

LIEBHERR

CONSTRUCTION EQUIPMENT



[[MALVERN MINERALS]] FORKLIFT NISSIAN APIF2-9U24393 9U24393 - Die

Sample No: LHMC121713
 Oil Type: DIESEL ENGINE OIL SAE 15W40



SAMPLE INFORMATION

Sample Number	LHMC121713	LHMC121712	---	---
Sample Date	30 Aug 2023	23 May 2023	---	---
Machine Hours	3673	250	---	---
Oil Hours	0	0	---	---
Oil Changed	N/A	Not Changd	---	---
Sample Status	ATTENTION	ABNORMAL	---	---

LIFT TRUCK SERVICE

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 LITTLE ROCK, AR
 US 72209
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OIL CONDITION

Visc @ 100°C	cSt	● 11.9	9.8	---	---
Base Number (BN)	mg KOH/g	● 6.5	● 10.1	---	---
Oxidation (PA)	%	28	38	---	---

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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Soot %	%	● 0.1	● 0.2	---	---
Nitration (PA)	%	41	64	---	---
Sulfation (PA)	%	37	37	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	● 0.4	---	---
Silicon	ppm	● 13	● 78	---	---
Sodium	ppm	● 1	● 4	---	---
Potassium	ppm	● 2	● 7	---	---



WEAR METALS

Iron	ppm	● 58	● 271	---	---
Copper	ppm	● <1	● 2	---	---
Lead	ppm	● 4	● 7	---	---
Tin	ppm	● <1	● 2	---	---
Aluminum	ppm	● 9	● 29	---	---
Chromium	ppm	● <1	● 4	---	---
Molybdenum	ppm	● 36	● 42	---	---
Nickel	ppm	● 0	● <1	---	---
Titanium	ppm	● <1	<1	---	---
Silver	ppm	● 0	● 0	---	---
Manganese	ppm	● 2	5	---	---
Vanadium	ppm	0	<1	---	---



ADDITIVES

Calcium	ppm	● 894	● 984	---	---
Magnesium	ppm	● 819	● 786	---	---
Zinc	ppm	● 1104	● 1179	---	---
Phosphorus	ppm	● 917	● 977	---	---
Barium	ppm	● 0	● 0	---	---
Boron	ppm	● 2	● 6	---	---

Depot: LIFLIT
 Unique No: 10633433
 Signed: Sean Felton
 Report Date: 08 Sep 2023



GRAPHS

