

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L538P 053864-1559 - Diesel Engine

Sample No: LH0281052

Oil Type: PETRO CANADA 10W40



SAMPLE INFORMATION

Sample Number	LH0281052	LH0246902	LH0226618	LH0221933
Sample Date	05 Feb 2024	13 Feb 2023	26 May 2022	11 Jan 2022
Machine Hours	6577	4984	3733	2951
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

RICHMOND STEEL RECYCLING
 11760 MITCHELL ROAD
 RICHMOND, BC
 CA V6V 1V8
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OIL CONDITION

Visc @ 100°C	cSt	13.0	12.8	12.9	13.4
Oxidation (PA)	%	57	63	67	29



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.2	0.3	0
Nitration (PA)	%	58	65	76	34
Sulfation (PA)	%	51	57	60	39
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	6	4	5
Sodium	ppm	2	2	2	1
Potassium	ppm	2	<1	1	1

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	14	13	15	14
Copper	ppm	2	3	4	6
Lead	ppm	2	2	3	2
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	5	3	3	3
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	56	57	60	59
Nickel	ppm	0	<1	<1	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1016	1094	1045	1075
Magnesium	ppm	920	929	958	1016
Zinc	ppm	1149	1159	1230	1250
Phosphorus	ppm	991	1064	1086	1070
Barium	ppm	0	0	0	0
Boron	ppm	2	1	1	3

Depot: RIC117RIC
 Unique No: 5722753
 Signed: Wes Davis
 Report Date: 06 Feb 2024



GRAPHS

