

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-121548 - Diesel Engine

Sample No: LH0272704

Oil Type: DIESEL ENGINE OIL SAE 5W40



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SAMPLE INFORMATION

Sample Number	LH0272704	LH0243342	LH0229290	LH0200319
Sample Date	18 Jan 2024	05 Oct 2023	18 Jul 2023	21 Apr 2023
Machine Hours	3594	2969	2422	1848
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	12.8	13.0	13.0	12.7
Base Number (BN)	mg KOH/g	6.3	6.4	5.4	6.1
Oxidation (PA)	%	63	58	59	63



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	73	72	73	73
Sulfation (PA)	%	58	55	54	55
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	9	8	7
Sodium	ppm	0	1	2	3
Potassium	ppm	4	4	2	1



WEAR METALS

Iron	ppm	7	7	8	10
Copper	ppm	4	5	8	14
Lead	ppm	<1	<1	<1	0
Tin	ppm	<1	<1	<1	0
Aluminum	ppm	2	1	1	<1
Chromium	ppm	<1	<1	0	<1
Molybdenum	ppm	6	9	16	28
Nickel	ppm	0	0	0	<1
Titanium	ppm	92	88	72	48
Silver	ppm	0	0	<1	<1
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	1	<1	1	<1



ADDITIVES

Calcium	ppm	1291	1325	1351	1151
Magnesium	ppm	686	721	792	807
Zinc	ppm	1166	1217	1212	1159
Phosphorus	ppm	897	938	978	948
Barium	ppm	0	0	0	0
Boron	ppm	83	63	49	37

Diagnosis

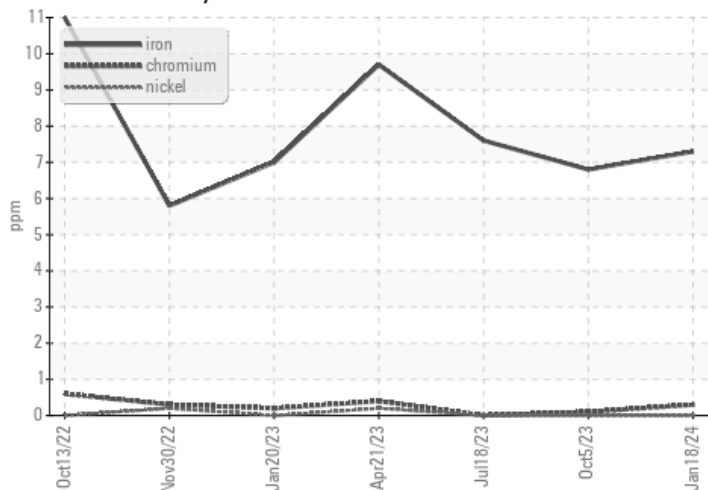
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: LEC0008
 Unique No: 10855886
 Signed: Wes Davis
 Report Date: 31 Jan 2024

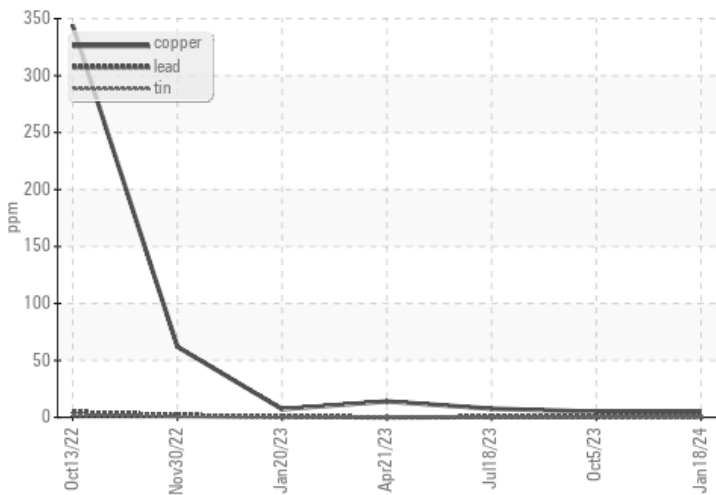


GRAPHS

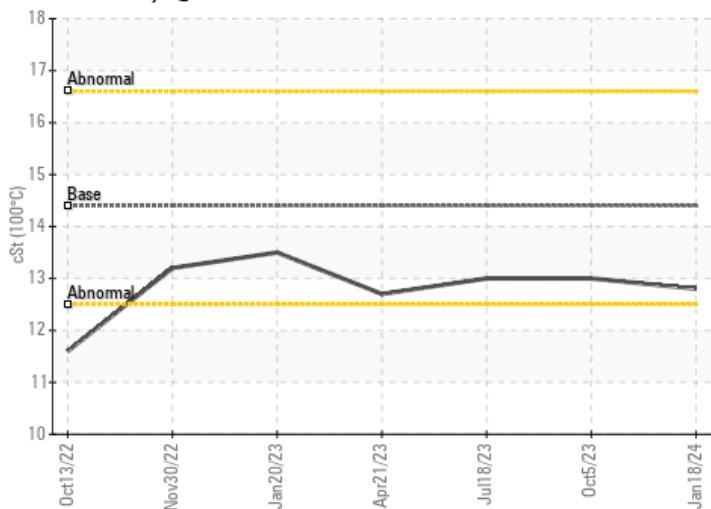
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

