

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L580 066027-1760 - Diesel Engine

Sample No: LH0225596

Oil Type: 49 NORTH ADV HD CK-4 10W30



SAMPLE INFORMATION

Sample Number	LH0225596	LH0225585	LH0225593	---
Sample Date	17 Mar 2023	09 Jan 2023	04 Jan 2023	---
Machine Hours	1969	962	1563	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Not Changd	---
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	---

GENERAL RECYCLING INDUSTRIES LTD.
 4120 - 84 AVENUE
 EDMONTON, AB
 CA T6B 3H3
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OIL CONDITION

Visc @ 100°C	cSt	10.7	11.4	10.8	---
Oxidation (PA)	%	69	80	65	---



CONTAMINATION

Soot %	%	0	0	0	---
Nitration (PA)	%	66	55	53	---
Sulfation (PA)	%	57	64	57	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	2.3	1.5	2	---
Silicon	ppm	4	6	4	---
Sodium	ppm	2	1	1	---
Potassium	ppm	<1	0	0	---



WEAR METALS

Iron	ppm	8	4	5	---
Copper	ppm	130	6	3	---
Lead	ppm	5	<1	1	---
Tin	ppm	<1	<1	<1	---
Aluminum	ppm	<1	1	1	---
Chromium	ppm	<1	0	0	---
Molybdenum	ppm	56	54	55	---
Nickel	ppm	0	<1	0	---
Titanium	ppm	0	<1	<1	---
Silver	ppm	<1	0	0	---
Manganese	ppm	<1	<1	<1	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	1048	1148	1082	---
Magnesium	ppm	950	935	918	---
Zinc	ppm	1185	1142	1165	---
Phosphorus	ppm	1058	1063	1074	---
Barium	ppm	1	2	<1	---
Boron	ppm	3	15	3	---

Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. Copper ppm levels are noted. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal. Light fuel dilution occurring. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is acceptable for the time in service.

Depot: GEN156EDM
Unique No: 5629767
Signed: Kevin Marson
Report Date: 21 Aug 2023



GRAPHS

