

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH60M 1528-98020 - Diesel Engine

Sample No: LH0253869

Oil Type: DIESEL ENGINE OIL SAE 5W40



SIMKO ACQUISITIONS LLC
 1901 N 6TH ST
 SUPERIOR, WI
 US 54880-1061
 Contact: STEVE K
 stevek@simkosuperior.com
 T:
 F:



SAMPLE INFORMATION

Sample Number	LH0253869	LH0200229	LH0204223	LH0185351
Sample Date	22 Aug 2023	08 Mar 2023	15 Feb 2022	03 Aug 2021
Machine Hours	5815	7645	5832	4992
Oil Hours	500	0	0	0
Oil Changed	Changed	N/A	Not Changd	Changed
Sample Status	ATTENTION	ATTENTION	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	11.8	10.8	13.0	11.6
Base Number (BN)	mg KOH/g	5.5	6.7	8.8	---
Oxidation (PA)	%	88	84	55	56



CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	110	113	61	100
Sulfation (PA)	%	71	62	50	47
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	2.0	<1.0	<1.0
Silicon	ppm	4	14	12	9
Sodium	ppm	4	2	2	3
Potassium	ppm	3	23	4	<1



WEAR METALS

Iron	ppm	4	13	7	7
Copper	ppm	3	2	1	2
Lead	ppm	<1	<1	<1	5
Tin	ppm	<1	<1	<1	0
Aluminum	ppm	<1	12	3	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	50	57	<1	0
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	2	85	<1
Silver	ppm	0	0	<1	<1
Manganese	ppm	1	1	<1	<1
Vanadium	ppm	0	0	<1	0



ADDITIVES

Calcium	ppm	1151	1167	1797	4130
Magnesium	ppm	935	868	685	94
Zinc	ppm	1209	1234	1304	1160
Phosphorus	ppm	1014	949	1134	1174
Barium	ppm	0	0	0	0
Boron	ppm	20	5	179	224

Diagnosis

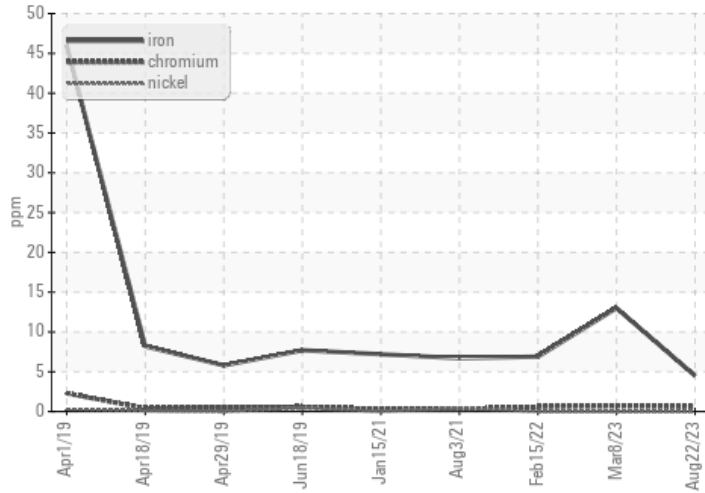
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Depot: SIMSUP
 Unique No: 10670537
 Signed: Don Baldrige
 Report Date: 01 Oct 2023

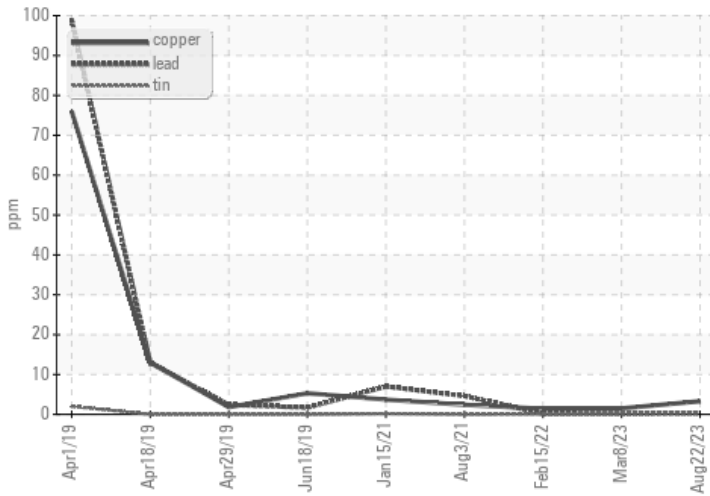


GRAPHS

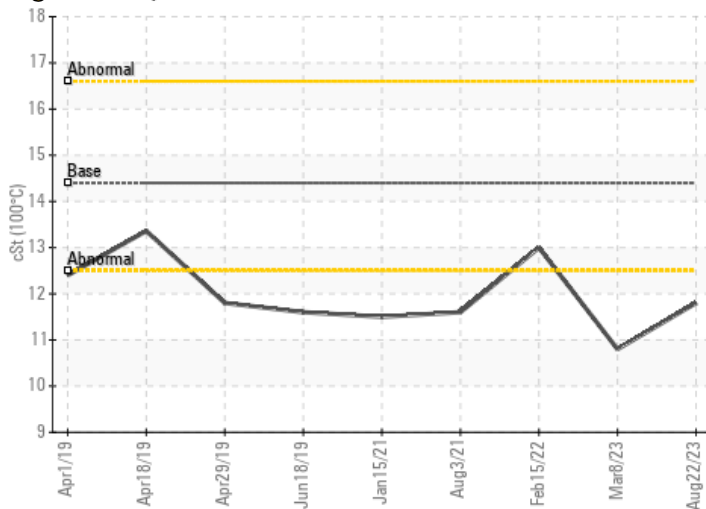
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

