

LIEBHERR

CONSTRUCTION EQUIPMENT



062154-1049 - Diesel Engine

Sample No: LH0123037

Oil Type: PETRO CANADA 10W40



SAMPLE INFORMATION

Sample Number	LH0123037	LH0202957	LH0222350	LH0215988
Sample Date	26 Oct 2023	22 Jun 2023	10 May 2022	11 Nov 2021
Machine Hours	12421	12090	11897	11462
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

American Iron and Metal

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OIL CONDITION

Visc @ 100°C	cSt	13.3	12.9	12.8	13.5
Oxidation (PA)	%	57	54	56	55



CONTAMINATION

Soot %	%	0.4	0	0	0
Nitration (PA)	%	56	49	58	53
Sulfation (PA)	%	53	49	55	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	6	8	6
Sodium	ppm	1	2	2	6
Potassium	ppm	0	<1	1	6

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	6	3	8	5
Copper	ppm	4	5	4	8
Lead	ppm	2	1	4	3
Tin	ppm	0	0	<1	<1
Aluminum	ppm	1	1	2	1
Chromium	ppm	0	0	<1	<1
Molybdenum	ppm	60	58	62	58
Nickel	ppm	0	<1	0	0
Titanium	ppm	0	<1	0	0
Silver	ppm	<1	0	0	0
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1075	1073	1197	1030
Magnesium	ppm	958	944	942	977
Zinc	ppm	1195	1179	1271	1189
Phosphorus	ppm	1008	1047	1098	1034
Barium	ppm	<1	0	0	0
Boron	ppm	1	2	8	2

Depot: BAKOTT
Unique No: 5670253
Signed: Kevin Marson
Report Date: 01 Nov 2023



GRAPHS

