

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R944BEW 012047-653 - Diesel Engine

Sample No: LHMC91087

Oil Type: DRYDENE DUAL RANGE HYD 15W30



SAMPLE INFORMATION

Sample Number	LHMC91087	LHMC100336	---	---
Sample Date	07 Nov 2023	13 Feb 2023	---	---
Machine Hours	0	0	---	---
Oil Hours	500	0	---	---
Oil Changed	Changed	N/A	---	---
Sample Status	SEVERE	MARGINAL	---	---

RECO EQUIPMENT INC.

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OIL CONDITION

Visc @ 100°C	cSt	6.9	12.3	---	---
Base Number (BN)	mg KOH/g	8.9	6.6	---	---
Oxidation (PA)	%	47	76	---	---



CONTAMINATION

Soot %	%	0.2	0.5	---	---
Nitration (PA)	%	78	93	---	---
Sulfation (PA)	%	47	60	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	24.5	3.4	---	---
Silicon	ppm	20	5	---	---
Sodium	ppm	362	2	---	---
Potassium	ppm	58	2	---	---



WEAR METALS

Iron	ppm	28	28	---	---
Copper	ppm	84	<1	---	---
Lead	ppm	15	1	---	---
Tin	ppm	2	<1	---	---
Aluminum	ppm	4	5	---	---
Chromium	ppm	1	1	---	---
Molybdenum	ppm	42	14	---	---
Nickel	ppm	<1	0	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	1099	2219	---	---
Magnesium	ppm	266	121	---	---
Zinc	ppm	863	1053	---	---
Phosphorus	ppm	701	864	---	---
Barium	ppm	0	0	---	---
Boron	ppm	31	8	---	---

Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Depot: LEC0070
Unique No: 10739819
Signed: Jonathan Hester
Report Date: 16 Nov 2023



GRAPHS

