	66	59
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	7	8	7
Sodium	ppm	3	4	4	1
Potassium	ppm	<1	<1	<1	4

#### 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.



#### WEAR METALS

Iron	ppm	2	4	6	3
Copper	ppm	2	97	4	1
Lead	ppm	0	3	<1	<1
Tin	ppm	<1	9	1	<1
Aluminum	ppm	<1	<1	1	0
Chromium	ppm	0	0	0	<1
Molybdenum	ppm	0	0	0	<1
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



#### ADDITIVES

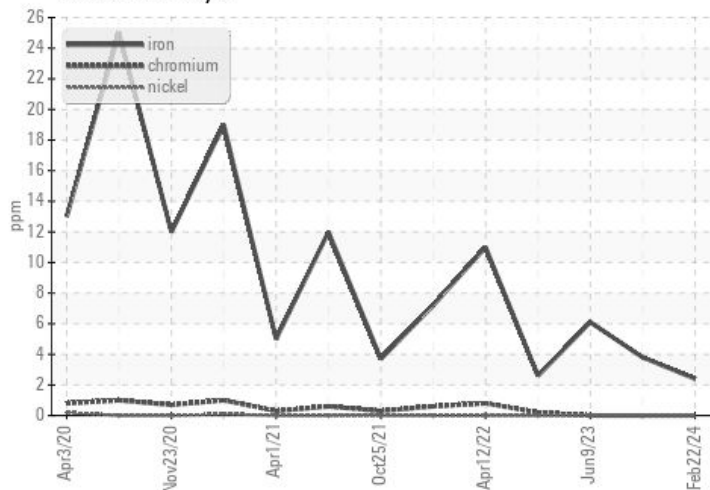
Calcium	ppm	1187	1197	1209	1434
Magnesium	ppm	616	624	628	573
Zinc	ppm	643	649	669	817
Phosphorus	ppm	643	633	649	689
Barium	ppm	0	0	<1	0
Boron	ppm	51	31	35	81

Depot: TIMMUN  
Unique No: 10896467  
Signed: Wes Davis  
Report Date: 26 Feb 2024

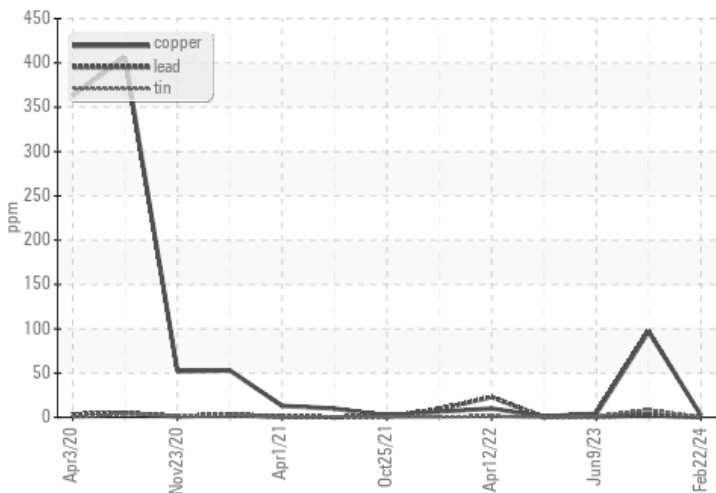


### GRAPHS

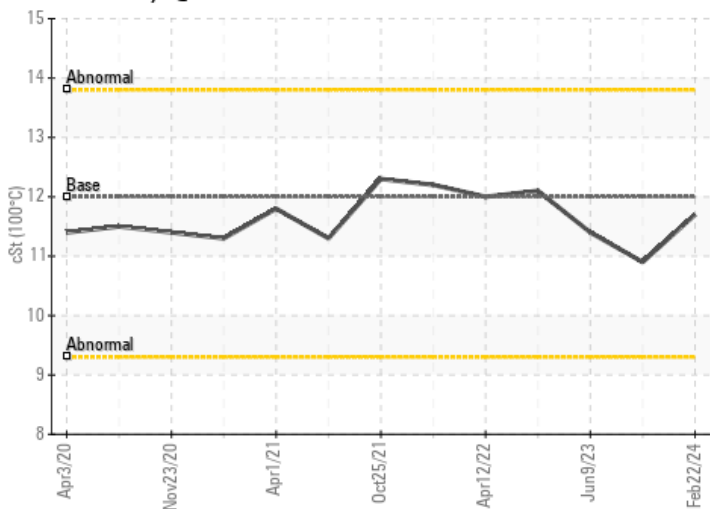
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

