

LIEBHERR

CONSTRUCTION EQUIPMENT



[(343446)] LIEBHERR LH60M 124381-1217 - Diesel Engine

Sample No: LH0285014

Oil Type: SAE 5W30



RAM IRON AND METAL

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SAMPLE INFORMATION

Sample Number	LH0285014	LH0265839	LH0261593	LH0256687
Sample Date	12 Feb 2024	26 Jun 2023	03 May 2023	02 Apr 2023
Machine Hours	12500	10141	9520	9107
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	13.6	13.2	13.7	13.3
Oxidation (PA)	%	76	80	68	76



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0	0	0
Nitration (PA)	%	80	78	68	82
Sulfation (PA)	%	55	57	52	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	7	7	6
Sodium	ppm	1	2	1	2
Potassium	ppm	2	<1	0	<1



WEAR METALS

Iron	ppm	4	3	2	3
Copper	ppm	<1	1	1	<1
Lead	ppm	0	<1	<1	<1
Tin	ppm	0	0	<1	<1
Aluminum	ppm	2	1	1	1
Chromium	ppm	<1	<1	0	0
Molybdenum	ppm	57	58	58	59
Nickel	ppm	<1	0	0	0
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1109	1043	1040	1102
Magnesium	ppm	941	978	955	972
Zinc	ppm	1176	1194	1155	1196
Phosphorus	ppm	993	1051	1079	1064
Barium	ppm	0	0	0	0
Boron	ppm	2	2	<1	4

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.

Depot: RAMTOR
Unique No: 5724302
Signed: Kevin Marson
Report Date: 13 Feb 2024



GRAPHS

