

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH30 101514-1253 - Diesel Engine

Sample No: LH0272808

Oil Type: DIESEL ENGINE OIL SAE 15W40



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

T:  
F:

#### 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.



#### SAMPLE INFORMATION

Sample Number	LH0272808	LH0235744	LH0229488	LH0217626
Sample Date	10 Jan 2024	23 Sep 2023	22 May 2023	22 Mar 2023
Machine Hours	12010	11543	1750	10552
Oil Hours	0	0	500	2000
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



#### OIL CONDITION

Visc @ 100°C	cSt	11.6	11.6	11.9	11.2
Base Number (BN)	mg KOH/g	13.7	14.5	13.5	14.1
Oxidation (PA)	%	51	54	51	51



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	114	121	101	115
Sulfation (PA)	%	46	47	46	47
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	10	7	9
Sodium	ppm	2	2	4	2
Potassium	ppm	0	0	0	3



#### WEAR METALS

Iron	ppm	7	10	15	10
Copper	ppm	1	2	3	2
Lead	ppm	<1	<1	0	0
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	2	2	2	4
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	2	<1	7	1
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

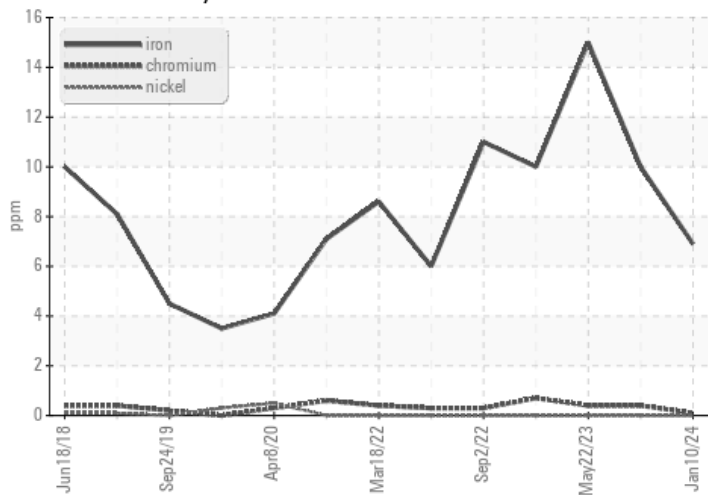
Calcium	ppm	4344	4486	4221	4436
Magnesium	ppm	32	21	89	21
Zinc	ppm	1232	1262	1255	1208
Phosphorus	ppm	1024	1059	1087	1045
Barium	ppm	0	0	0	2
Boron	ppm	241	256	287	293

Depot: SPASPALH  
Unique No: 10833845  
Signed: Sean Felton  
Report Date: 18 Jan 2024

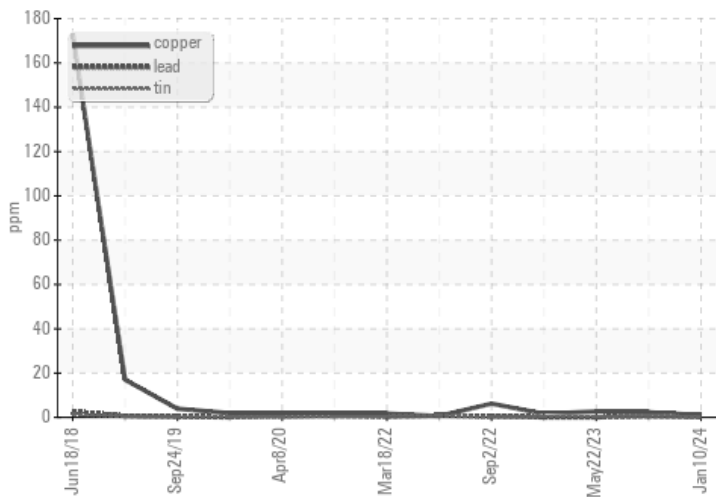


### GRAPHS

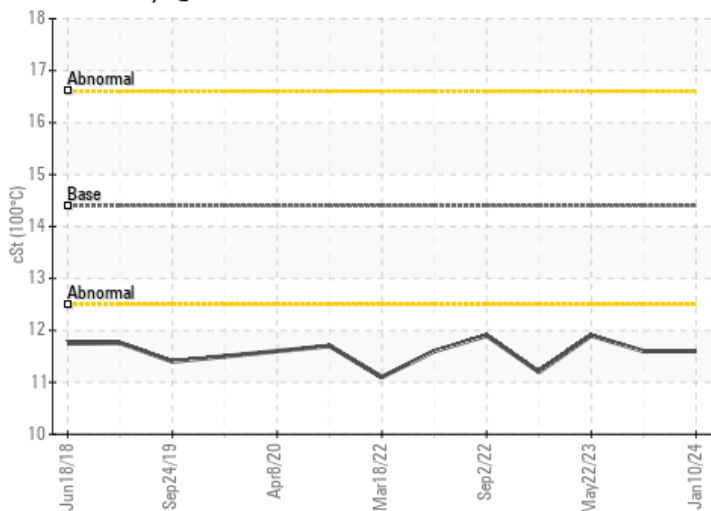
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

