LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR L566 1484-49442 - Diesel Engine

Sample No: LH0268802

Oil Type: DIESEL ENGINE OIL SAE 5W40

ECO BLOCK
2650 W 5TH AVE
GARY, IN
US 46408
Contact: JAMES CROOK
jcrook@ecoblockmfg.com
T: (219)886-3000
F: (219)886-3001

SAMPLE INFORMATION

Sample Number		**LH0268802**	---	---	---
Sample Date		**17 Jan 2024**	---	---	---
Machine Hours		**4536**	---	---	---
Oil Hours		**500**	---	---	---
Oil Changed		**Changed**	---	---	---
Sample Status		**SEVERE**	---	---	---

OIL CONDITION

Visc @ 100°C	cSt	**13.6**	---	---	---
Base Number (BN)	mg KOH/g	**6.4**	---	---	---
Oxidation (PA)	%	**57**	---	---	---

CONTAMINATION

Water	%	**NEG**	---	---	---
Soot %	%	**0.1**	---	---	---
Nitration (PA)	%	**70**	---	---	---
Sulfation (PA)	%	**53**	---	---	---
Glycol	%	**NEG**	---	---	---
Fuel	%	**<1.0**	---	---	---
Silicon	ppm	**6**	---	---	---
Sodium	ppm	**0**	---	---	---
Potassium	ppm	**1**	---	---	---

WEAR METALS

Iron	ppm	**0**	---	---	---
Copper	ppm	**251**	---	---	---
Lead	ppm	**<1**	---	---	---
Tin	ppm	**0**	---	---	---
Aluminum	ppm	**<1**	---	---	---
Chromium	ppm	**<1**	---	---	---
Molybdenum	ppm	**8**	---	---	---
Nickel	ppm	**0**	---	---	---
Titanium	ppm	**<1**	---	---	---
Silver	ppm	**0**	---	---	---
Manganese	ppm	**<1**	---	---	---
Vanadium	ppm	**0**	---	---	---

ADDITIVES

Calcium	ppm	**1260**	---	---	---
Magnesium	ppm	**692**	---	---	---
Zinc	ppm	**830**	---	---	---
Phosphorus	ppm	**697**	---	---	---
Barium	ppm	**0**	---	---	---
Boron	ppm	**71**	---	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other 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 acceptable for the time in service.

Depot: ECOGAR
Unique No: 10862459
Signed: Sean Felton
Report Date: 07 Feb 2024

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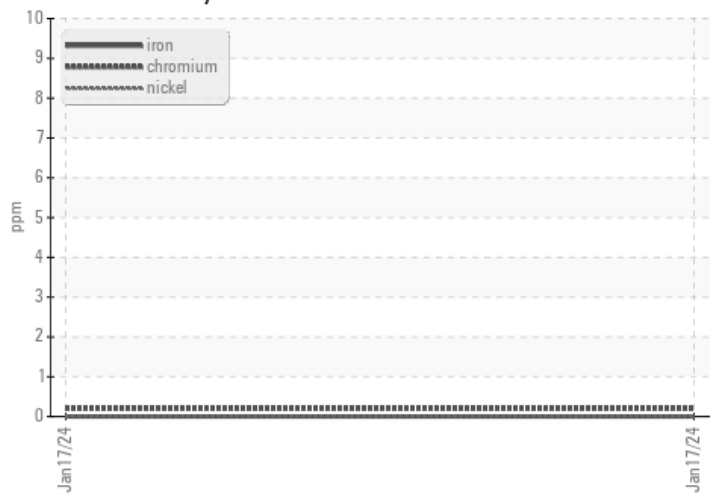
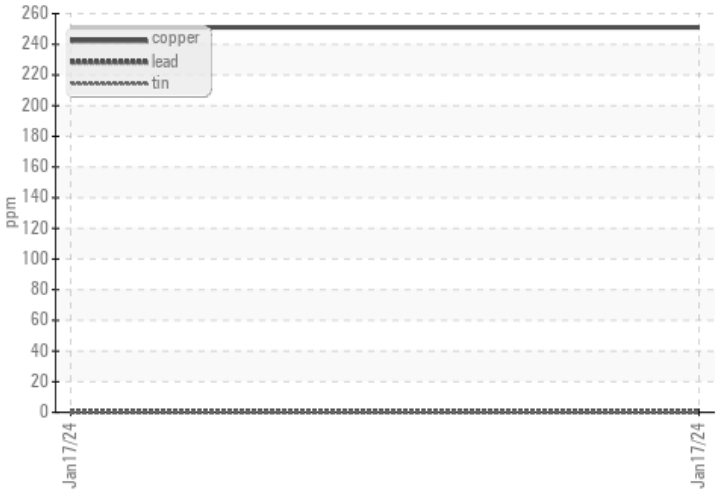
GRAPHS

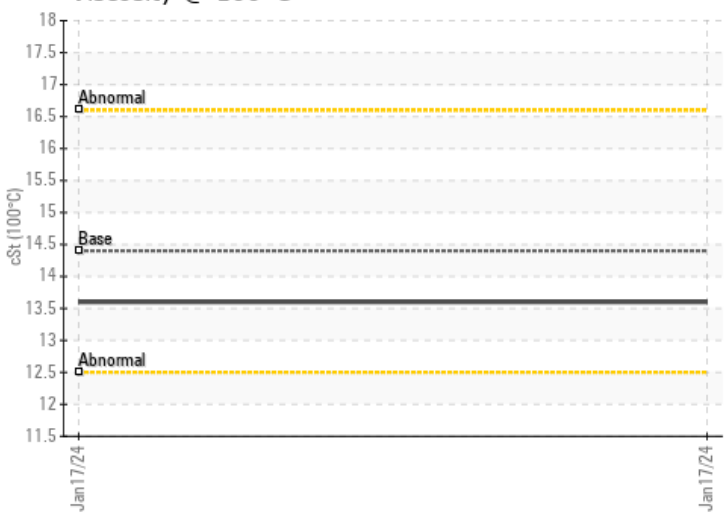
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number