

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH30 115841-1253 - Diesel Engine

Sample No: LH0272809

Oil Type: DIESEL ENGINE OIL SAE 15W40



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



#### SAMPLE INFORMATION

Sample Number	LH0272809	LH06062460	LH0235741	DJJ0011135
Sample Date	08 Mar 2024	11 Jan 2024	28 Sep 2023	22 May 2023
Machine Hours	11903	11390	10707	500
Oil Hours	0	0	0	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	NORMAL



#### OIL CONDITION

Visc @ 100°C	cSt	11.9	11.9	12.4	11.6
Base Number (BN)	mg KOH/g	13.8	12.1	10.0	14.4
Oxidation (PA)	%	64	68	102	55

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 acceptable for the time in service.



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	132	136	182	127
Sulfation (PA)	%	52	55	70	47
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	9	8	11	9
Sodium	ppm	3	2	2	4
Potassium	ppm	4	2	8	0



#### WEAR METALS

Iron	ppm	10	11	16	6
Copper	ppm	1	2	4	1
Lead	ppm	0	3	26	0
Tin	ppm	0	<1	1	<1
Aluminum	ppm	5	3	4	2
Chromium	ppm	<1	<1	1	<1
Molybdenum	ppm	<1	2	1	<1
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	<1	<1	<1



#### ADDITIVES

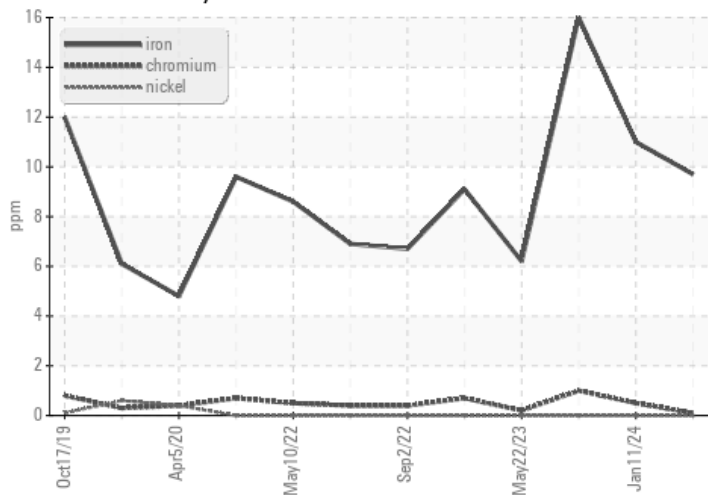
Calcium	ppm	4684	4813	5279	4677
Magnesium	ppm	26	33	24	24
Zinc	ppm	1212	1342	1474	1259
Phosphorus	ppm	1084	1105	1194	1092
Barium	ppm	0	0	0	0
Boron	ppm	239	241	242	301

Depot: SPASPALH  
 Unique No: 10924464  
 Signed: Don Baldrige  
 Report Date: 13 Mar 2024

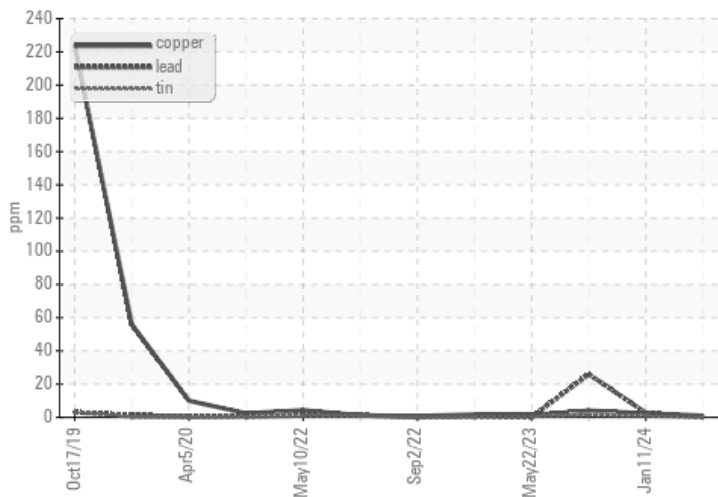


### GRAPHS

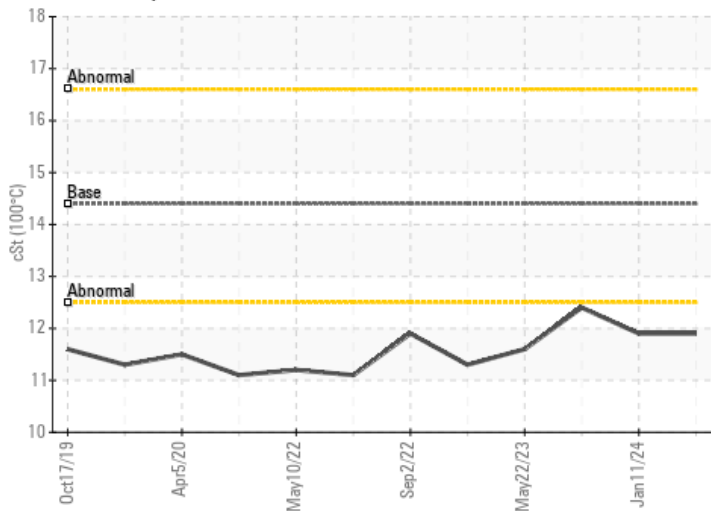
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

