

LIEBHERR

CONSTRUCTION EQUIPMENT



035301-1375 - Diesel Engine

Sample No: LH0274436

Oil Type: PETRO CANADA 10W30



SAMPLE INFORMATION

Sample Number	LH0274436	LH0247329	LH	LH
Sample Date	15 Aug 2023	15 Jan 2023	19 Jan 2022	16 Jul 2021
Machine Hours	13957	0	11963	11248
Oil Hours	0	0	0	0
Oil Changed	Changed	N/A	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

American Iron and Metal
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OIL CONDITION

Visc @ 100°C	cSt	14.8	15.1	13.9	14.1
Oxidation (PA)	%	64	52	61	59



CONTAMINATION

Soot %	%	2.3	1.9	2.1	1.8
Nitration (PA)	%	80	68	75	69
Sulfation (PA)	%	67	64	66	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	6	6	6
Sodium	ppm	5	3	2	1
Potassium	ppm	2	<1	0	<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	18	20	30	24
Copper	ppm	2	2	5	8
Lead	ppm	<1	2	2	1
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	2	3	2	1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	63	61	63	62
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	<1	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1072	1158	1113	1085
Magnesium	ppm	1060	1016	1079	1044
Zinc	ppm	1238	1221	1258	1230
Phosphorus	ppm	1071	1075	1093	1070
Barium	ppm	0	0	0	0
Boron	ppm	7	2	4	2

Depot: AIMMON
 Unique No: 5629095
 Signed: Wes Davis
 Report Date: 16 Aug 2023



GRAPHS

