

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR 134249 - Diesel Engine

Sample No: LH0286370

Oil Type: PETRO CANADA SUPREME 5W30



Sample Information

Sample Number	LH0286370	LH0225104	LH0225038	---
Sample Date	23 Apr 2024	14 Feb 2023	29 Sep 2022	---
Machine Hours	4909	4260	2848	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	N/A	---
Sample Status	NORMAL	NORMAL	NORMAL	---

WARD AND BURKE MICROTUNNELLING LTD
 9279 BARLOW TRAIL SE
 CALGARY, AB
 CA T2C 2N8
 Contact: Service Manager
 canadainfo@wardandburke.com
 T:
 F:



Oil Condition

Visc @ 100°C	cSt	11.7	11.7	11.6	---
Oxidation (PA)	%	72	77	104	---



Contamination

Water	%	NEG	NEG	NEG	---
Soot %	%	0	0	0	---
Nitration (PA)	%	72	79	91	---
Sulfation (PA)	%	55	61	68	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	5	7	8	---
Sodium	ppm	4	4	5	---
Potassium	ppm	<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	3	3	7	---
Copper	ppm	2	2	23	---
Lead	ppm	0	<1	1	---
Tin	ppm	0	<1	<1	---
Aluminum	ppm	<1	1	1	---
Chromium	ppm	0	0	<1	---
Molybdenum	ppm	62	59	63	---
Nickel	ppm	0	<1	0	---
Titanium	ppm	0	<1	<1	---
Silver	ppm	0	0	<1	---
Manganese	ppm	0	<1	<1	---
Vanadium	ppm	0	0	0	---



Additives

Calcium	ppm	879	837	894	---
Magnesium	ppm	1089	1114	1158	---
Zinc	ppm	1189	1211	1223	---
Phosphorus	ppm	1007	1116	1049	---
Barium	ppm	<1	0	2	---
Boron	ppm	51	39	24	---

Depot: WARCAL
 Unique No: 5776360
 Signed: Wes Davis
 Report Date: 14 May 2024



Graphs

