

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH30M 1253-146094 - Diesel Engine

Sample No: LH0278138

Oil Type: DURON 5W40



TRAM CONSTRUCTION
9279 E KY 8
GARRISON, KY
US 41141
Contact: Service Manager

T:
F:



SAMPLE INFORMATION

Sample Number	LH0278138	---	---	---
Sample Date	20 Dec 2023	---	---	---
Machine Hours	575	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---



OIL CONDITION

Visc @ 100°C	cSt	● 11.3	---	---	---
Base Number (BN)	mg KOH/g	● 4.5	---	---	---
Oxidation (PA)	%	208	---	---	---



CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	● 0.1	---	---	---
Nitration (PA)	%	103	---	---	---
Sulfation (PA)	%	110	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	● 1.1	---	---	---
Silicon	ppm	● 8	---	---	---
Sodium	ppm	● 0	---	---	---
Potassium	ppm	● 5	---	---	---



WEAR METALS

Iron	ppm	● 14	---	---	---
Copper	ppm	● 273	---	---	---
Lead	ppm	● 2	---	---	---
Tin	ppm	● 1	---	---	---
Aluminum	ppm	● 3	---	---	---
Chromium	ppm	● 1	---	---	---
Molybdenum	ppm	● 46	---	---	---
Nickel	ppm	● 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	● 0	---	---	---
Manganese	ppm	1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	● 1322	---	---	---
Magnesium	ppm	● 897	---	---	---
Zinc	ppm	● 866	---	---	---
Phosphorus	ppm	671	---	---	---
Barium	ppm	● 17	---	---	---
Boron	ppm	● 97	---	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Depot: TRAGARLH
Unique No: 10806503
Signed: Jonathan Hester
Report Date: 29 Dec 2023



GRAPHS

