

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-115017 - Diesel Engine

Sample No: LH0267176

Oil Type: DIESEL ENGINE OIL SAE 5W40



Sample Information

Sample Number	LH0267176	LH0263959	LH0243323	LH0263876
Sample Date	01 May 2024	30 Jan 2024	29 Sep 2023	05 Aug 2023
Machine Hours	9474	8879	8189	7823
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	MARGINAL	NORMAL	NORMAL

ALTER RECYCLING

2175 BADGERLAND DR
GREEN BAY, WI
US 54303

Contact: LORI GRAVES

lori.graves@altertrading.com

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Oil Condition

Visc @ 100°C	cSt	12.5	12.4	13.1	12.7
Base Number (BN)	mg KOH/g	6.9	6.6	7.2	6.5
Oxidation (PA)	%	61	65	53	60



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	75	74	69	73
Sulfation (PA)	%	57	58	50	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	2.3	<1.0	<1.0
Silicon	ppm	8	8	8	8
Sodium	ppm	4	0	0	2
Potassium	ppm	3	<1	4	3



Wear Metals

Iron	ppm	5	0	4	6
Copper	ppm	2	2	<1	2
Lead	ppm	2	<1	0	<1
Tin	ppm	<1	0	0	<1
Aluminum	ppm	1	<1	1	0
Chromium	ppm	0	<1	0	0
Molybdenum	ppm	6	3	7	14
Nickel	ppm	0	0	0	0
Titanium	ppm	91	86	90	70
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	<1	<1



Additives

Calcium	ppm	1409	1264	1293	1385
Magnesium	ppm	704	724	710	791
Zinc	ppm	1215	1176	1277	1256
Phosphorus	ppm	1034	957	1032	1003
Barium	ppm	0	0	0	0
Boron	ppm	101	81	102	50

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: ALTGRE

Unique No: 11019358

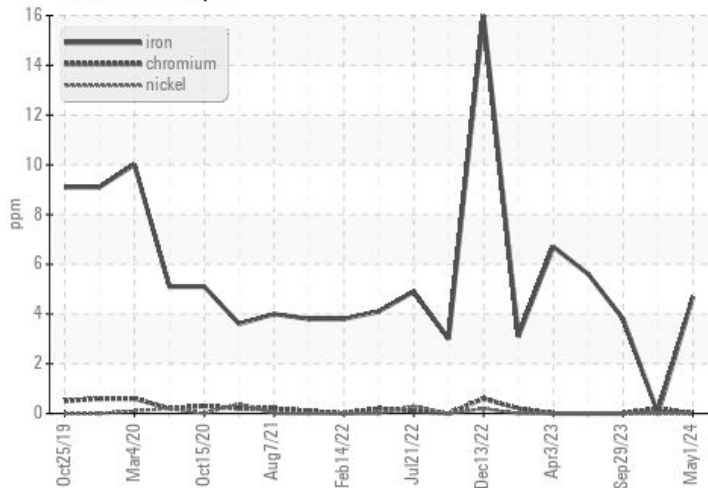
Signed: Wes Davis

Report Date: 09 May 2024

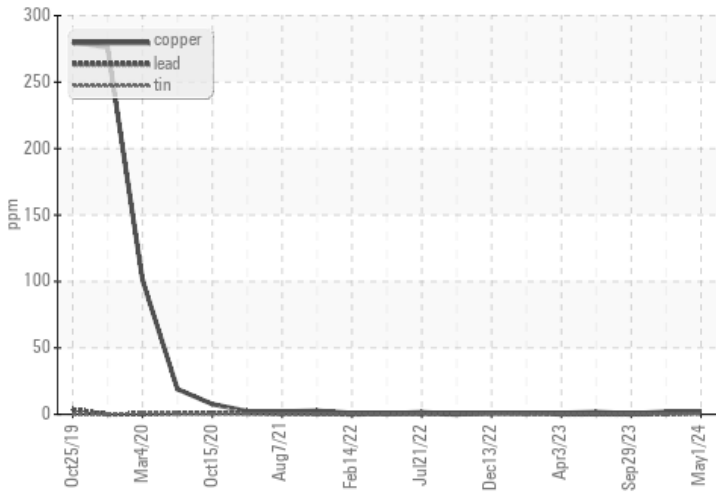


Graphs

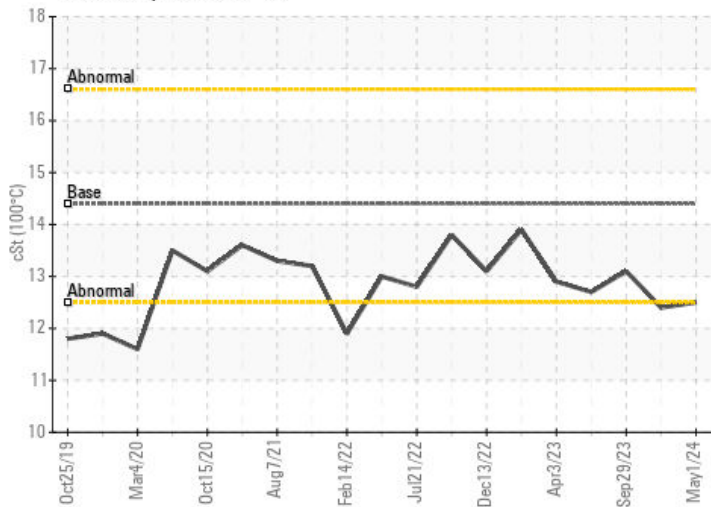
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

