

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH80M 1205-74802 - Diesel Engine

Sample No: LH0243739
 Oil Type: MOBIL 15W40



SAMPLE INFORMATION

Sample Number	LH0243739	LH0191304	LH0191300	LH0191261
Sample Date	17 Feb 2024	21 Aug 2022	25 May 2022	17 Nov 2021
Machine Hours	24159	23597	23504	1490
Oil Hours	355	93	4	275
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	SEVERE	NORMAL

NUCOR STEEL
 2911 E NUCOR RD
 NORFOLK, NE
 US 68702
 Contact: NICOLE IRISH
 nicole.irish@nucor.com
 T: (402)500-9035
 F: (402)644-0389



OIL CONDITION

Visc @ 100°C	cSt	11.8	12.9	11.4	12.9
Base Number (BN)	mg KOH/g	6.7	10.1	8.4	7.6
Oxidation (PA)	%	57	57	67	60

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The aluminum level is abnormal. All other component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.6	0.2	0.4	0.8
Nitration (PA)	%	90	67	88	87
Sulfation (PA)	%	54	53	64	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	0.5	<1.0	<1.0	<1.0
Silicon	ppm	12	12	15	7
Sodium	ppm	6	7	12	5
Potassium	ppm	6	21	5	4



WEAR METALS

Iron	ppm	42	14	94	13
Copper	ppm	24	21	68	116
Lead	ppm	<1	3	73	<1
Tin	ppm	2	2	13	<1
Aluminum	ppm	35	4	28	5
Chromium	ppm	3	<1	1	<1
Molybdenum	ppm	0	<1	2	<1
Nickel	ppm	0	0	3	<1
Titanium	ppm	<1	<1	1	<1
Silver	ppm	<1	<1	4	1
Manganese	ppm	2	1	4	<1
Vanadium	ppm	0	0	<1	0



ADDITIVES

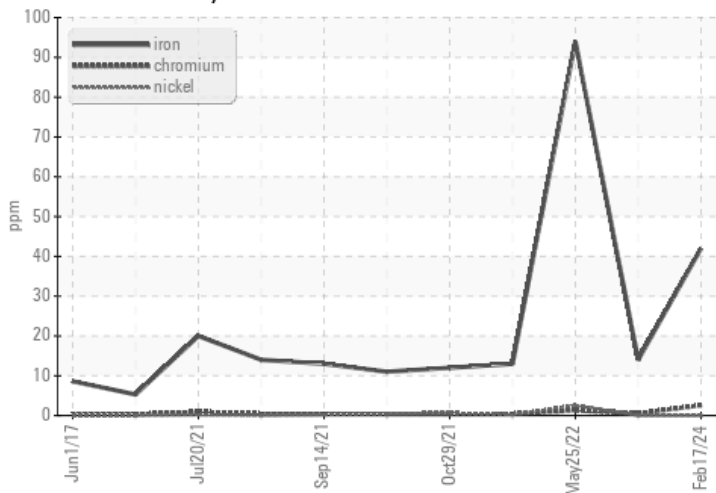
Calcium	ppm	1188	1357	1380	1395
Magnesium	ppm	710	669	723	773
Zinc	ppm	792	787	902	890
Phosphorus	ppm	735	707	762	790
Barium	ppm	<1	7	3	0
Boron	ppm	51	98	94	39

Depot: NUCNOR
 Unique No: 10903294
 Signed: Jonathan Hester
 Report Date: 05 Mar 2024

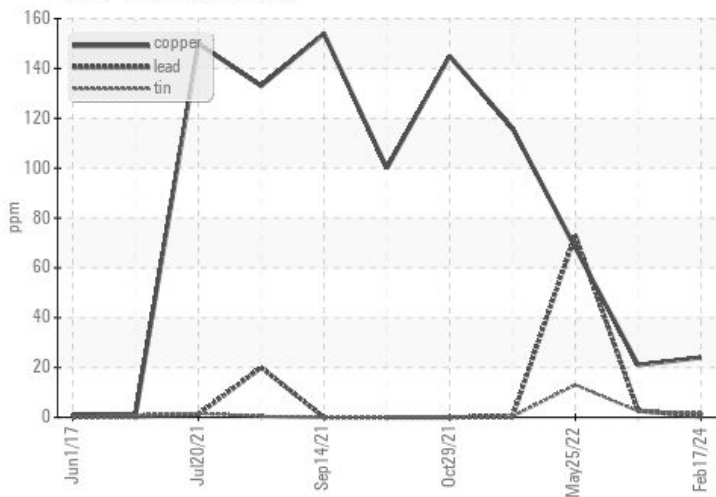


GRAPHS

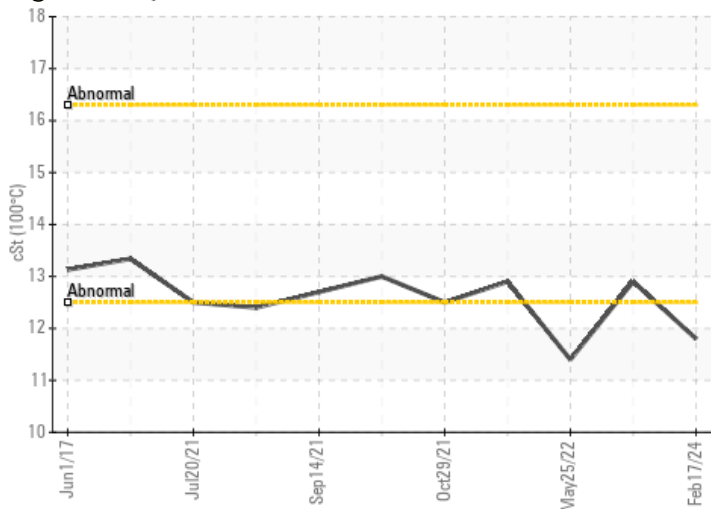
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

