

LIEBHERR

CONSTRUCTION EQUIPMENT



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

Sample No: LH0296541

Oil Type: SAE 5W30



RAM IRON AND METAL

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Sample Information

Sample Number	LH0296541	LH0289735	LH0289702	LH0285014
Sample Date	07 Jul 2024	27 May 2024	16 Apr 2024	12 Feb 2024
Machine Hours	14056	13670	13245	12500
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 100°C	cSt	13.5	12.0	13.1	13.6
Oxidation (PA)	%	75	85	89	76



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0	0	0
Nitration (PA)	%	75	88	87	80
Sulfation (PA)	%	53	59	59	55
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	6	6	8
Sodium	ppm	2	4	2	1
Potassium	ppm	<1	<1	<1	2



Wear Metals

Iron	ppm	3	4	5	4
Copper	ppm	<1	<1	1	<1
Lead	ppm	0	0	0	0
Tin	ppm	0	0	0	0
Aluminum	ppm	1	1	2	2
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	56	59	60	57
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	0	0	0
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	962	861	1088	1109
Magnesium	ppm	949	1122	982	941
Zinc	ppm	1179	1219	1204	1176
Phosphorus	ppm	977	1033	989	993
Barium	ppm	0	0	0	0
Boron	ppm	4	23	4	2

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: 5811658
Signed: Kevin Marson
Report Date: 08 Jul 2024



Graphs

