

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-115016 - Diesel Engine

Sample No: LH0272127

Oil Type: DIESEL ENGINE OIL SAE 5W40



SAMPLE INFORMATION

Sample Number	LH0272127	LH0156673	LH0156612	LH0156715
Sample Date	19 Dec 2023	30 Aug 2023	25 Apr 2023	25 Jan 2023
Machine Hours	17781	16752	15594	14552
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ATTENTION

PCA

400 2ND STREET
INTERNATIONAL FALLS, MN
US 56649
Contact: SCOTT LINDVALL
scottlindvall@boisepaper.com
T: (218)285-5706
F:



OIL CONDITION

Visc @ 100°C	cSt	12.6	12.4	12.6	14.0
Base Number (BN)	mg KOH/g	5.7	5.1	5.1	9.4
Oxidation (PA)	%	81	86	76	61



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	88	89	79	59
Sulfation (PA)	%	67	71	59	51
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	9	11	10	6
Sodium	ppm	2	3	3	1
Potassium	ppm	3	3	3	0



WEAR METALS

Iron	ppm	4	8	5	4
Copper	ppm	5	2	1	<1
Lead	ppm	0	0	0	<1
Tin	ppm	0	0	0	<1
Aluminum	ppm	2	2	1	<1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	3	4	10	56
Nickel	ppm	0	0	<1	0
Titanium	ppm	85	93	83	0
Silver	ppm	0	0	<1	<1
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	2	<1	<1	0



ADDITIVES

Calcium	ppm	1238	1414	1306	1042
Magnesium	ppm	698	765	769	942
Zinc	ppm	1143	1265	1230	1227
Phosphorus	ppm	950	1000	996	982
Barium	ppm	0	0	0	0
Boron	ppm	40	29	57	3

Diagnosis

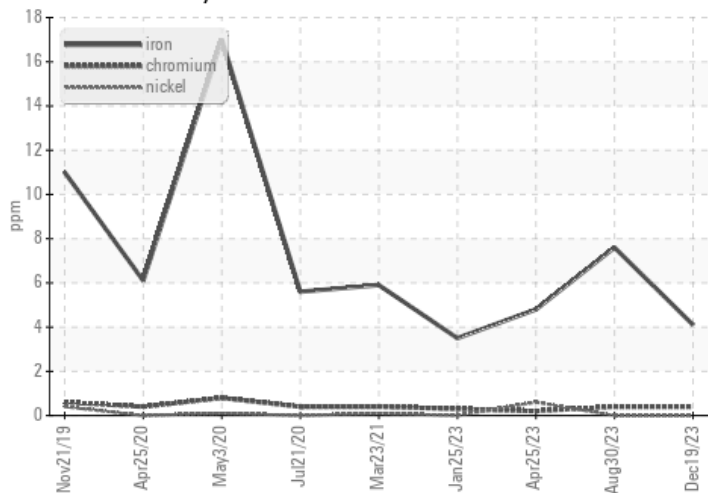
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.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

Depot: PCAINT
Unique No: 10844244
Signed: Wes Davis
Report Date: 23 Jan 2024

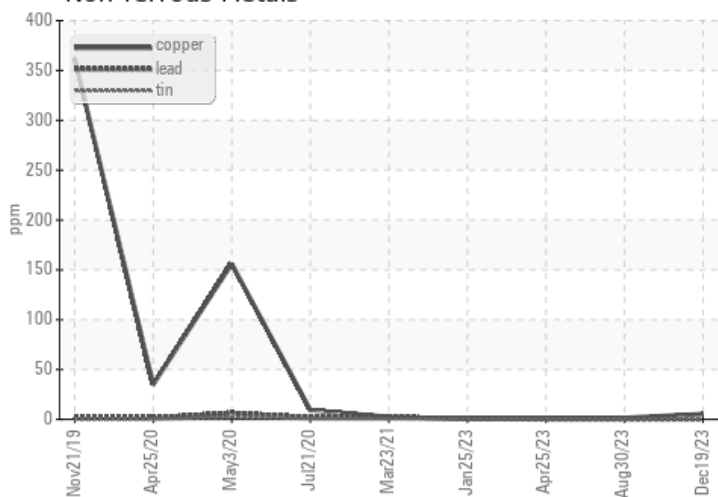


GRAPHS

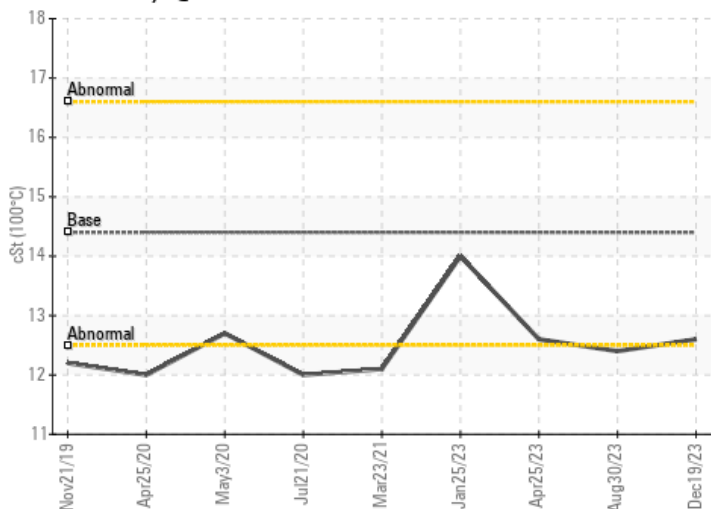
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

