

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50 1216-123739 - Diesel Engine

Sample No: LH0211706

Oil Type: MOBIL DELVAC 1 5W40



AHLSTROM-MUNKSJO NA SPECIALTY
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Sample Information

Sample Number	LH0211706	LH0211682	LH0211664	LH0211654
Sample Date	10 Apr 2024	31 Jan 2024	22 Sep 2023	09 Aug 2023
Machine Hours	11545	10743	9153	8617
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	NORMAL



Oil Condition

Visc @ 100°C	cSt	12.8	13.1	11.9	12.9
Base Number (BN)	mg KOH/g	3.9	4.9	4.9	4.4
Oxidation (PA)	%	198	188	190	188



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	93	88	88	88
Sulfation (PA)	%	111	107	108	106
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	2.1	<1.0
Silicon	ppm	12	12	9	11
Sodium	ppm	2	<1	1	<1
Potassium	ppm	1	0	2	1



Wear Metals

Iron	ppm	3	19	1	3
Copper	ppm	2	1	1	2
Lead	ppm	1	<1	1	4
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	2	2	2	2
Chromium	ppm	0	0	0	0
Molybdenum	ppm	44	45	42	45
Nickel	ppm	0	0	<1	0
Titanium	ppm	0	<1	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	0	<1
Vanadium	ppm	0	<1	0	0



Additives

Calcium	ppm	1014	1002	925	1078
Magnesium	ppm	871	904	794	937
Zinc	ppm	1224	1270	1145	1296
Phosphorus	ppm	1053	1054	925	1034
Barium	ppm	0	0	0	0
Boron	ppm	87	77	46	57

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. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: AHLKAU
Unique No: 10983765
Signed: Don Baldrige
Report Date: 23 Apr 2024



Graphs

