

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH110 1227-155752 - Diesel Engine

Sample No: LH0280561

Oil Type: HDMO SYN BLEND 15W40 CK4



**KINDER MORGAN**  
4301 IVERSON  
TRINITY, AL  
US 35601  
Contact: CHIP OAKES

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#### Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



#### SAMPLE INFORMATION

Sample Number	LH0280561	LH0280558	---	---
Sample Date	11 Jan 2024	28 Dec 2023	---	---
Machine Hours	507	277	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	ATTENTION	ATTENTION	---	---



#### OIL CONDITION

Visc @ 100°C	cSt	12.1	12.0	---	---
Base Number (BN)	mg KOH/g	5.6	6.2	---	---
Oxidation (PA)	%	180	197	---	---



#### CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.1	0.1	---	---
Nitration (PA)	%	88	87	---	---
Sulfation (PA)	%	101	107	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	1.2	1.3	---	---
Silicon	ppm	9	10	---	---
Sodium	ppm	3	3	---	---
Potassium	ppm	3	2	---	---



#### WEAR METALS

Iron	ppm	5	4	---	---
Copper	ppm	29	12	---	---
Lead	ppm	2	2	---	---
Tin	ppm	1	1	---	---
Aluminum	ppm	2	2	---	---
Chromium	ppm	<1	<1	---	---
Molybdenum	ppm	48	43	---	---
Nickel	ppm	<1	<1	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	0	0	---	---



#### ADDITIVES

Calcium	ppm	1196	1200	---	---
Magnesium	ppm	771	818	---	---
Zinc	ppm	853	801	---	---
Phosphorus	ppm	723	691	---	---
Barium	ppm	25	28	---	---
Boron	ppm	153	125	---	---

**Depot:** KINTRI  
**Unique No:** 10847995  
**Signed:** Don Baldrige  
**Report Date:** 29 Jan 2024



### GRAPHS

