

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### - Diesel Engine

Sample No: LH0291144

Oil Type: {unknown}



### Sample Information

Sample Number	LH0291144	---	---	---
Sample Date	09 May 2024	---	---	---
Machine Hours	2719	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

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### Oil Condition

Visc @ 100°C	cSt	11.8	---	---	---
Oxidation (PA)	%	47	---	---	---



### Contamination

Water	%	NEG	---	---	---
Soot %	%	0	---	---	---
Nitration (PA)	%	63	---	---	---
Sulfation (PA)	%	51	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	0.4	---	---	---
Silicon	ppm	2	---	---	---
Sodium	ppm	2	---	---	---
Potassium	ppm	11	---	---	---



### Wear Metals

Iron	ppm	6	---	---	---
Copper	ppm	2	---	---	---
Lead	ppm	0	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	3	---	---	---
Chromium	ppm	0	---	---	---
Molybdenum	ppm	6	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	0	---	---	---
Vanadium	ppm	0	---	---	---



### Additives

Calcium	ppm	2169	---	---	---
Magnesium	ppm	126	---	---	---
Zinc	ppm	1047	---	---	---
Phosphorus	ppm	888	---	---	---
Barium	ppm	<1	---	---	---
Boron	ppm	20	---	---	---

### Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample. All component wear rates are normal. Fuel content negligible. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

**Depot:** LIEMIS  
**Unique No:** 5775647  
**Signed:** Kevin Marson  
**Report Date:** 13 May 2024



### Graphs

