

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L586 058671-1334 - Diesel Engine

Sample No: LH0260106

Oil Type: DIESEL ENGINE OIL SAE 30



SAMPLE INFORMATION

Sample Number	LH0260106	LH0150833	LH0199519	---
Sample Date	07 Aug 2023	16 Dec 2022	07 Jul 2022	---
Machine Hours	6000	5000	0	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	SEVERE	NORMAL	NORMAL	---

Bird's Hill Gravel and Stone Ltd.

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OIL CONDITION

Visc @ 100°C	cSt	14.2	13.6	12.4	---
Oxidation (PA)	%	121	76	104	---



CONTAMINATION

Soot %	%	0.2	0	0.1	---
Nitration (PA)	%	125	78	98	---
Sulfation (PA)	%	80	61	76	---
Glycol	%	0.0	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	21	12	8	---
Sodium	ppm	3	2	3	---
Potassium	ppm	12	7	16	---



WEAR METALS

Iron	ppm	37	12	23	---
Copper	ppm	10	7	47	---
Lead	ppm	<1	<1	3	---
Tin	ppm	2	<1	2	---
Aluminum	ppm	13	8	6	---
Chromium	ppm	11	4	1	---
Molybdenum	ppm	37	39	46	---
Nickel	ppm	<1	0	0	---
Titanium	ppm	<1	<1	<1	---
Silver	ppm	<1	0	<1	---
Manganese	ppm	<1	<1	<1	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	1363	1431	1385	---
Magnesium	ppm	630	654	787	---
Zinc	ppm	1119	1156	1187	---
Phosphorus	ppm	938	1058	928	---
Barium	ppm	1	<1	4	---
Boron	ppm	15	21	17	---

Diagnosis

We advise that you check for faulty combustion and a possible overheat condition. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Chromium ppm levels are severe. Ring wear is indicated. A cylinder ring may be cracked or broken. The water content is negligible. There is no indication of any contamination in the oil. A small degree of oil oxidation was indicated. Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: BIRWIN

Unique No: 5619517

Signed: Kevin Marson

Report Date: 08 Aug 2023



GRAPHS

