

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A934C 064064-1007 - Diesel Engine

Sample No: LH0254817

Oil Type: CHEVRON DELO LE 5W40



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SAMPLE INFORMATION

Sample Number	LH0254817	LH0254034	LH0243214	LH0236101
Sample Date	23 Jun 2023	28 Mar 2023	10 Jan 2023	10 Oct 2022
Machine Hours	24973	24487	24002	23520
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ABNORMAL



OIL CONDITION

Visc @ 100°C	cSt	13.4	13.3	13.2	13.9
Base Number (BN)	mg KOH/g	6.4	6.8	6.3	5.3
Oxidation (PA)	%	67	61	63	73



CONTAMINATION

Soot %	%	2.2	2.1	2.4	3.5
Nitration (PA)	%	83	74	79	92
Sulfation (PA)	%	73	65	71	87
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	8	8	8
Sodium	ppm	5	10	5	4
Potassium	ppm	4	2	<1	4



WEAR METALS

Iron	ppm	23	24	18	21
Copper	ppm	2	2	2	2
Lead	ppm	<1	0	<1	2
Tin	ppm	<1	0	0	<1
Aluminum	ppm	0	1	1	1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	18	30	4	4
Nickel	ppm	0	<1	0	0
Titanium	ppm	52	34	79	80
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	<1	<1



ADDITIVES

Calcium	ppm	1419	1233	1492	1399
Magnesium	ppm	681	740	549	541
Zinc	ppm	1181	1172	1109	1096
Phosphorus	ppm	923	928	904	889
Barium	ppm	0	0	0	2
Boron	ppm	39	28	65	41

Diagnosis

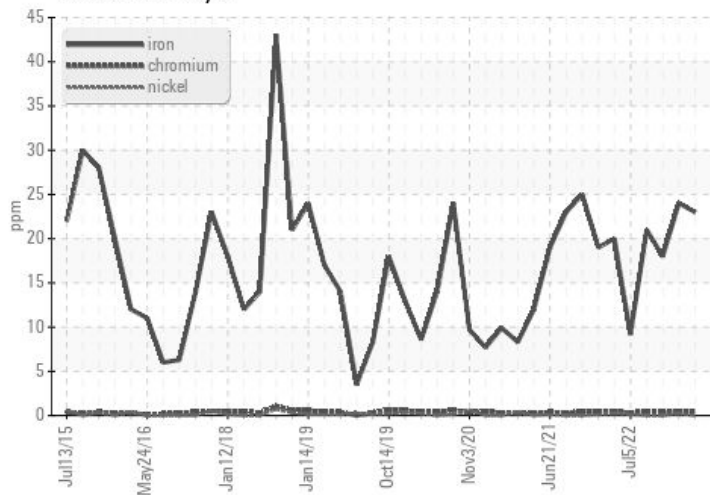
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: LEC0008
 Unique No: 10546513
 Signed: Sean Felton
 Report Date: 07 Jul 2023

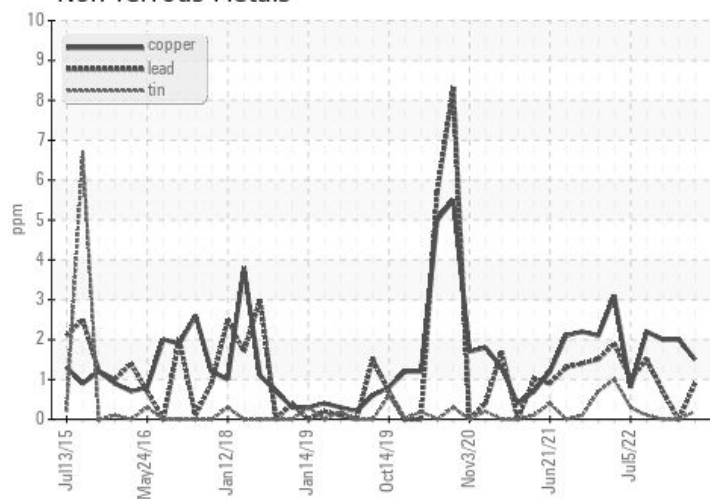


GRAPHS

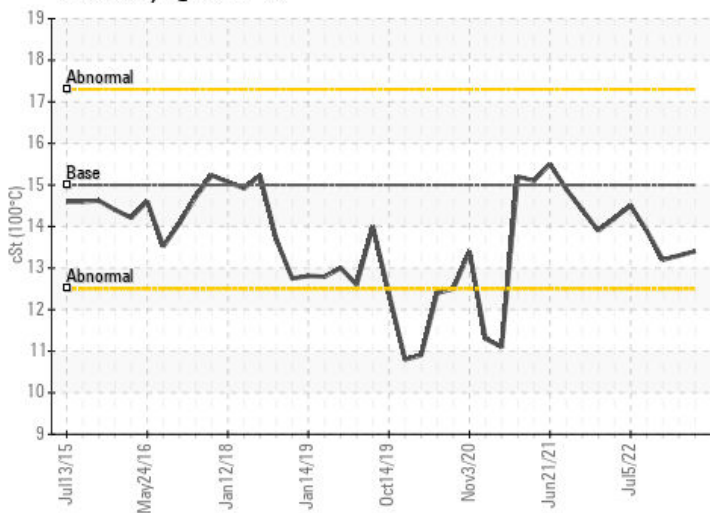
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

