

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH50M 094197-1216 - Diesel Engine

Sample No: LH0279118

Oil Type: PETRO CANADA 10W40



SAMPLE INFORMATION

Sample Number	LH0279118	LH0261135	LH0260825	LH0251211
Sample Date	05 Feb 2024	29 Dec 2023	31 May 2023	13 Mar 2023
Machine Hours	24766	24211	22824	22266
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

INDUSTRIES GDS INC.

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OIL CONDITION

Visc @ 100°C	cSt	11.7	13.6	13.7	12.7
Oxidation (PA)	%	76	58	61	69



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0	0	0
Nitration (PA)	%	77	53	66	85
Sulfation (PA)	%	55	50	52	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	1.1	<1.0	<1.0	<1.0
Silicon	ppm	6	6	6	6
Sodium	ppm	5	2	<1	1
Potassium	ppm	2	2	<1	0

Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. 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.



WEAR METALS

Iron	ppm	5	5	2	3
Copper	ppm	82	4	<1	1
Lead	ppm	2	<1	0	<1
Tin	ppm	0	0	0	<1
Aluminum	ppm	1	1	1	1
Chromium	ppm	0	0	0	0
Molybdenum	ppm	58	55	59	59
Nickel	ppm	0	<1	0	0
Titanium	ppm	0	0	0	<1
Silver	ppm	<1	0	0	0
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	857	1050	1119	1130
Magnesium	ppm	1097	934	965	970
Zinc	ppm	1188	1163	1185	1199
Phosphorus	ppm	1041	989	1064	1076
Barium	ppm	<1	3	0	0
Boron	ppm	33	3	<1	<1

Depot: INDVIL
Unique No: 5734493
Signed: Kevin Marson
Report Date: 23 Feb 2024



GRAPHS

