CONSTRUCTION EQUIPMENT

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

Sample No: LH0277797

Oil Type: DIESEL ENGINE OIL SAE 40

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	<mark>()</mark> 11.7	13.2	11.8	
Oxidation (PA)	%	84	67	201	

CONTAMINATION Water % NEG NEG NEG % 0 Soot % 0 0 🔘 Nitration (PA) 100 % 86 71 Sulfation (PA) % 58 52 109 Glycol % NEG NEG NEG Fuel % 0 1.8 <1.0 0 1.5 Silicon 08 6 9 ppm Sodium 04 $\bigcirc 2$ 03 ppm Potassium ppm 01 < '</p> 3

\mathbf{O} **WEAR METALS** 05 Iron ppm 0 11 04 Copper ppm 03 010 243 Lead ppm ○ <1 07 < Tin **○** <1 ppm $\bigcirc 2$ < Aluminum 01 3 ppm ○ <1 Chromium ○ <1 $\bigcirc 0$ ○ <1 ppm Molybdenum 0 59 58 0 46 ppm Nickel ○ <1 $\bigcirc 0$ 0 <1 ppm Titanium 0 0 <1 ppm < Silver 0 $\bigcirc 0$ ppm $\bigcirc 0$ Manganese 0 ppm ○ <1 Vanadium ppm 0

	ITIVES				
Calcium	ppm	0 820	0 1095	1388	
Magnesium	ppm	0 1037	○ 956	924	
Zinc	ppm	0 1154	0 1172	861	
Phosphorus	ppm	950	0 1066	782	
Barium	ppm	○ <1	○ <1	24	
Boron	ppm	0 22	03	○ 77	





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Diagnosis

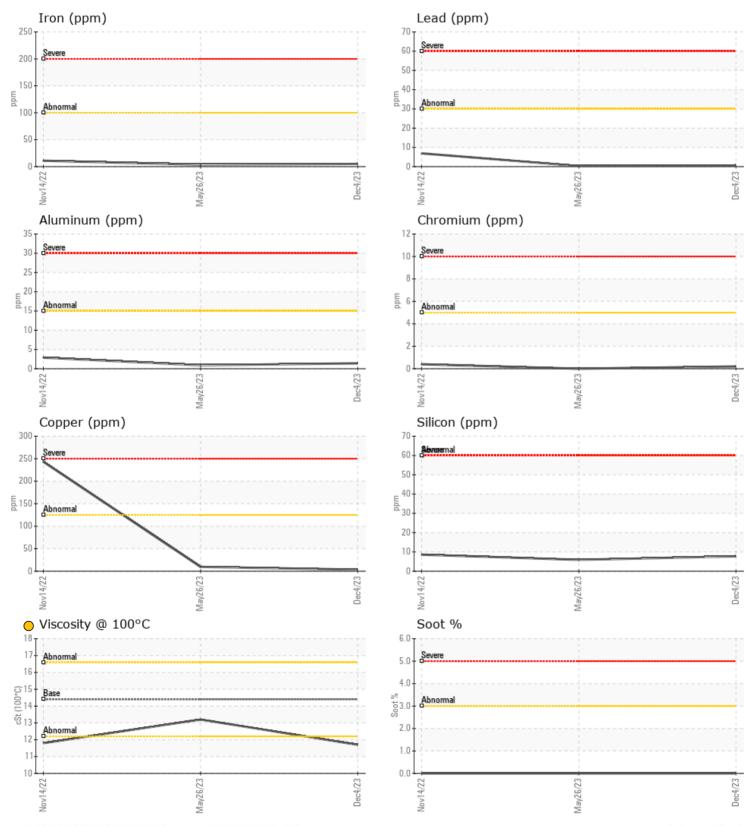
No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.





GRAPHS

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