

LIEBHERR

CONSTRUCTION EQUIPMENT



[[S20230516021844]] LIEBHERR TA230 4162 - Front Axle

Sample No: LH06059589

Oil Type: GEAR OIL SAE 80W90



HEAVY MACHINES INC.
 3930 EAST RAINES RD
 MEMPHIS, TN
 US 38118
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SAMPLE INFORMATION

Sample Number	LH06059589	---	---	---
Sample Date	10 Nov 2023	---	---	---
Machine Hours	3503	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---



OIL CONDITION

Visc @ 40°C	cSt	63.7	---	---	---
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CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	14	---	---	---
Sodium	ppm	16	---	---	---
Potassium	ppm	2	---	---	---



WEAR METALS

Iron	ppm	343	---	---	---
Copper	ppm	177	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	8	---	---	---
Aluminum	ppm	2	---	---	---
Chromium	ppm	3	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	17	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	56	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	3526	---	---	---
Magnesium	ppm	10	---	---	---
Zinc	ppm	1459	---	---	---
Phosphorus	ppm	1258	---	---	---
Barium	ppm	4	---	---	---
Boron	ppm	127	---	---	---

Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level is abnormal. The nickel level is abnormal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type.

Depot: LEC0051
Unique No: 10830971
Signed: Jonathan Hester
Report Date: 16 Jan 2024



GRAPHS

