

LIEBHERR

CONSTRUCTION EQUIPMENT



[[S20230805031554]] LIEBHERR TA230 4161 - Diesel Engine

Sample No: LH06059097

Oil Type: DIESEL ENGINE OIL SAE 15W40



SAMPLE INFORMATION

Sample Number	LH06059097	---	---	---
Sample Date	29 Dec 2023	---	---	---
Machine Hours	2804	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	NORMAL	---	---	---

HEAVY MACHINES INC.

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OIL CONDITION

Visc @ 100°C	cSt	12.4	---	---	---
Base Number (BN)	mg KOH/g	7.2	---	---	---
Oxidation (PA)	%	82	---	---	---



CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	0.2	---	---	---
Nitration (PA)	%	78	---	---	---
Sulfation (PA)	%	61	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	0.7	---	---	---
Silicon	ppm	4	---	---	---
Sodium	ppm	5	---	---	---
Potassium	ppm	<1	---	---	---

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. 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 suitable for further service.



WEAR METALS

Iron	ppm	10	---	---	---
Copper	ppm	79	---	---	---
Lead	ppm	<1	---	---	---
Tin	ppm	1	---	---	---
Aluminum	ppm	3	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	49	---	---	---
Nickel	ppm	2	---	---	---
Titanium	ppm	11	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	2	---	---	---
Vanadium	ppm	<1	---	---	---



ADDITIVES

Calcium	ppm	1158	---	---	---
Magnesium	ppm	952	---	---	---
Zinc	ppm	1250	---	---	---
Phosphorus	ppm	933	---	---	---
Barium	ppm	<1	---	---	---
Boron	ppm	1	---	---	---

Depot: LEC0051
Unique No: 10830479
Signed: Wes Davis
Report Date: 16 Jan 2024



GRAPHS

