

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R954 014564-629 - Diesel Engine

Sample No: LH0258528

Oil Type: DIESEL ENGINE OIL SAE 5W40



SAMPLE INFORMATION

Sample Number	LH0258528	LH0254318	LH0254404	LH0217298
Sample Date	26 Feb 2024	16 Apr 2023	06 Apr 2023	09 Mar 2023
Machine Hours	15490	15292	0	15291
Oil Hours	198	1	0	48
Oil Changed	N/A	Not Changd	N/A	Changed
Sample Status	SEVERE	MARGINAL	SEVERE	SEVERE

HENEGHAN WRECKING
 1321 W CONCORD PL
 CHICAGO, IL
 US 60622
 Contact: SERVICE MANAGER



OIL CONDITION

Visc @ 100°C	cSt	4.5	12.5	6.3	6.3
Base Number (BN)	mg KOH/g	5.8	8.1	7.5	7.7
Oxidation (PA)	%	45	49	45	45

T:
F:



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0	0.2	0.2
Nitration (PA)	%	72	32	47	47
Sulfation (PA)	%	43	44	45	45
Glycol	%	NEG	NEG	NEG	0.0
Fuel	%	41.3	4.6	29.3	31.8
Silicon	ppm	8	8	6	6
Sodium	ppm	2	<1	0	1
Potassium	ppm	4	2	<1	1

Diagnosis

We advise that you check the fuel injection system. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.



WEAR METALS

Iron	ppm	8	<1	0	4
Copper	ppm	2	0	2	2
Lead	ppm	<1	0	0	0
Tin	ppm	<1	0	0	0
Aluminum	ppm	<1	<1	0	<1
Chromium	ppm	1	0	<1	<1
Molybdenum	ppm	9	49	36	35
Nickel	ppm	<1	0	0	<1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	0	<1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

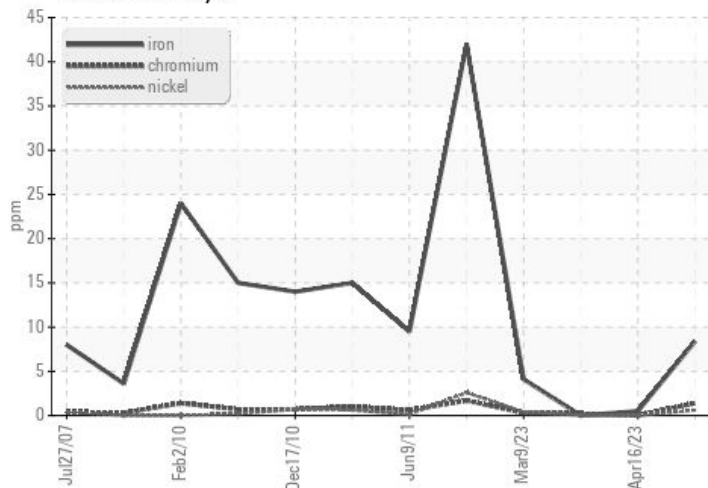
Calcium	ppm	723	1655	1154	1198
Magnesium	ppm	329	369	284	313
Zinc	ppm	479	1191	819	883
Phosphorus	ppm	402	931	689	728
Barium	ppm	2	0	0	0
Boron	ppm	45	6	13	13

Depot: HENCHI
 Unique No: 10899708
 Signed: Jonathan Hester
 Report Date: 04 Mar 2024

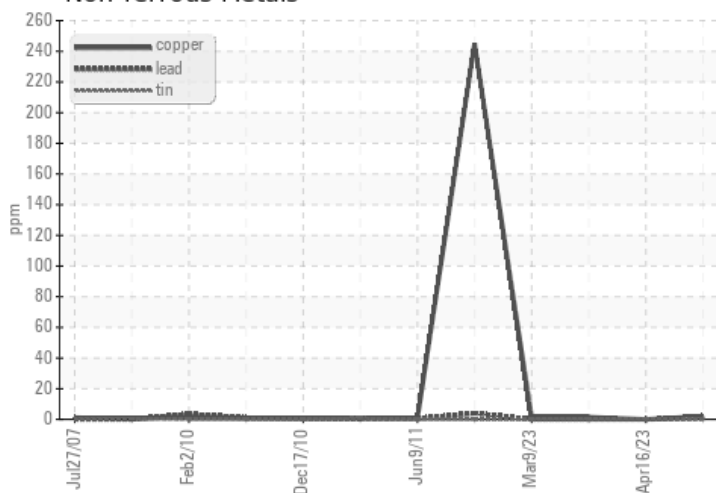


GRAPHS

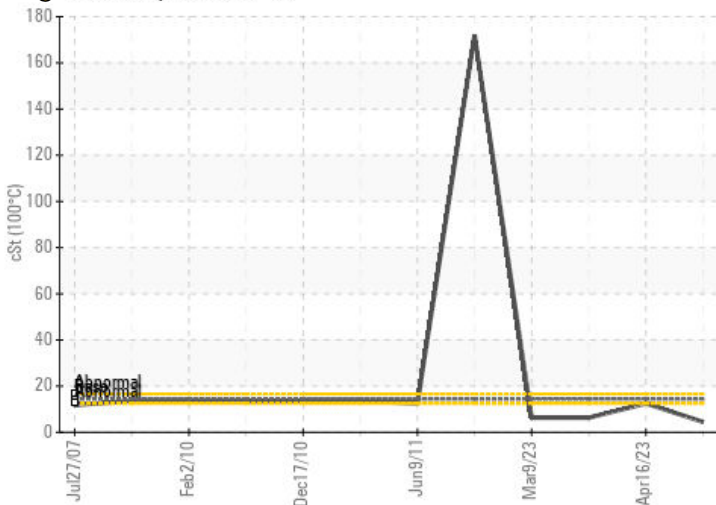
Ferrous Alloys



Non-ferrous Metals



● Viscosity @ 100°C



Base Number

