

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A924 043186-1049 - Diesel Engine

Sample No: LH0267721
 Oil Type: DIESEL ENGINE OIL SAE 15W40



RECO EQUIPMENT INC
 8075 PRODUCTION DRIVE
 FLORENCE, KY
 US 41042
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Sample Information

Sample Number	LH0267721	LH0272957	LH0190617	LH0166781
Sample Date	18 Apr 2024	28 Nov 2023	15 Mar 2023	27 Apr 2021
Machine Hours	18491	18008	17465	15800
Oil Hours	0	0	0	0
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 100°C	cSt	13.7	14.1	13.7	13.2
Base Number (BN)	mg KOH/g	7.2	6.9	5.8	---
Oxidation (PA)	%	45	52	51	45



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	1.5	1.8	1	0.6
Nitration (PA)	%	68	73	69	67
Sulfation (PA)	%	55	57	50	57
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	6	8	5
Sodium	ppm	2	<1	2	2
Potassium	ppm	2	2	1	2



Wear Metals

Iron	ppm	8	4	4	5
Copper	ppm	<1	<1	<1	<1
Lead	ppm	2	0	0	<1
Tin	ppm	<1	<1	0	<1
Aluminum	ppm	<1	2	0	0
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	29	57	88	7
Nickel	ppm	0	0	<1	0
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	2188	1930	2082	2442
Magnesium	ppm	245	196	35	58
Zinc	ppm	1191	1138	1184	1043
Phosphorus	ppm	1003	856	998	962
Barium	ppm	0	0	2	0
Boron	ppm	12	29	77	14

Diagnosis

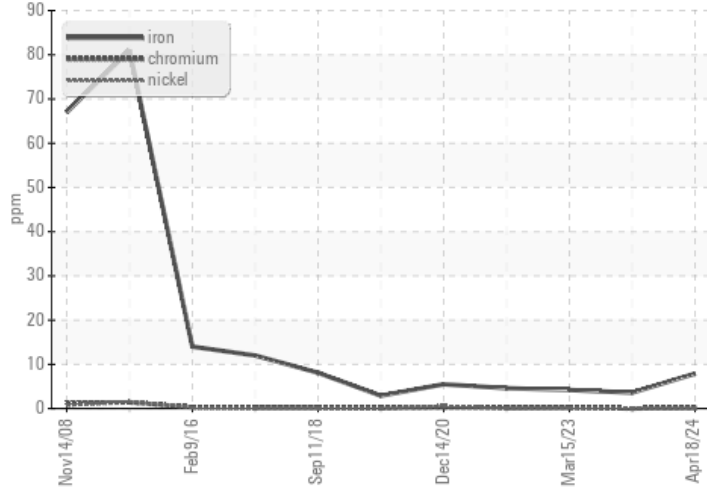
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.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

Depot: LEC0082
 Unique No: 11019357
 Signed: Wes Davis
 Report Date: 09 May 2024

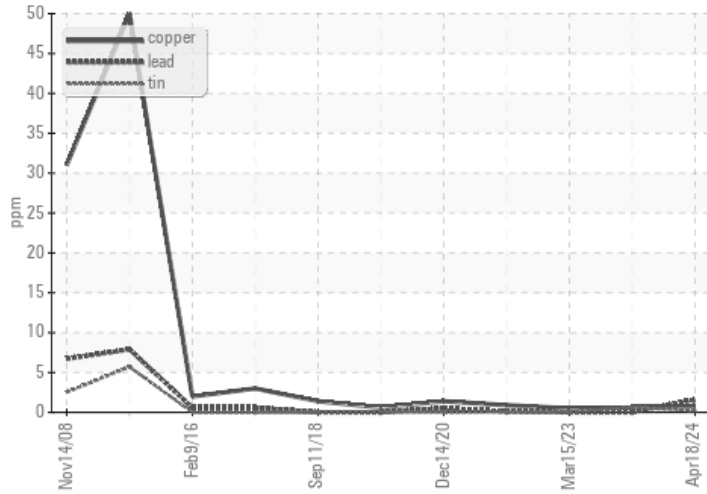


Graphs

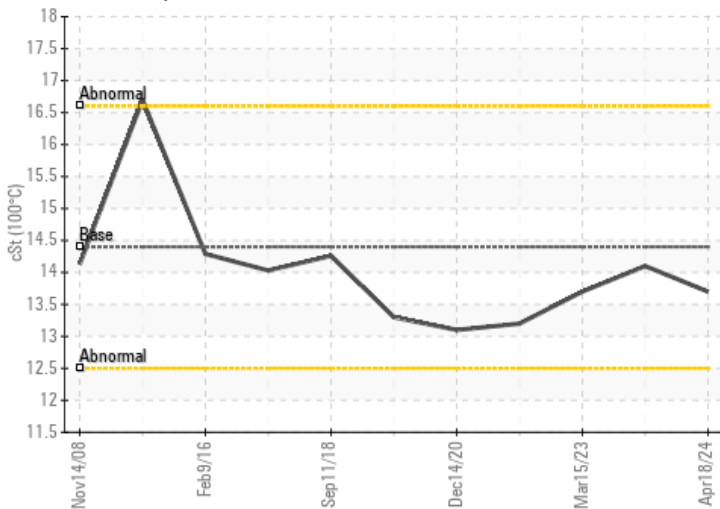
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

