

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH110 1227-155752 - Diesel Engine

Sample No: LH0267275

Oil Type: DIESEL ENGINE OIL SAE 15W40



Sample Information

Sample Number	LH0267275	LH0267271	LH0267540	LH0267550
Sample Date	10 Jun 2024	08 Jun 2024	20 May 2024	06 May 2024
Machine Hours	2998	2768	2578	2262
Oil Hours	420	190	547	231
Oil Changed	Changed	Not Changd	Changed	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

KINDER MORGAN

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TRINITY, AL

US 35601

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Oil Condition

Visc @ 100°C	cSt	12.8	13.1	12.3	12.5
Base Number (BN)	mg KOH/g	6.8	7.1	6.5	7.3
Oxidation (PA)	%	60	57	68	61



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0	0.1	0.1
Nitration (PA)	%	68	58	67	57
Sulfation (PA)	%	54	52	58	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	8	10	10
Sodium	ppm	0	0	3	3
Potassium	ppm	2	2	3	3



Wear Metals

Iron	ppm	4	3	5	5
Copper	ppm	<1	<1	2	1
Lead	ppm	<1	<1	1	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	3	3	4	4
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	86	85	82	83
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	2	2	<1	<1
Silver	ppm	0	0	1	1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	<1	<1



Additives

Calcium	ppm	1790	1780	1312	1279
Magnesium	ppm	261	236	408	397
Zinc	ppm	1202	1156	1157	1097
Phosphorus	ppm	1038	1011	976	921
Barium	ppm	<1	<1	1	1
Boron	ppm	219	260	310	380

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: 11088315

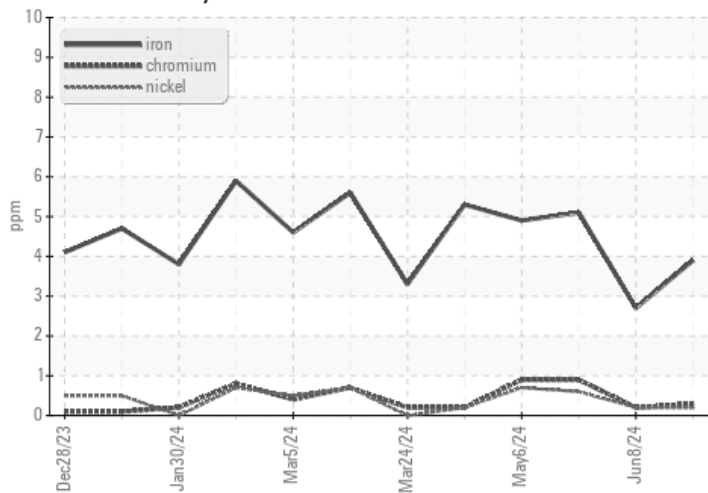
Signed: Wes Davis

Report Date: 21 Jun 2024

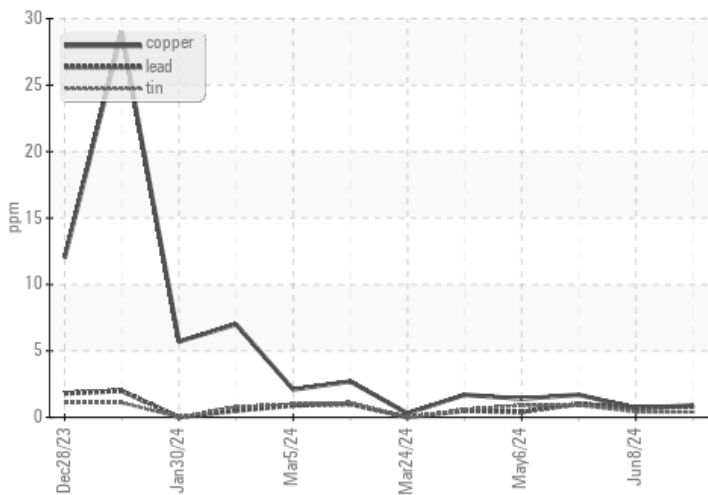


Graphs

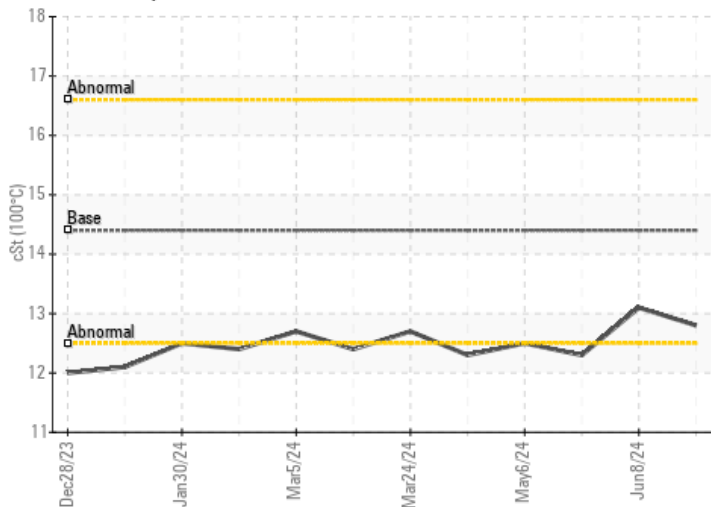
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

