

LIEBHERR

CONSTRUCTION EQUIPMENT



[[587085]] LIEBHERR LH60M 141098-1217 - Diesel Engine

Sample No: LH0277797

Oil Type: DIESEL ENGINE OIL SAE 40



JOHN ZUBICK LTD.
 105 CLARKE ROAD
 LONDON, ON
 CA N5W 5C9
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SAMPLE INFORMATION

Sample Number	LH0277797	LH0261815	LH0234956	---
Sample Date	04 Dec 2023	26 May 2023	14 Nov 2022	---
Machine Hours	0	1399	467	---
Oil Hours	0	0	0	---
Oil Changed	N/A	Changed	Changed	---
Sample Status	ABNORMAL	NORMAL	NORMAL	---



OIL CONDITION

Visc @ 100°C	cSt	11.7	13.2	11.8	---
Oxidation (PA)	%	84	67	201	---



CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	0	0	0	---
Nitration (PA)	%	86	71	100	---
Sulfation (PA)	%	58	52	109	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	1.8	<1.0	1.5	---
Silicon	ppm	8	6	9	---
Sodium	ppm	4	2	3	---
Potassium	ppm	1	<1	3	---



WEAR METALS

Iron	ppm	5	4	11	---
Copper	ppm	3	10	243	---
Lead	ppm	<1	<1	7	---
Tin	ppm	<1	<1	2	---
Aluminum	ppm	1	<1	3	---
Chromium	ppm	<1	0	<1	---
Molybdenum	ppm	59	58	46	---
Nickel	ppm	<1	0	<1	---
Titanium	ppm	0	<1	<1	---
Silver	ppm	0	0	0	---
Manganese	ppm	0	<1	1	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	820	1095	1388	---
Magnesium	ppm	1037	956	924	---
Zinc	ppm	1154	1172	861	---
Phosphorus	ppm	950	1066	782	---
Barium	ppm	<1	<1	24	---
Boron	ppm	22	3	77	---

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected 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: JOHLON
 Unique No: 5693943
 Signed: Kevin Marson
 Report Date: 06 Dec 2023



GRAPHS

