

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### C21.04.90157 - Diesel Engine

Sample No: LH0277800  
 Oil Type: DIESEL ENGINE OIL SAE 10W30



#### SAMPLE INFORMATION

Sample Number	LH0277800	LH0257051	---	---
Sample Date	20 Nov 2023	16 Mar 2023	---	---
Machine Hours	0	0	---	---
Oil Hours	0	0	---	---
Oil Changed	N/A	Not Changd	---	---
Sample Status	NORMAL	NORMAL	---	---

**LIEBHERR CANADA LTD. - REMAN**  
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#### OIL CONDITION

Visc @ 100°C	cSt	11.8	11.3	---	---
Oxidation (PA)	%	73	69	---	---



#### CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0	0	---	---
Nitration (PA)	%	62	56	---	---
Sulfation (PA)	%	58	61	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	1	1.2	---	---
Silicon	ppm	7	7	---	---
Sodium	ppm	14	5	---	---
Potassium	ppm	0	9	---	---

#### Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. The condition of the oil is acceptable for the time in service.



#### WEAR METALS

Iron	ppm	11	11	---	---
Copper	ppm	5	4	---	---
Lead	ppm	2	1	---	---
Tin	ppm	<1	2	---	---
Aluminum	ppm	1	3	---	---
Chromium	ppm	0	0	---	---
Molybdenum	ppm	59	47	---	---
Nickel	ppm	0	0	---	---
Titanium	ppm	0	<1	---	---
Silver	ppm	<1	0	---	---
Manganese	ppm	0	<1	---	---
Vanadium	ppm	0	0	---	---



#### ADDITIVES

Calcium	ppm	866	910	---	---
Magnesium	ppm	1123	1037	---	---
Zinc	ppm	1221	1107	---	---
Phosphorus	ppm	1046	1032	---	---
Barium	ppm	2	6	---	---
Boron	ppm	59	73	---	---

Depot: REMAN  
 Unique No: 5682840  
 Signed: Kevin Marson  
 Report Date: 22 Nov 2023



### GRAPHS

