

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R936LC 28 (S/N 047223-2149) - Diesel Engine

Sample No: LHMC93459

Oil Type: LIEBHERR MOTOROIL 10W-40 LOW ASH



Sample Information

Sample Number	LHMC93459	---	---	---
Sample Date	06 Jun 2024	---	---	---
Machine Hours	4894	---	---	---
Oil Hours	0	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	ATTENTION	---	---	---

BANE MACHINERY INC
 2449 MANANA DR
 DALLAS, TX
 US 75220
 Contact: BOBBIE WADLEY
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 F:



Oil Condition

Visc @ 100°C	cSt	12.2	---	---	---
Base Number (BN)	mg KOH/g	8.5	---	---	---
Oxidation (PA)	%	155	---	---	---

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Tests indicate that there is no fuel present in the oil. 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

Water	%	NEG	---	---	---
Soot %	%	0.1	---	---	---
Nitration (PA)	%	63	---	---	---
Sulfation (PA)	%	93	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	0.4	---	---	---
Silicon	ppm	29	---	---	---
Sodium	ppm	4	---	---	---
Potassium	ppm	4	---	---	---



Wear Metals

Iron	ppm	16	---	---	---
Copper	ppm	23	---	---	---
Lead	ppm	1	---	---	---
Tin	ppm	<1	---	---	---
Aluminum	ppm	6	---	---	---
Chromium	ppm	1	---	---	---
Molybdenum	ppm	44	---	---	---
Nickel	ppm	<1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	5	---	---	---
Vanadium	ppm	<1	---	---	---



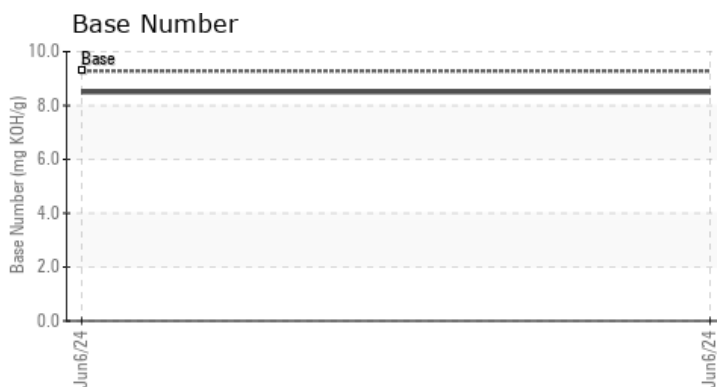
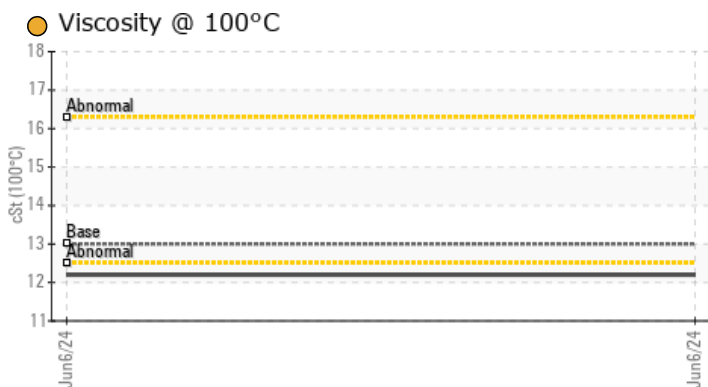
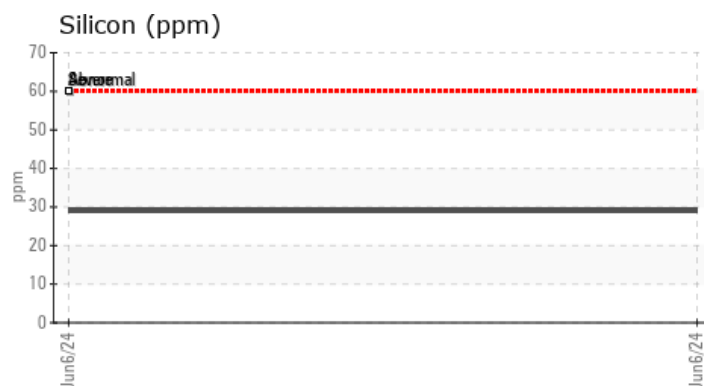
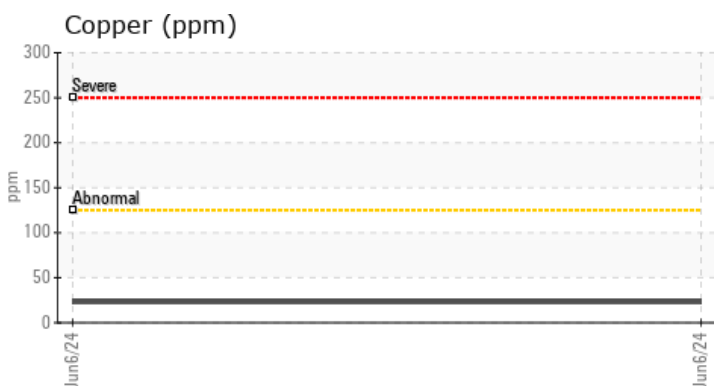
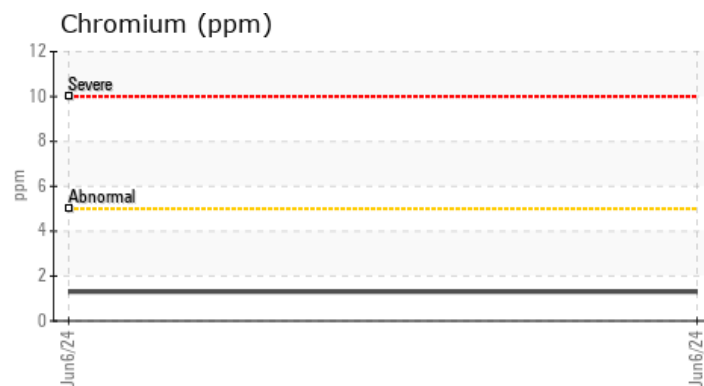
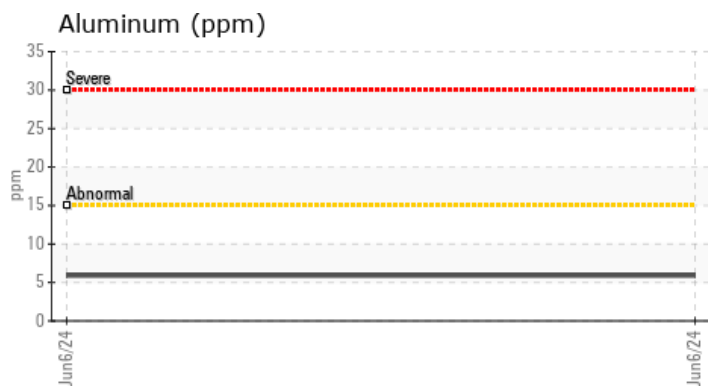
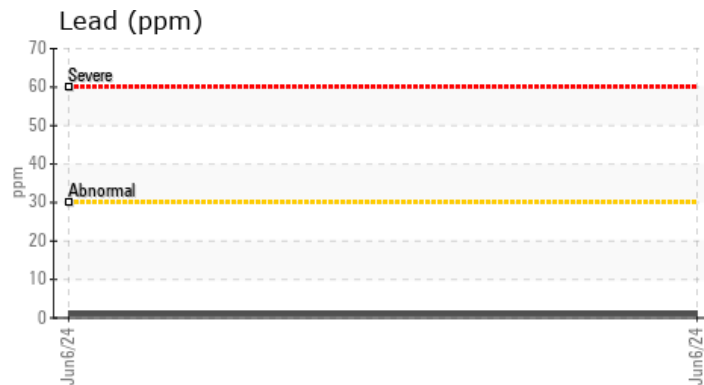
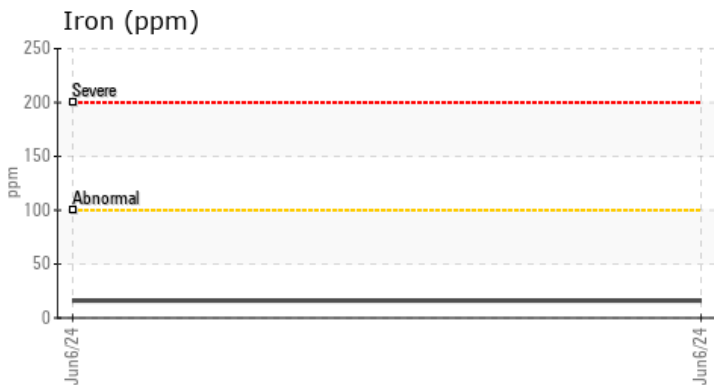
Additives

