

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR HS8100 184947 - Diesel Engine

Sample No: LH0278870

Oil Type: PETRO CANADA SUPREME 5W30



SAMPLE INFORMATION

Sample Number	LH0278870	LH0239507	LH0235040	LH
Sample Date	26 Jan 2024	05 May 2023	08 Jul 2022	09 Jul 2021
Machine Hours	15056	13236	11198	8863
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	ATTENTION	ATTENTION	NORMAL

HIGGS & HIGGS

RR # 4

ST THOMAS, ON

CA N5P 3S8

Contact: Bernie Higgs



OIL CONDITION

Visc @ 100°C	cSt	12.0	14.3	12.7	12.8
Oxidation (PA)	%	92	155	108	97

T: (519)631-4095

F: (519)631-2745



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0	0	0
Nitration (PA)	%	98	163	114	92
Sulfation (PA)	%	63	88	75	66
Glycol	%	0.0	0.0	0.0	0.0
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	12	10	7
Sodium	ppm	275	544	333	116
Potassium	ppm	13	35	24	9

Diagnosis

Check for low coolant level. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. Water treatment chemicals present, indicating slow coolant leak. Test for glycol is negative. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service (see recommendation).



WEAR METALS

Iron	ppm	10	17	9	14
Copper	ppm	1	2	2	3
Lead	ppm	<1	<1	<1	<1
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	1	2	<1	1
Chromium	ppm	<1	1	<1	<1
Molybdenum	ppm	70	70	62	63
Nickel	ppm	0	<1	0	<1
Titanium	ppm	0	<1	<1	<1
Silver	ppm	<1	0	0	<1
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	817	916	883	847
Magnesium	ppm	1086	1154	1156	1202
Zinc	ppm	1169	1262	1286	1292
Phosphorus	ppm	957	1095	1058	1123
Barium	ppm	0	0	0	<1
Boron	ppm	17	21	16	20

Depot: HIGSTT

Unique No: 5721232

Signed: Bill Quesnel

Report Date: 31 Jan 2024



GRAPHS

