

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR PR766 021682-1421 - Diesel Engine

Sample No: LH0254161

Oil Type: DIESEL ENGINE OIL SAE 5W30



SAMPLE INFORMATION

Sample Number	LH0254161	---	---	---
Sample Date	28 Nov 2023	---	---	---
Machine Hours	10573	---	---	---
Oil Hours	250	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

INTERNATIONAL PAPER

601 COUNTY RD 78
SELMA, AL
US 36703
Contact: JERRY BROWN



OIL CONDITION

Visc @ 100°C	cSt	● 11.2	---	---	---
Base Number (BN)	mg KOH/g	● 9.9	---	---	---
Oxidation (PA)	%	50	---	---	---

T: (334)418-5599
F: (334)418-5582



CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	● 0.1	---	---	---
Nitration (PA)	%	79	---	---	---
Sulfation (PA)	%	47	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	● 8	---	---	---
Sodium	ppm	● 0	---	---	---
Potassium	ppm	● 4	---	---	---

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.



WEAR METALS

Iron	ppm	● 8	---	---	---
Copper	ppm	● 200	---	---	---
Lead	ppm	● <1	---	---	---
Tin	ppm	● <1	---	---	---
Aluminum	ppm	● 2	---	---	---
Chromium	ppm	● <1	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	● <1	---	---	---
Titanium	ppm	● <1	---	---	---
Silver	ppm	● <1	---	---	---
Manganese	ppm	● 1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

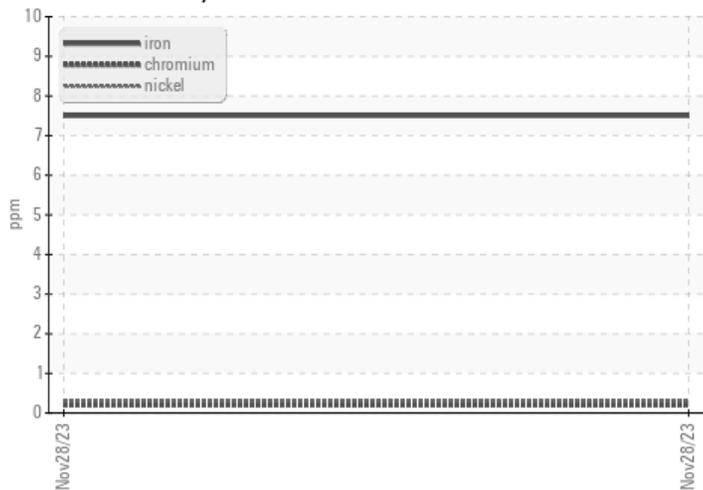
Calcium	ppm	● 2379	---	---	---
Magnesium	ppm	● 474	---	---	---
Zinc	ppm	● 950	---	---	---
Phosphorus	ppm	● 806	---	---	---
Barium	ppm	● 19	---	---	---
Boron	ppm	● 149	---	---	---

Depot: INTSELLH
Unique No: 10819391
Signed: Don Baldrige
Report Date: 09 Jan 2024

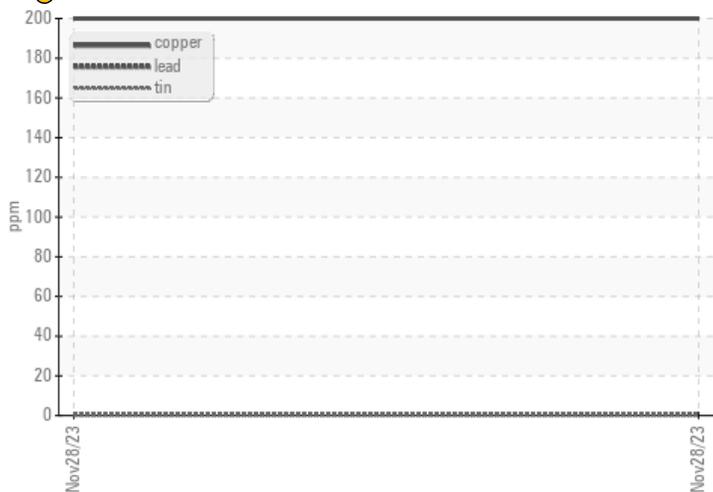


GRAPHS

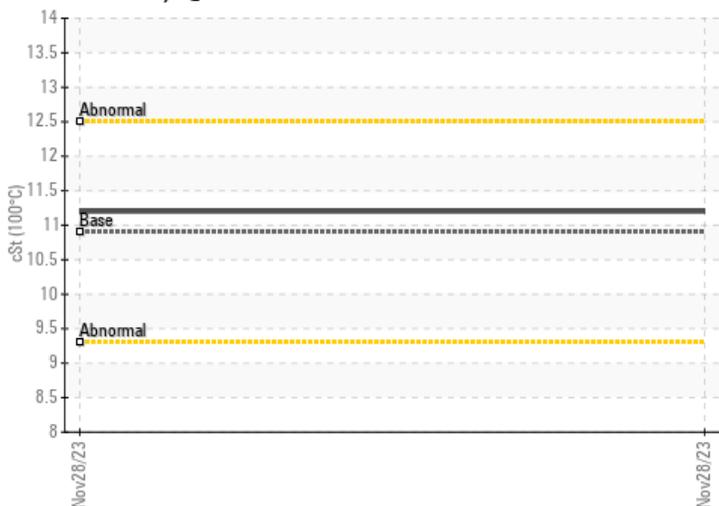
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

