

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH110 1227-155752 - Diesel Engine

Sample No: LH0267271

Oil Type: DIESEL ENGINE OIL SAE 15W40



Sample Information

Sample Number	LH0267271	LH0267540	LH0267550	LH0280583
Sample Date	08 Jun 2024	20 May 2024	06 May 2024	18 Apr 2024
Machine Hours	2768	2578	2262	1980
Oil Hours	190	547	231	0
Oil Changed	Not Changd	Changed	Not Changd	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

KINDER MORGAN

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Oil Condition

Visc @ 100°C	cSt	13.1	12.3	12.5	12.3
Base Number (BN)	mg KOH/g	7.1	6.5	7.3	6.9
Oxidation (PA)	%	57	68	61	67



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0.1	0.1	0.2
Nitration (PA)	%	58	67	57	69
Sulfation (PA)	%	52	58	56	58
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	0.6
Silicon	ppm	8	10	10	10
Sodium	ppm	0	3	3	<1
Potassium	ppm	2	3	3	3



Wear Metals

Iron	ppm	3	5	5	5
Copper	ppm	<1	2	1	2
Lead	ppm	<1	1	<1	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	3	4	4	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	85	82	83	84
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	2	<1	<1	<1
Silver	ppm	0	1	1	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	<1	<1



Additives

Calcium	ppm	1780	1312	1279	1341
Magnesium	ppm	236	408	397	413
Zinc	ppm	1156	1157	1097	1204
Phosphorus	ppm	1011	976	921	1140
Barium	ppm	<1	1	1	<1
Boron	ppm	260	310	380	421

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: KINTRI

Unique No: 11088320

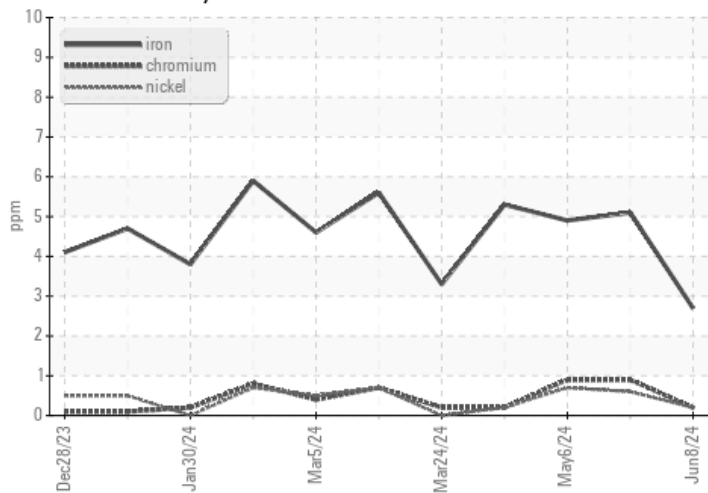
Signed: Wes Davis

Report Date: 21 Jun 2024

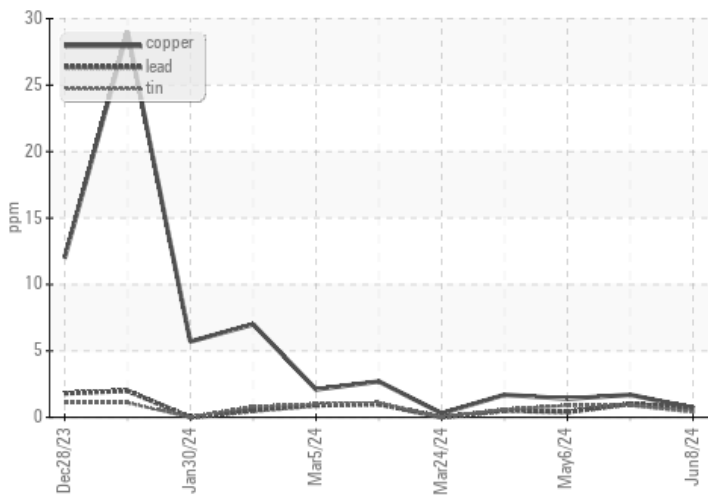


Graphs

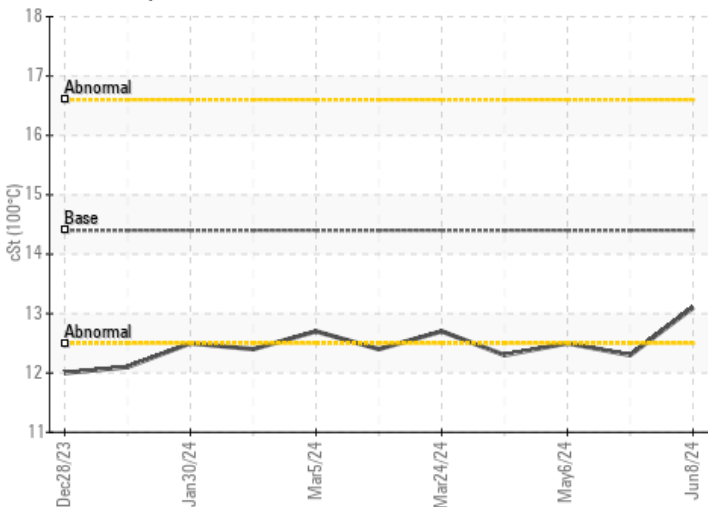
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

