

LIEBHERR

CONSTRUCTION EQUIPMENT



[ZANCON FOUNDATIONS] LIEBHERR LB28 115549 - Diesel Eng

Sample No: LH0277554

Oil Type: PETRO CANADA 10W40



SAMPLE INFORMATION

Sample Number	LH0277554	LH0261809	---	---
Sample Date	14 Feb 2024	16 May 2023	---	---
Machine Hours	6734	5786	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	ABNORMAL	NORMAL	---	---

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OIL CONDITION

Visc @ 100°C	cSt	14.0	14.5	---	---
Oxidation (PA)	%	63	52	---	---



CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	1	0.3	---	---
Nitration (PA)	%	70	49	---	---
Sulfation (PA)	%	59	51	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	7	4	---	---
Sodium	ppm	2	1	---	---
Potassium	ppm	<1	0	---	---

Diagnosis

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Aluminum ppm levels are abnormal. Piston wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.



WEAR METALS

Iron	ppm	47	13	---	---
Copper	ppm	4	1	---	---
Lead	ppm	1	<1	---	---
Tin	ppm	<1	<1	---	---
Aluminum	ppm	20	5	---	---
Chromium	ppm	4	1	---	---
Molybdenum	ppm	55	52	---	---
Nickel	ppm	<1	<1	---	---
Titanium	ppm	0	<1	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	0	<1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	1388	1336	---	---
Magnesium	ppm	858	860	---	---
Zinc	ppm	1170	1138	---	---
Phosphorus	ppm	1008	1051	---	---
Barium	ppm	<1	0	---	---
Boron	ppm	14	12	---	---

Depot: LIEMIS
 Unique No: 5733313
 Signed: Kevin Marson
 Report Date: 16 Feb 2024



GRAPHS

