

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR PR766 027905-1681 - Diesel Engine

Sample No: LH0254540

Oil Type: LIEBHERR MOTOROIL 5W30



#### Sample Information

Sample Number	LH0254540	LH0254475	LH0254558	LH0254251
Sample Date	21 Jun 2024	22 May 2024	09 Apr 2024	19 Mar 2024
Machine Hours	3093	2389	1627	1016
Oil Hours	703	762	611	566
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	NORMAL

**HEAVY MACHINES INC.**  
 3930 EAST RAINES RD  
 MEMPHIS, TN  
 US 38118  
 Contact: J. DAVIS  
 JDAVIS@HEAVY.LLC.COM  
 T:  
 F: (901)260-2245



#### Oil Condition

Visc @ 100°C	cSt	10.9	10.9	11.0	11.3
Base Number (BN)	mg KOH/g	6.5	6.5	6.6	6.4
Oxidation (PA)	%	55	56	61	80



#### Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	76	76	73	75
Sulfation (PA)	%	52	53	53	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	4	3	4
Sodium	ppm	<1	2	2	2
Potassium	ppm	4	4	5	3



#### Wear Metals

Iron	ppm	6	5	3	5
Copper	ppm	101	110	131	49
Lead	ppm	1	3	<1	2
Tin	ppm	<1	1	0	<1
Aluminum	ppm	3	1	0	<1
Chromium	ppm	<1	0	0	0
Molybdenum	ppm	2	1	<1	7
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	<1	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	0	<1
Vanadium	ppm	0	<1	0	0



#### Additives

Calcium	ppm	1299	1492	1526	1328
Magnesium	ppm	701	774	720	729
Zinc	ppm	824	918	838	849
Phosphorus	ppm	649	812	794	754
Barium	ppm	0	1	<1	6
Boron	ppm	46	45	73	63

#### Diagnosis

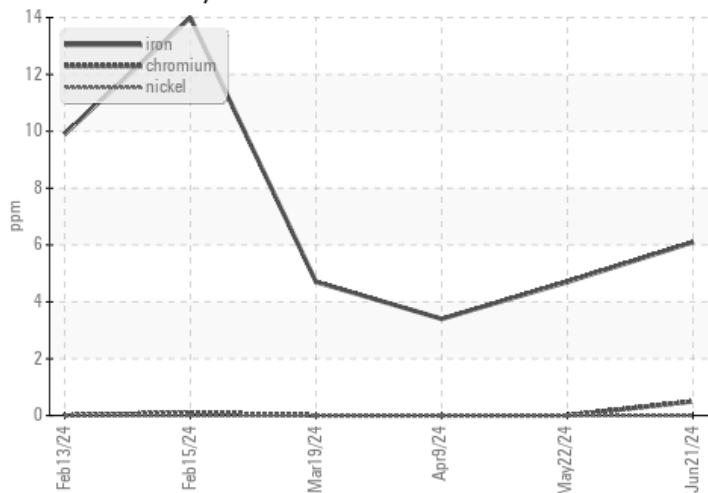
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

**Depot:** LEC0051  
**Unique No:** 11126415  
**Signed:** Sean Felton  
**Report Date:** 18 Jul 2024

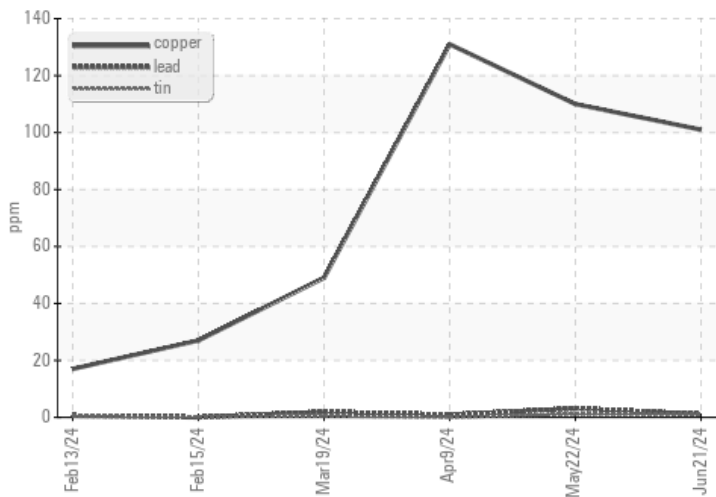


### Graphs

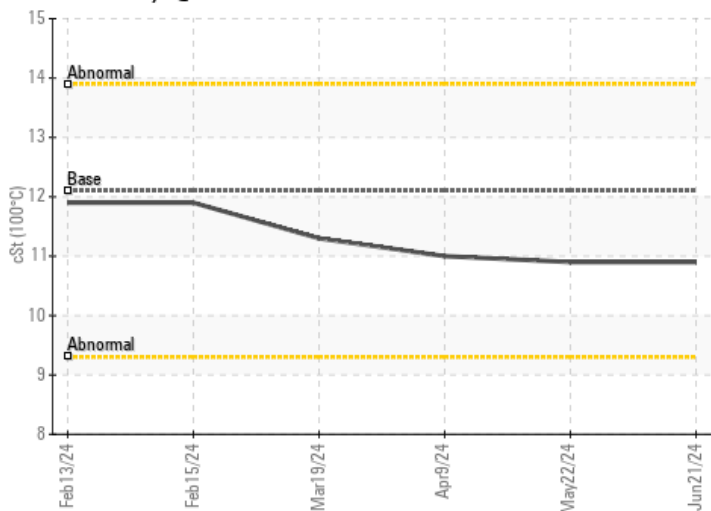
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

