

LIEBHERR

CONSTRUCTION EQUIPMENT



[(361220)] LIEBHERR LH50M 134706-1216 - Diesel Engine

Sample No: LH0234443

Oil Type: PETRO CANADA SUPREME 5W30



SAMPLE INFORMATION

Sample Number	LH0234443	LH0250105	LH0242765	LH0242829
Sample Date	15 Jun 2023	27 Mar 2023	21 Jan 2023	31 Oct 2022
Machine Hours	3528	2610	2610	2020
Oil Hours	0	0	0	0
Oil Changed	Not Chngd	N/A	N/A	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

Industrial Metals

550 Messier St.
Winnipeg, MB
CA R2J 0G5
Contact: Service Manager



OIL CONDITION

Visc @ 100°C	cSt	13.6	13.5	12.0	13.3
Oxidation (PA)	%	66	65	82	77

T:
F:



CONTAMINATION

Soot %	%	0	0	0	0
Nitration (PA)	%	69	67	84	74
Sulfation (PA)	%	52	60	60	58
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	1.6	<1.0
Silicon	ppm	6	6	6	6
Sodium	ppm	1	2	4	2
Potassium	ppm	<1	0	<1	0

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. Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.



WEAR METALS

Iron	ppm	3	3	4	4
Copper	ppm	2	5	2	8
Lead	ppm	<1	<1	<1	<1
Tin	ppm	0	0	0	<1
Aluminum	ppm	<1	1	2	1
Chromium	ppm	<1	0	0	0
Molybdenum	ppm	59	59	57	45
Nickel	ppm	0	<1	<1	0
Titanium	ppm	0	<1	<1	<1
Silver	ppm	<1	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1012	1133	935	1422
Magnesium	ppm	984	989	1097	731
Zinc	ppm	1197	1231	1244	1183
Phosphorus	ppm	1070	1105	1123	1074
Barium	ppm	0	<1	0	0
Boron	ppm	2	8	45	13

Depot: IND550WIN
Unique No: 5606266
Signed: Kevin Marson
Report Date: 12 Jul 2023



GRAPHS

