

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR R944C 018096-793 - Diesel Engine

Sample No: LH0270435

Oil Type: PETRO CANADA 10W40



#### SAMPLE INFORMATION

Sample Number	LH0270435	LH0247514	LH0192815	LH0222743
Sample Date	20 Sep 2023	24 Mar 2023	12 Jul 2022	28 Jan 2022
Machine Hours	25291	24530	23796	23267
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

#### GERDAU METALS

5402 OLD RICHMOND RD  
NEPEAN, ON  
CA K2R 1G7  
Contact: Service Manager



#### OIL CONDITION

Visc @ 40°C	cSt	117	---	---	---
Visc @ 100°C	cSt	16.6	14.7	14.7	14.6
Viscosity Index (VI)	Scale	153	---	---	---
Oxidation (PA)	%	67	74	82	23

T:  
F:

#### Diagnosis

The oil change at the time of sampling has been noted. All component wear rates are normal. Light concentration of carbon/soot present in the oil. The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.



#### CONTAMINATION

Soot %	%	4.3	2.9	2.2	0.3
Nitration (PA)	%	93	97	96	32
Sulfation (PA)	%	80	78	71	37
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	7	6	6
Sodium	ppm	2	2	2	2
Potassium	ppm	0	<1	<1	8



#### WEAR METALS

Iron	ppm	20	21	13	13
Copper	ppm	3	2	2	1
Lead	ppm	2	2	<1	1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	3	3	2	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	54	58	61	62
Nickel	ppm	0	<1	0	<1
Titanium	ppm	0	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



#### ADDITIVES

Calcium	ppm	1145	1255	1133	1125
Magnesium	ppm	883	935	1009	1082
Zinc	ppm	1172	1217	1267	1312
Phosphorus	ppm	1005	1086	1056	1103
Barium	ppm	0	0	0	0
Boron	ppm	8	8	1	2

Depot: GER540NEP  
Unique No: 5645764  
Signed: Wes Davis  
Report Date: 22 Sep 2023



### GRAPHS

