

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A934C 038194-1007 - Diesel Engine

Sample No: LH0244693

Oil Type: DIESEL ENGINE OIL SAE 15W40



Sample Information

Sample Number	LH0244693	LH0244880	LH0230033	LH0190605
Sample Date	06 May 2024	25 Apr 2023	28 Nov 2022	28 Feb 2022
Machine Hours	36956	35282	33796	32149
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

INTEGRITY METALS

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Oil Condition

Visc @ 100°C	cSt	12.9	12.5	13.8	14.2
Base Number (BN)	mg KOH/g	8.2	3.4	9.5	6.7
Oxidation (PA)	%	56	61	53	73



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.6	1.2	0.3	1.9
Nitration (PA)	%	66	74	47	96
Sulfation (PA)	%	51	60	51	73
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	6	5	6
Sodium	ppm	<1	2	<1	3
Potassium	ppm	0	0	1	0

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.



Wear Metals

Iron	ppm	5	14	3	12
Copper	ppm	<1	3	4	4
Lead	ppm	<1	0	1	2
Tin	ppm	0	<1	<1	1
Aluminum	ppm	<1	2	<1	2
Chromium	ppm	0	0	<1	<1
Molybdenum	ppm	27	76	64	86
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



Additives

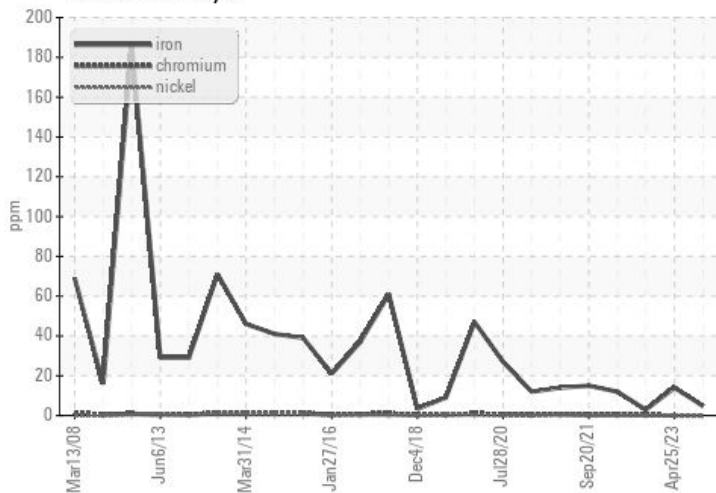
Calcium	ppm	2097	1758	1268	2067
Magnesium	ppm	460	113	882	258
Zinc	ppm	1124	1161	1374	1250
Phosphorus	ppm	961	915	1054	1024
Barium	ppm	0	0	0	0
Boron	ppm	41	22	6	21

Depot: INTMORLH
Unique No: 11018257
Signed: Wes Davis
Report Date: 09 May 2024

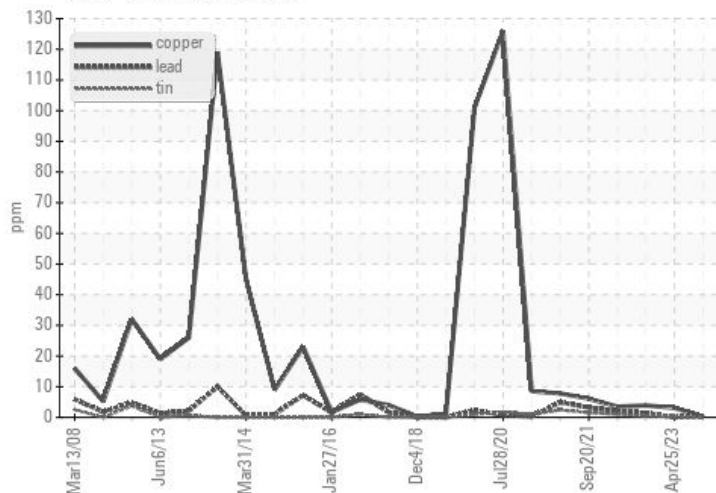


Graphs

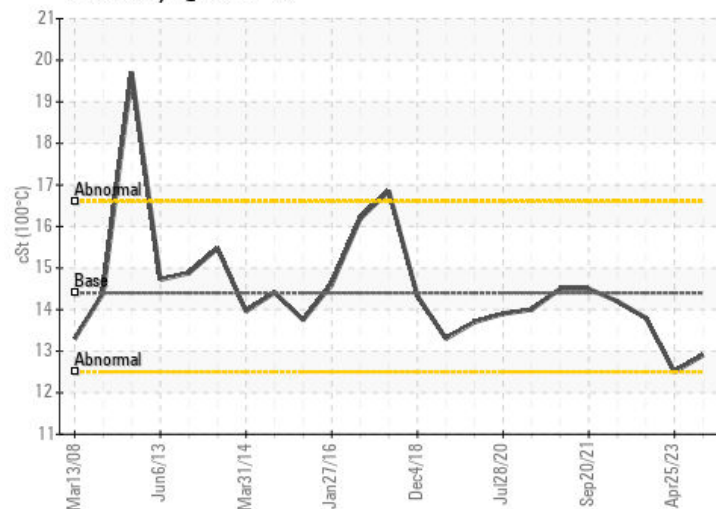
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

