

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH30M 117414-1253 - Diesel Engine

Sample No: LH0272898

Oil Type: DIESEL ENGINE OIL SAE 15W40



SPARTAN RECYCLING
 3071 HOWARD ST
 SPARTANBURG, SC
 US 29303
 Contact: SERVICE MANAGER

T:
 F:



SAMPLE INFORMATION

Sample Number	LH0272898	LH0235762	LHMC160593	LH0217610
Sample Date	10 Jan 2024	26 Sep 2023	22 May 2023	22 Mar 2023
Machine Hours	8285	0	1750	6571
Oil Hours	0	0	500	750
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	11.3	11.2	11.4	11.3
Base Number (BN)	mg KOH/g	12.5	13.2	15.6	13.0
Oxidation (PA)	%	54	54	41	52



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	118	118	103	108
Sulfation (PA)	%	48	48	40	50
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	9	10	9
Sodium	ppm	2	1	4	2
Potassium	ppm	<1	0	0	3



WEAR METALS

Iron	ppm	8	9	6	9
Copper	ppm	2	2	1	6
Lead	ppm	<1	<1	0	<1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	3	<1	2	4
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	<1	1	2	9
Nickel	ppm	0	0	0	0
Titanium	ppm	0	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	<1	<1



ADDITIVES

Calcium	ppm	4433	4323	4468	4003
Magnesium	ppm	5	27	29	27
Zinc	ppm	1241	1243	1222	1143
Phosphorus	ppm	1030	1041	1066	1007
Barium	ppm	0	0	0	2
Boron	ppm	235	240	304	257

Diagnosis

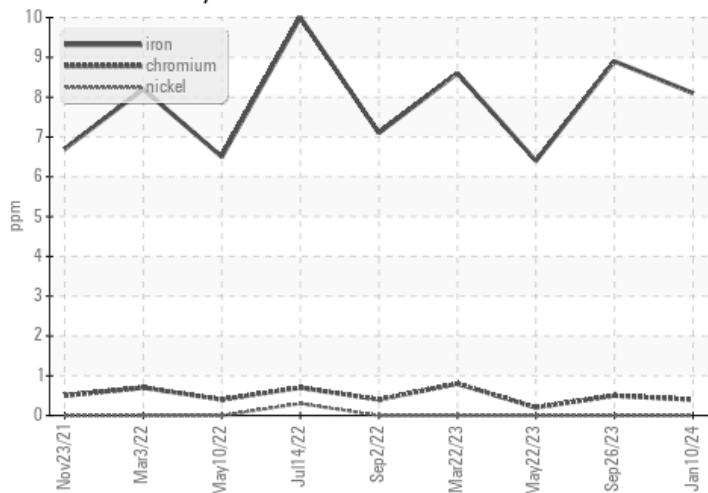
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: SPASPALH
 Unique No: 10833843
 Signed: Sean Felton
 Report Date: 18 Jan 2024

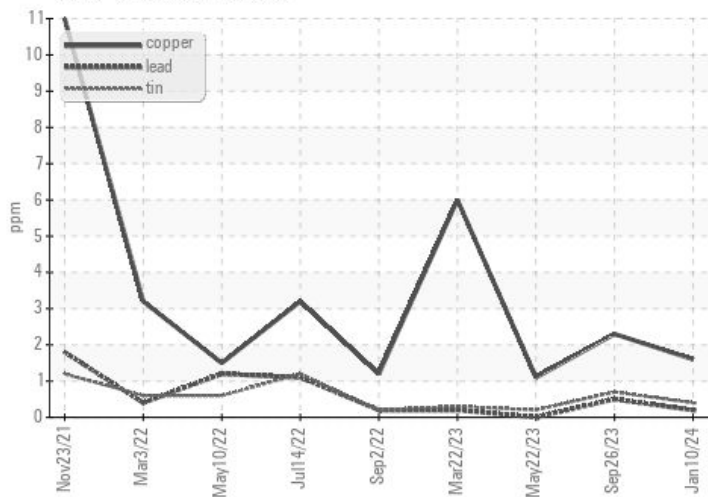


GRAPHS

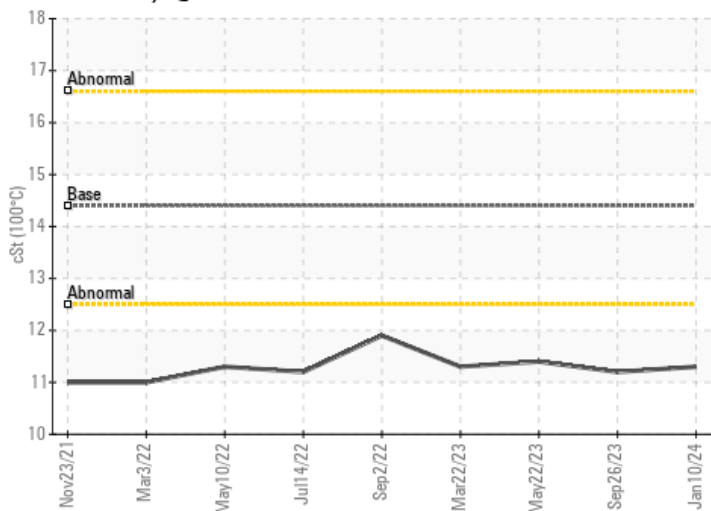
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

