

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH30 119194-1253 - Diesel Engine

Sample No: LH0229303

Oil Type: LIEBHERR MOTOROIL 5W-30 LOW ASH



#### SAMPLE INFORMATION

Sample Number	LH0229303	LH0243134	LH0243133	LH0243135
Sample Date	28 Feb 2024	22 Feb 2024	11 Jan 2024	09 Jun 2023
Machine Hours	7567	6782	7279	6258
Oil Hours	298	524	1021	1039
Oil Changed	Not Changd	Not Changd	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	NORMAL

#### TIMBER PRODUCTS

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



#### OIL CONDITION

Visc @ 100°C	cSt	12.0	11.7	10.9	11.4
Base Number (BN)	mg KOH/g	7.2	6.4	5.3	4.7
Oxidation (PA)	%	56	60	77	85



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	73	80	88	101
Sulfation (PA)	%	50	54	63	66
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	6	7	8
Sodium	ppm	3	3	4	4
Potassium	ppm	3	<1	<1	<1



#### WEAR METALS

Iron	ppm	3	2	4	6
Copper	ppm	12	2	97	4
Lead	ppm	0	0	3	<1
Tin	ppm	1	<1	9	1
Aluminum	ppm	2	<1	<1	1
Chromium	ppm	<1	0	0	0
Molybdenum	ppm	<1	0	0	0
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



#### ADDITIVES

Calcium	ppm	1185	1187	1197	1209
Magnesium	ppm	668	616	624	628
Zinc	ppm	786	643	649	669
Phosphorus	ppm	659	643	633	649
Barium	ppm	0	0	0	<1
Boron	ppm	73	51	31	35

#### Diagnosis

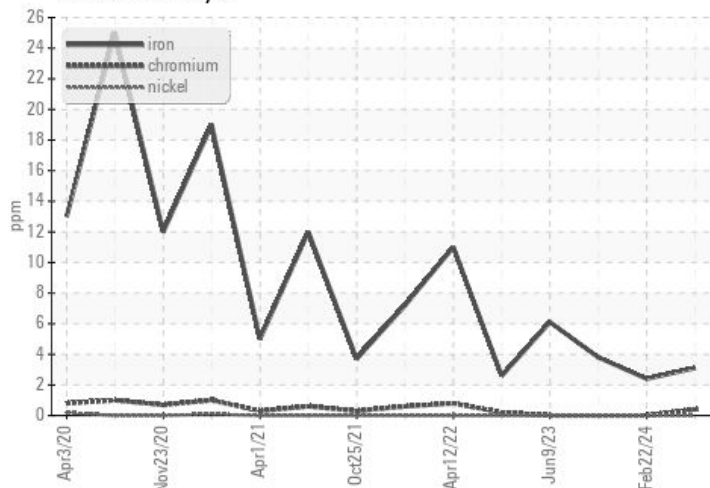
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: TIMMUN  
Unique No: 10916865  
Signed: Wes Davis  
Report Date: 11 Mar 2024

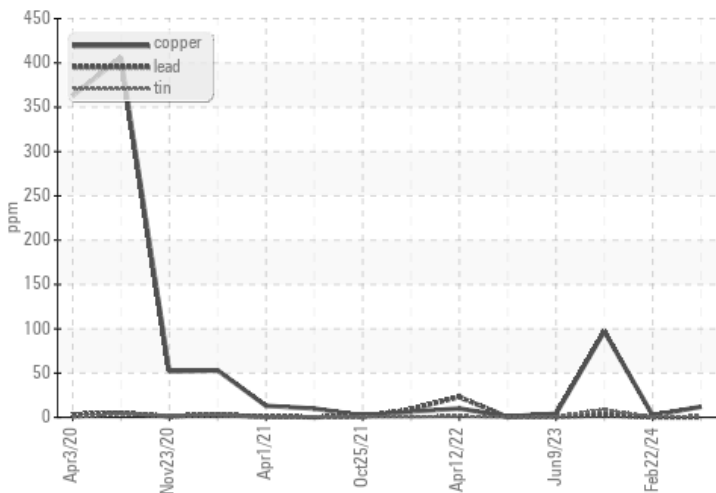


### GRAPHS

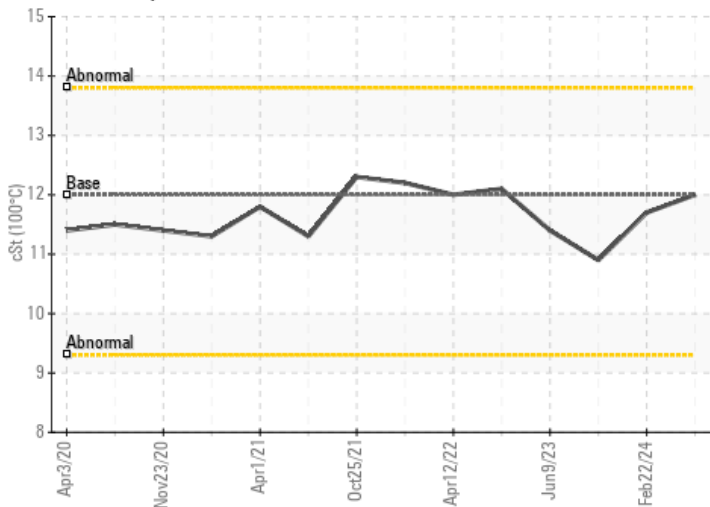
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

