

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A924 021802-957 - Diesel Engine

Sample No: LH0244305

Oil Type: CEMEX MAXTON 5W40



SAMPLE INFORMATION

Sample Number	LH0244305	LH0185159	LH,C154868	LHMC154858
Sample Date	24 Jan 2024	11 May 2021	17 Aug 2020	10 Mar 2020
Machine Hours	21840	20637	20091	19852
Oil Hours	329	394	239	272
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ABNORMAL

RUSS'S AUTO & SCRAP

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OIL CONDITION

Visc @ 100°C	cSt	14.0	14.5	14.3	14.1
Base Number (BN)	mg KOH/g	8.7	---	---	---
Oxidation (PA)	%	80	86	73	76

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.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.2	0.2	0.2
Nitration (PA)	%	82	89	69	77
Sulfation (PA)	%	55	60	57	58
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	6	8	8
Sodium	ppm	8	7	14	51
Potassium	ppm	24	15	37	165



WEAR METALS

Iron	ppm	10	8	6	6
Copper	ppm	1	1	6	48
Lead	ppm	<1	1	<1	4
Tin	ppm	<1	<1	0	<1
Aluminum	ppm	2	1	2	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	71	65	66	71
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	<1	<1	<1	0
Silver	ppm	0	<1	<1	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	1000	896	897	740
Magnesium	ppm	1211	1121	1207	959
Zinc	ppm	1433	1280	1279	1044
Phosphorus	ppm	1107	1141	1097	942
Barium	ppm	0	0	0	0
Boron	ppm	65	50	51	38

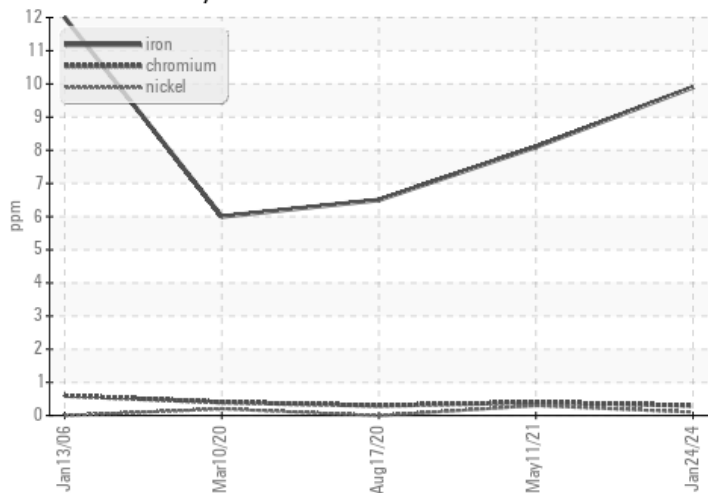
Depot: RUSGRA
Unique No: 10855883
Signed: Wes Davis
Report Date: 31 Jan 2024

Contact/Location: RUSS ? - RUSGRA

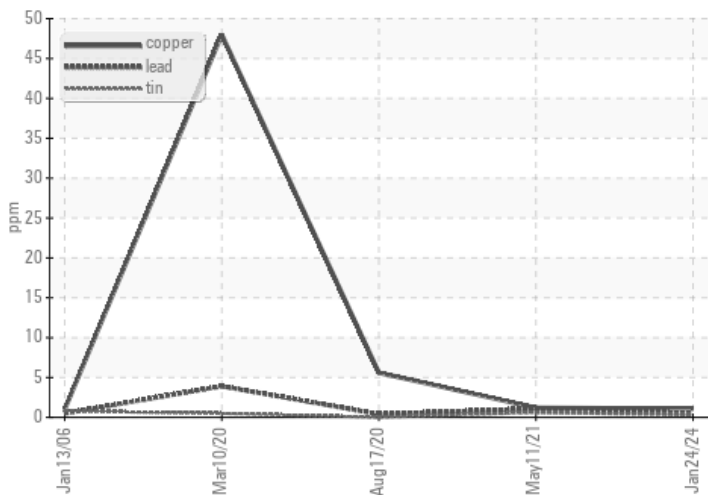


GRAPHS

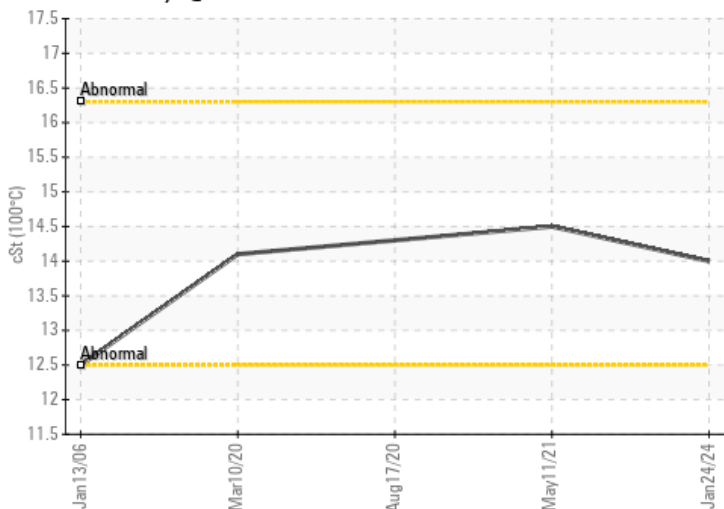
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

