

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LRB18 111076 - Diesel Engine

Sample No: LHMC161368

Oil Type: LIEBHERR MOTOROIL 5W-30 LOW ASH



#### SAMPLE INFORMATION

Sample Number	LHMC161368	LHMC161060	---	---
Sample Date	28 Oct 2022	25 Oct 2022	---	---
Machine Hours	4415	4500	---	---
Oil Hours	5	300	---	---
Oil Changed	Changed	N/A	---	---
Sample Status	NORMAL	SEVERE	---	---

**LIEBHERR CRANE INC**  
 7075 BENNINGTON ST  
 HOUSTON, TX  
 US 77028  
 Contact: BRETT YOUNG  
 brett.young@liebherr.com  
 T:  
 F: (713)636-4039



#### OIL CONDITION

Visc @ 100°C	cSt	● 12.2	● 6.1	---	---
Base Number (BN)	mg KOH/g	● 10.9	● 14.4	---	---
Oxidation (PA)	%	49	35	---	---

#### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



#### CONTAMINATION

Soot %	%	● 0.1	● 0.1	---	---
Nitration (PA)	%	68	87	---	---
Sulfation (PA)	%	50	39	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	● 24.6	---	---
Silicon	ppm	● 7	● 5	---	---
Sodium	ppm	● 1	● <1	---	---
Potassium	ppm	● 4	● 2	---	---



#### WEAR METALS

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



#### ADDITIVES

Calcium	ppm	● 1970	3305	---	---
Magnesium	ppm	● 510	● 12	---	---
Zinc	ppm	● 896	● 916	---	---
Phosphorus	ppm	● 775	● 784	---	---
Barium	ppm	● 0	● 0	---	---
Boron	ppm	● 134	● 186	---	---

Depot: LIEHOU  
 Unique No: 10206541  
 Signed: Wes Davis  
 Report Date: 08 Nov 2022



### GRAPHS

