

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH30M 117414-1253 - Diesel Engine

Sample No: LHMC160593

Oil Type: LIEBHERR MOTOROIL 5W30



SAMPLE INFORMATION

Sample Number	LHMC160593	LH0217610	LH0236562	LH0217600
Sample Date	22 May 2023	22 Mar 2023	02 Sep 2022	14 Jul 2022
Machine Hours	1750	6571	5433	0
Oil Hours	500	750	250	0
Oil Changed	Changed	Changed	Changed	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

SPARTAN RECYCLING

3071 HOWARD ST
SPARTANBURG, SC
US 29303

Contact: SERVICE MANAGER



OIL CONDITION

Visc @ 100°C	cSt	11.4	11.3	11.9	11.2
Base Number (BN)	mg KOH/g	15.6	13.0	17.8	15.2
Oxidation (PA)	%	41	52	42	52

T:
F:



CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	103	108	103	124
Sulfation (PA)	%	40	50	43	49
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	10	9	8	9
Sodium	ppm	4	2	2	3
Potassium	ppm	0	3	2	1

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.



WEAR METALS

Iron	ppm	6	9	7	10
Copper	ppm	1	6	1	3
Lead	ppm	0	<1	<1	1
Tin	ppm	<1	<1	<1	1
Aluminum	ppm	2	4	3	3
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	2	9	1	<1
Nickel	ppm	0	0	0	<1
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	4468	4003	4125	4728
Magnesium	ppm	29	27	15	34
Zinc	ppm	1222	1143	1164	1305
Phosphorus	ppm	1066	1007	996	1122
Barium	ppm	0	2	0	0
Boron	ppm	304	257	259	228

Depot: SPASPALH

Unique No: 10565430

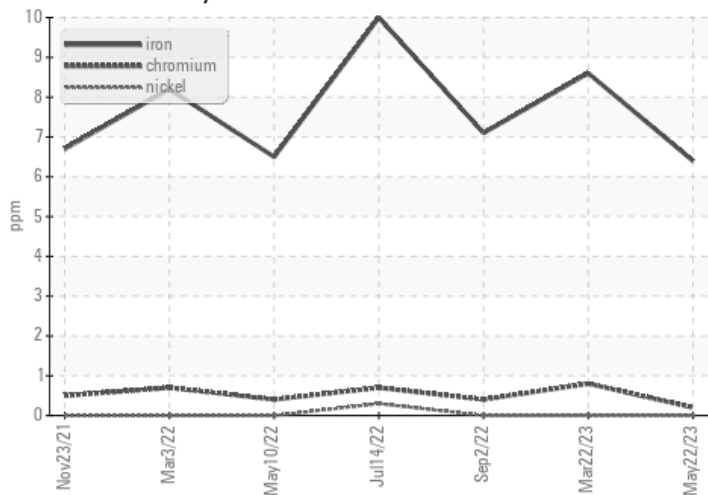
Signed: Wes Davis

Report Date: 25 Jul 2023

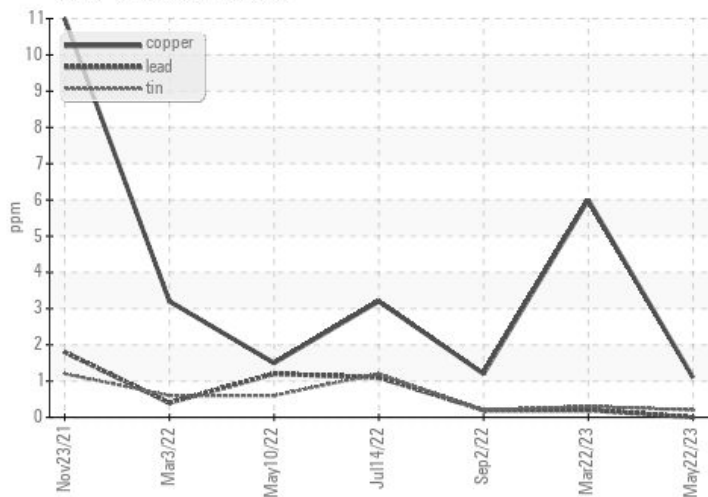


GRAPHS

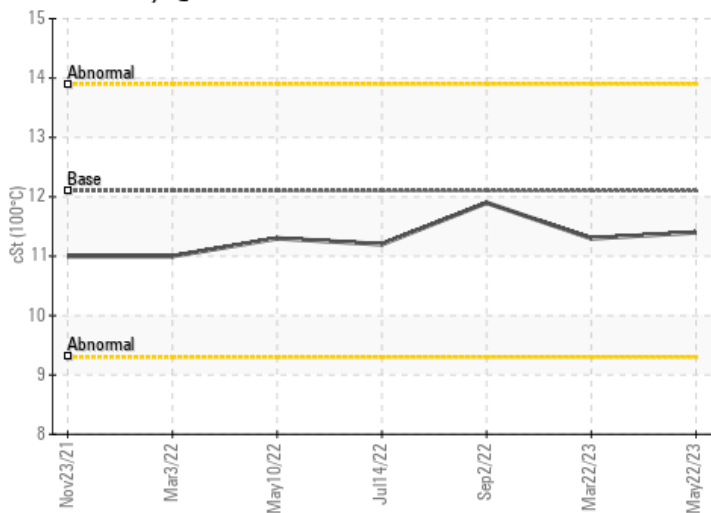
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

