

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [(355226)] LIEBHERR R938 053191-1650 - Diesel Engine

Sample No: LH0274642

Oil Type: PETRO CANADA 10W40



THOMAS CAVANAGH CONSTRUCTION LTD  
RR # 2, 9094 CAVANAGH ROAD  
ASHTON, ON  
CA K0A 1B0  
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### INFORMATION SUR L'ÉCHANTILLON

Numéro d'échant.	LH0274642	LH0279026	LH0195723	LH0237765
Date d'échant.	01 Nov 2023	01 Nov 2023	26 Jul 2023	05 Apr 2023
Heures de la Machine	3610	3610	3133	2606
Heures de l'huile	0	0	0	0
Huile changée	Changed	Changed	Changed	Changed
Statut de l'échant.	ABNORMAL	NORMAL	NORMAL	ABNORMAL



### ÉTAT D'HUILE

Visc 100°C	cSt	11.7	13.2	12.8	11.6
Oxydation (PA)	%	68	71	75	82



### CONTAMINATION

% de suie	%	0	0	0	0
Nitration (PA)	%	68	73	78	87
Sulfatation (PA)	%	53	55	58	66
Glycol	%	NEG	NEG	NEG	NEG
Essence	%	1.5	<1.0	<1.0	1.5
Silicium	ppm	7	7	8	7
Sodium	ppm	2	2	2	4
Potassium	ppm	0	0	1	<1



### MÉTAUX D'USURE

Fer	ppm	3	4	5	5
Cuivre	ppm	2	3	3	2
Plomb	ppm	<1	<1	<1	<1
Étain	ppm	0	0	<1	<1
Aluminium	ppm	1	2	2	2
Chrome	ppm	0	<1	<1	<1
Molybdène	ppm	60	59	57	51
Nickel	ppm	0	0	0	<1
Titane	ppm	0	0	1	8
Argent	ppm	<1	<1	0	0
Manganèse	ppm	0	0	<1	<1
Vanadium	ppm	0	0	0	<1



### ADDITIFS

Calcium	ppm	1071	1066	1055	1039
Magnésium	ppm	981	973	999	1039
Zinc	ppm	1215	1204	1238	1247
Phosphore	ppm	1008	986	1089	1134
Baryum	ppm	<1	<1	<1	0
Bore	ppm	2	1	5	35

### Diagnostic

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.

Depot: CAVASH  
Unique No: 5671951  
Signed: Bill Quesnel  
Report Date: 10 Nov 2023



### GRAPHS

