

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [AECON] LIEBHERR LB28 115656 - Diesel Engine

Sample No: LH0250375

Oil Type: PETRO CANADA SUPREME 5W30



#### SAMPLE INFORMATION

Sample Number	LH0250375	LH0151102	LH0203769	LH0177737
Sample Date	07 Nov 2023	10 Feb 2022	30 May 2021	17 Dec 2020
Machine Hours	7358	9333	3000	2171
Oil Hours	338	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

LIEBHERR CANADA LTD.

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#### OIL CONDITION

Visc @ 100°C	cSt	11.7	12.1	12.2	12.5
Oxidation (PA)	%	82	75	86	98



#### CONTAMINATION

Soot %	%	0	0	0	0.1
Nitration (PA)	%	78	78	87	94
Sulfation (PA)	%	58	59	63	69
Glycol	%	NEG	NEG	NEG	0.0
Fuel	%	1.2	<1.0	<1.0	<1.0
Silicon	ppm	9	7	5	5
Sodium	ppm	6	4	4	4
Potassium	ppm	16	2	3	37



#### WEAR METALS

Iron	ppm	10	4	7	18
Copper	ppm	8	1	4	24
Lead	ppm	<1	<1	<1	2
Tin	ppm	<1	<1	<1	1
Aluminum	ppm	5	2	2	8
Chromium	ppm	<1	<1	<1	1
Molybdenum	ppm	55	57	53	46
Nickel	ppm	0	<1	<1	<1
Titanium	ppm	0	<1	8	<1
Silver	ppm	<1	<1	<1	<1
Manganese	ppm	2	<1	<1	<1
Vanadium	ppm	0	0	<1	0



#### ADDITIVES

Calcium	ppm	857	818	967	1180
Magnesium	ppm	1081	1154	1076	957
Zinc	ppm	1190	1226	1296	1223
Phosphorus	ppm	968	1095	1016	958
Barium	ppm	18	0	<1	3
Boron	ppm	41	48	27	12

#### Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time. Metal levels are typical for a new component breaking in. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring. No other contaminants were detected in the oil. The condition of the oil is acceptable for the time in service.

Depot: LIESPR

Unique No: 5672358

Signed: Bill Quesnel

Report Date: 10 Nov 2023



### GRAPHS

