

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### C22.03.90121 - Diesel Engine

Sample No: LH0270593  
 Oil Type: NOT GIVEN



#### SAMPLE INFORMATION

Sample Number	LH0270593	---	---	---
Sample Date	14 Jul 2023	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	SEVERE	---	---	---

**LIEBHERR CANADA LTD. - REMAN**  
 1015 SUTTON DRIVE  
 BURLINGTON, ON  
 CA L7L 5Z8  
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#### OIL CONDITION

Visc @ 100°C	cSt	● 9.5	---	---	---
Oxidation (PA)	%	49	---	---	---



#### CONTAMINATION

Soot %	%	● 0	---	---	---
Nitration (PA)	%	42	---	---	---
Sulfation (PA)	%	47	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	● 12.7	---	---	---
Silicon	ppm	● 7	---	---	---
Sodium	ppm	● 3	---	---	---
Potassium	ppm	● 3	---	---	---



#### WEAR METALS

Iron	ppm	● 1	---	---	---
Copper	ppm	● 4	---	---	---
Lead	ppm	● 1	---	---	---
Tin	ppm	● 0	---	---	---
Aluminum	ppm	● <1	---	---	---
Chromium	ppm	● 0	---	---	---
Molybdenum	ppm	● 46	---	---	---
Nickel	ppm	● 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	● 0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



#### ADDITIVES

Calcium	ppm	● 987	---	---	---
Magnesium	ppm	● 775	---	---	---
Zinc	ppm	● 1004	---	---	---
Phosphorus	ppm	● 923	---	---	---
Barium	ppm	● <1	---	---	---
Boron	ppm	● 20	---	---	---

#### Diagnosis

We advise that you check the fuel injection system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Depot: REMAN  
 Unique No: 5607373  
 Signed: Wes Davis  
 Report Date: 18 Jul 2023



### GRAPHS

