

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R945 055435-1866 - Diesel Engine

Sample No: LH0252141

Oil Type: PETRO CANADA 10W40



SAMPLE INFORMATION

Sample Number	LH0252141	LH0252127	LH0256973	---
Sample Date	27 Nov 2023	31 Jul 2023	27 Mar 2023	---
Machine Hours	2001	1467	1015	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	NORMAL	NORMAL	NORMAL	---

CLOUTHIER VENTURES LTD.
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OIL CONDITION

Visc @ 100°C	cSt	13.2	13.5	13.2	---
Oxidation (PA)	%	64	60	73	---



CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	0	0	0	---
Nitration (PA)	%	67	62	71	---
Sulfation (PA)	%	51	54	62	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	7	8	6	---
Sodium	ppm	2	1	1	---
Potassium	ppm	<1	<1	0	---

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 condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	4	4	6	---
Copper	ppm	2	2	5	---
Lead	ppm	<1	<1	2	---
Tin	ppm	0	<1	<1	---
Aluminum	ppm	1	1	2	---
Chromium	ppm	<1	<1	<1	---
Molybdenum	ppm	58	57	58	---
Nickel	ppm	0	0	<1	---
Titanium	ppm	0	0	<1	---
Silver	ppm	<1	0	0	---
Manganese	ppm	0	<1	<1	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	1046	1050	1163	---
Magnesium	ppm	983	987	961	---
Zinc	ppm	1188	1183	1155	---
Phosphorus	ppm	1009	1062	1053	---
Barium	ppm	<1	<1	2	---
Boron	ppm	4	4	10	---

Depot: CLOPEM
 Unique No: 5684897
 Signed: Kevin Marson
 Report Date: 30 Nov 2023



GRAPHS

