

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50 1203-82019 - Diesel Engine

Sample No: LHMC132952

Oil Type: SHELL ROTELLA T5 10W30 (CJ4)



**BRENNER RECYCLING**  
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#### Sample Information

Sample Number	LHMC132952	LHMC132851	LHMC112872	---
Sample Date	16 Jul 2024	02 Jul 2024	09 Feb 2017	---
Machine Hours	5673	94	2097	---
Oil Hours	32	94	500	---
Oil Changed	Not Chngd	Changed	Changed	---
Sample Status	NORMAL	NORMAL	ABNORMAL	---



#### Oil Condition

Visc @ 100°C	cSt	11.7	11.5	14.04	---
Base Number (BN)	mg KOH/g	8.1	9.1	---	---
Oxidation (PA)	%	61	52	80	---



#### Contamination

Water	%	NEG	NEG	NEG	---
Soot %	%	0.1	0.1	1.1	---
Nitration (PA)	%	48	63	108	---
Sulfation (PA)	%	54	49	64	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	0.3	<1.0	<1.0	---
Silicon	ppm	8	12	10	---
Sodium	ppm	1	5	7	---
Potassium	ppm	9	15	4	---



#### Wear Metals

Iron	ppm	4	11	97	---
Copper	ppm	4	17	69	---
Lead	ppm	0	2	22	---
Tin	ppm	<1	2	2	---
Aluminum	ppm	1	2	42	---
Chromium	ppm	0	0	3	---
Molybdenum	ppm	4	3	6	---
Nickel	ppm	0	<1	1	---
Titanium	ppm	0	<1	0	---
Silver	ppm	0	<1	0	---
Manganese	ppm	0	1	2	---
Vanadium	ppm	0	0	0	---



#### Additives

Calcium	ppm	2096	1451	2202	---
Magnesium	ppm	110	713	88	---
Zinc	ppm	1181	868	801	---
Phosphorus	ppm	998	791	662	---
Barium	ppm	0	7	4	---
Boron	ppm	165	75	3	---

#### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. Tests indicate that there is no fuel present in the oil. 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.

Depot: BREHAZ  
 Unique No: 11128860  
 Signed: Sean Felton  
 Report Date: 23 Jul 2024



### Graphs

