

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH110 155976-1227 - Diesel Engine

Sample No: LH0280572

Oil Type: DIESEL ENGINE OIL SAE 15W40



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

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#### Diagnosis

Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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.



#### SAMPLE INFORMATION

Sample Number	LH0280572	LH0280569	LH0280558	---
Sample Date	15 Feb 2024	30 Jan 2024	09 Jan 2024	---
Machine Hours	874	534	166	---
Oil Hours	0	0	0	---
Oil Changed	Not Changd	Changed	Not Changd	---
Sample Status	NORMAL	ABNORMAL	ATTENTION	---



#### OIL CONDITION

Visc @ 100°C	cSt	12.8	12.1	12.0	---
Base Number (BN)	mg KOH/g	7.1	5.7	7.1	---
Oxidation (PA)	%	73	180	193	---



#### CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	0.1	0.1	0.1	---
Nitration (PA)	%	59	90	73	---
Sulfation (PA)	%	61	101	108	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	1.0	---
Silicon	ppm	9	11	8	---
Sodium	ppm	3	2	3	---
Potassium	ppm	2	3	2	---



#### WEAR METALS

Iron	ppm	5	8	4	---
Copper	ppm	22	141	16	---
Lead	ppm	<1	0	<1	---
Tin	ppm	<1	0	<1	---
Aluminum	ppm	3	2	2	---
Chromium	ppm	<1	<1	<1	---
Molybdenum	ppm	79	55	42	---
Nickel	ppm	<1	0	<1	---
Titanium	ppm	<1	0	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	<1	0	<1	---
Vanadium	ppm	<1	0	0	---



#### ADDITIVES

Calcium	ppm	1152	1251	1202	---
Magnesium	ppm	439	858	808	---
Zinc	ppm	1060	938	794	---
Phosphorus	ppm	863	686	693	---
Barium	ppm	36	32	15	---
Boron	ppm	335	142	140	---

Depot: KINTRI  
Unique No: 10898140  
Signed: Wes Davis  
Report Date: 27 Feb 2024



### GRAPHS

