

LIEBHERR

CONSTRUCTION EQUIPMENT



[(358628)] LIEBHERR R914 047334-1511 - Diesel Engine

Sample No: LH

Oil Type: PETRO CANADA SUPREME 5W30



SAMPLE INFORMATION

Sample Number	LH	LH0261014	LH0225248	LH
Sample Date	23 Nov 2023	05 Jun 2023	03 Mar 2022	22 Sep 2021
Machine Hours	3825	3700	1531	0
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

L.A.H. EQUIPMENT INC.

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OIL CONDITION

Visc @ 100°C	cSt	13.3	11.8	11.7	13.5
Oxidation (PA)	%	59	66	33	57



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0	0	0
Nitration (PA)	%	55	65	33	53
Sulfation (PA)	%	52	53	41	52
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	8	8	9
Sodium	ppm	2	4	4	2
Potassium	ppm	0	<1	<1	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.



WEAR METALS

Iron	ppm	18	12	6	23
Copper	ppm	1	<1	<1	2
Lead	ppm	<1	<1	0	<1
Tin	ppm	0	0	0	<1
Aluminum	ppm	4	3	1	4
Chromium	ppm	2	2	<1	3
Molybdenum	ppm	60	58	55	52
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	0	<1	0	<1
Silver	ppm	<1	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1125	873	814	1132
Magnesium	ppm	998	1104	1106	909
Zinc	ppm	1209	1208	1177	1154
Phosphorus	ppm	990	1093	1059	1012
Barium	ppm	<1	0	0	0
Boron	ppm	7	40	53	3

Depot: LAHBRO

Unique No: 5684024

Signed: Kevin Marson

Report Date: 28 Nov 2023



GRAPHS

