

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 2018042455 (S/N 001270-013) - Diesel Engine

Sample No: LH0281565

Oil Type: {unknown}



#### SAMPLE INFORMATION

Sample Number	LH0281565	---	---	---
Sample Date	10 Dec 2023	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	NORMAL	---	---	---

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

Visc @ 100°C	cSt	● 11.9	---	---	---
Oxidation (PA)	%	200	---	---	---



#### CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	● 0	---	---	---
Nitration (PA)	%	89	---	---	---
Sulfation (PA)	%	111	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	● 1	---	---	---
Silicon	ppm	● 9	---	---	---
Sodium	ppm	● 4	---	---	---
Potassium	ppm	● 15	---	---	---



#### WEAR METALS

Iron	ppm	● 12	---	---	---
Copper	ppm	● 123	---	---	---
Lead	ppm	● 4	---	---	---
Tin	ppm	● <1	---	---	---
Aluminum	ppm	● 5	---	---	---
Chromium	ppm	● <1	---	---	---
Molybdenum	ppm	● 48	---	---	---
Nickel	ppm	● <1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	● <1	---	---	---
Manganese	ppm	2	---	---	---
Vanadium	ppm	0	---	---	---



#### ADDITIVES

Calcium	ppm	● 1308	---	---	---
Magnesium	ppm	● 890	---	---	---
Zinc	ppm	● 787	---	---	---
Phosphorus	ppm	● 596	---	---	---
Barium	ppm	● 31	---	---	---
Boron	ppm	● 82	---	---	---

#### Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 30 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample. All component wear rates are normal. 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: REMAN  
 Unique No: 5696148  
 Signed: Kevin Marson  
 Report Date: 18 Dec 2023



### GRAPHS