Calcium	ppm	1642	---	---	---
Magnesium	ppm	683	---	---	---
Zinc	ppm	875	---	---	---
Phosphorus	ppm	764	---	---	---
Barium	ppm	1	---	---	---
Boron	ppm	145	---	---	---

Depot: BANDAL
Unique No: 11115574
Signed: Sean Felton
Report Date: 12 Jul 2024



Graphs



LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R936LC 047 223-2149 - Diesel Fuel

Sample No: LHMC93456

Oil Type: NOT GIVEN



SAMPLE INFORMATION

Sample Number	LHMC93456	---	---	---
Sample Date	10 Dec 2023	---	---	---
Machine Hours	4596	---	---	---
Sample Status	NORMAL	---	---	---



FUEL CONDITION

Sulfur	ppm	0	---	---	---
Visc @ 40°C	cSt	2.6	---	---	---



CONTAMINATION

Water	%	0.003	---	---	---
Lead	ppm	0	---	---	---
Nickel	ppm	0	---	---	---
Aluminum	ppm	0	---	---	---
Vanadium	ppm	0	---	---	---
Silicon	ppm	0	---	---	---

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Diagnosis

This is a baseline read-out on the submitted sample. No corrective action is recommended at this time. All metal levels are normal indicating no corrosion in the system. The water content is negligible. There is no indication of any contamination in the fuel. The condition of the fuel is acceptable for the time in service.

Depot: BANDAL
Unique No: 10804851
Signed: Jonathan Hester
Report Date: 29 Dec 2023



GRAPHS

Pensky-Martens Flash Point (°C)

