

LIEBHERR

CONSTRUCTION EQUIPMENT



116431-1217 - Diesel Engine

Sample No: LH0278857

Oil Type: PETRO CANADA 10W40



Sample Information

Sample Number	LH0278857	LH0277753	LH0270562	LH0222875
Sample Date	30 Apr 2024	08 Jan 2024	25 Sep 2023	09 May 2023
Machine Hours	8543	8104	7608	7133
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

American Iron and Metal

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Oil Condition

Visc @ 100°C	cSt	11.4	13.0	12.8	12.5
Oxidation (PA)	%	81	67	65	69



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0	0	0
Nitration (PA)	%	88	73	74	84
Sulfation (PA)	%	57	53	53	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	1.1	<1.0	<1.0	<1.0
Silicon	ppm	6	6	7	6
Sodium	ppm	4	1	2	2
Potassium	ppm	0	<1	0	0

Diagnosis

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. Calcium ppm levels are abnormally low. Visc @ 100°C is abnormally low. Viscosity of sample indicates oil is within SAE 30 range, advise investigate.



Wear Metals

Iron	ppm	4	4	5	5
Copper	ppm	<1	<1	3	3
Lead	ppm	0	<1	1	<1
Tin	ppm	0	0	0	<1
Aluminum	ppm	1	1	2	1
Chromium	ppm	0	0	0	0
Molybdenum	ppm	58	57	59	59
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	0	0	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	0	0	0	<1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	844	1132	1127	1133
Magnesium	ppm	1086	925	976	950
Zinc	ppm	1170	1162	1244	1241
Phosphorus	ppm	973	1000	1021	1111
Barium	ppm	0	0	<1	0
Boron	ppm	30	6	1	1

Depot: BAKOTT
Unique No: 5775001
Signed: Kevin Marson
Report Date: 08 May 2024



Graphs

