

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [SUBLATUS] LIEBHERR R934 54888 - Diesel Engine

Sample No: LH0225020

Oil Type: Diesel Engine Oil



#### SAMPLE INFORMATION

Sample Number	LH0225020	LH0269741	LH0225121	LH0224993
Sample Date	21 Jan 2024	30 Aug 2023	29 May 2023	15 Mar 2023
Machine Hours	1940	1423	971	577
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

**LIEBHERR CANADA LTD.**  
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#### OIL CONDITION

Visc @ 100°C	cSt	11.7	11.5	12.0	11.8
Oxidation (PA)	%	92	88	99	203



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0	0	0
Nitration (PA)	%	88	83	89	103
Sulfation (PA)	%	62	64	65	114
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	1.3	1.2	<1.0	1
Silicon	ppm	8	8	8	10
Sodium	ppm	5	5	5	3
Potassium	ppm	2	1	0	2

#### 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. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. The condition of the oil is acceptable for the time in service.



#### WEAR METALS

Iron	ppm	7	6	7	13
Copper	ppm	5	14	102	265
Lead	ppm	6	1	4	9
Tin	ppm	<1	<1	<1	2
Aluminum	ppm	2	<1	1	3
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	60	58	58	47
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	0	0	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	0	<1	0	1
Vanadium	ppm	0	0	0	0



#### ADDITIVES

Calcium	ppm	852	831	923	1365
Magnesium	ppm	1147	1140	1145	948
Zinc	ppm	1244	1227	1249	886
Phosphorus	ppm	1033	1063	1014	797
Barium	ppm	0	<1	3	26
Boron	ppm	25	26	37	89

Depot: LIESPR  
 Unique No: 5722485  
 Signed: Bill Quesnel  
 Report Date: 06 Feb 2024



### GRAPHS

