

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH30 120113-1253 - Diesel Engine

Sample No: LH0272494

Oil Type: CHEVRON DELO LE 5W40



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SAMPLE INFORMATION

Sample Number	LH0272494	LH0264320	LH0254038	LH0221010
Sample Date	29 Dec 2023	27 Jul 2023	22 Mar 2023	28 Nov 2022
Machine Hours	9587	9001	8516	7984
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	12.9	13.2	13.1	13.2
Base Number (BN)	mg KOH/g	6.4	6.8	6.9	7.5
Oxidation (PA)	%	62	57	59	63



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.2	0.2	0.1
Nitration (PA)	%	75	73	76	80
Sulfation (PA)	%	59	53	59	62
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	6	8	9
Sodium	ppm	0	<1	2	3
Potassium	ppm	4	4	3	3



WEAR METALS

Iron	ppm	4	6	5	4
Copper	ppm	5	7	4	5
Lead	ppm	<1	0	<1	<1
Tin	ppm	<1	<1	<1	1
Aluminum	ppm	1	2	1	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	7	15	4	3
Nickel	ppm	0	<1	<1	0
Titanium	ppm	88	51	88	90
Silver	ppm	0	0	0	<1
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	1	<1	<1	1



ADDITIVES

Calcium	ppm	1226	1111	1440	1391
Magnesium	ppm	651	655	713	654
Zinc	ppm	1097	1085	1278	1209
Phosphorus	ppm	1028	849	1047	1008
Barium	ppm	10	0	0	<1
Boron	ppm	77	55	110	105

Diagnosis

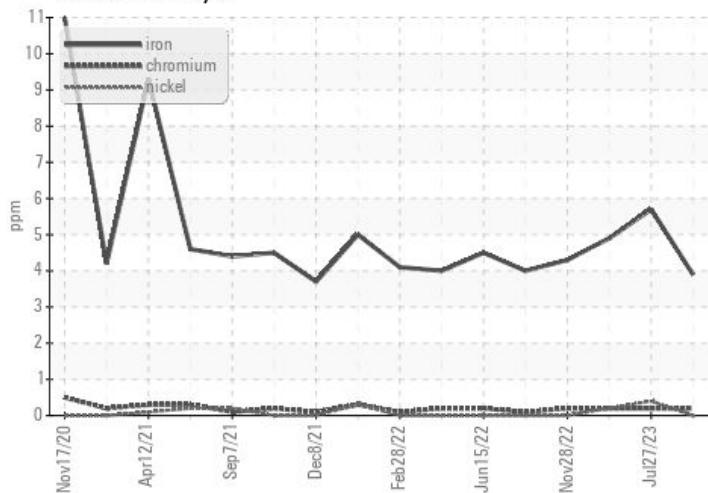
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: LEC0008
 Unique No: 10818591
 Signed: Wes Davis
 Report Date: 08 Jan 2024

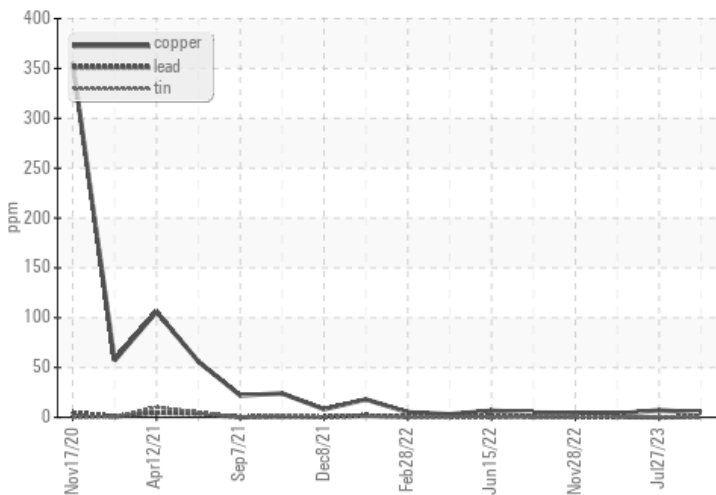


GRAPHS

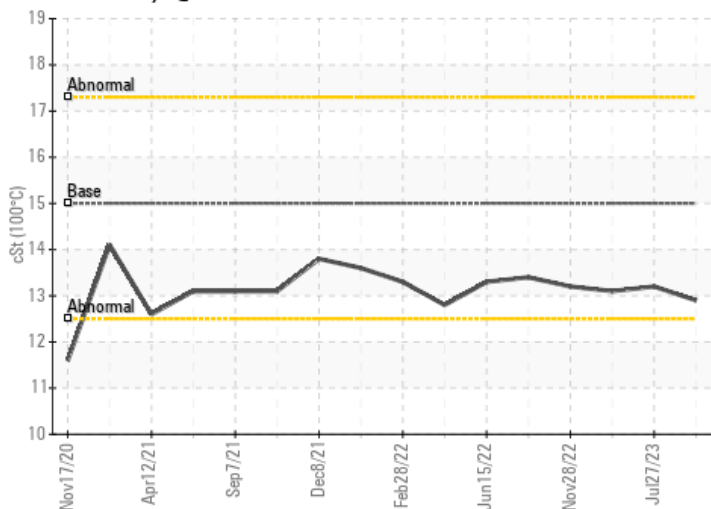
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

