

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH60M 111993-1217 - Diesel Engine

Sample No: LH0236571

Oil Type: CHEVRON URSA SUPER PLUS EC 15W40



SAMPLE INFORMATION

Sample Number	LH0236571	---	---	---
Sample Date	20 Feb 2023	---	---	---
Machine Hours	6200	---	---	---
Oil Hours	500	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	SEVERE	---	---	---

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OIL CONDITION

Visc @ 100°C	cSt	3.7	---	---	---
Base Number (BN)	mg KOH/g	5.6	---	---	---
Oxidation (PA)	%	34	---	---	---



CONTAMINATION

Soot %	%	0.1	---	---	---
Nitration (PA)	%	59	---	---	---
Sulfation (PA)	%	39	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	55.3	---	---	---
Silicon	ppm	7	---	---	---
Sodium	ppm	1	---	---	---
Potassium	ppm	5	---	---	---

Diagnosis

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. 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. The oil is no longer serviceable due to the presence of contaminants.



WEAR METALS

Iron	ppm	8	---	---	---
Copper	ppm	1	---	---	---
Lead	ppm	0	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	5	---	---	---
Chromium	ppm	1	---	---	---
Molybdenum	ppm	1	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

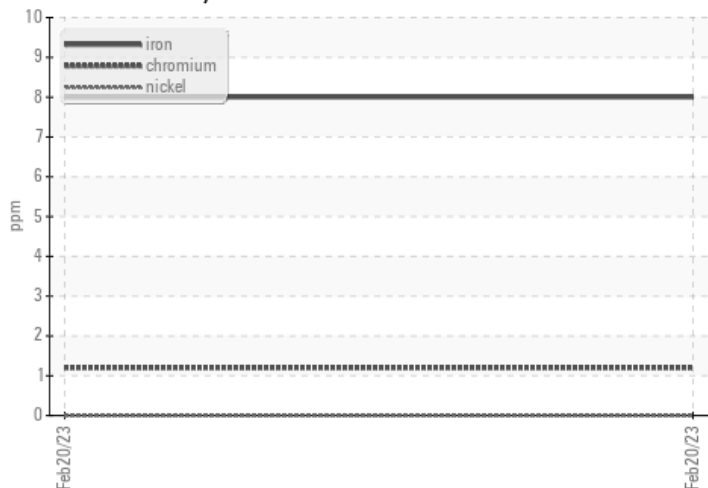
Calcium	ppm	1070	---	---	---
Magnesium	ppm	8	---	---	---
Zinc	ppm	565	---	---	---
Phosphorus	ppm	472	---	---	---
Barium	ppm	<1	---	---	---
Boron	ppm	32	---	---	---

Depot: LEC0052
 Unique No: 10350438
 Signed: Jonathan Hester
 Report Date: 28 Feb 2023

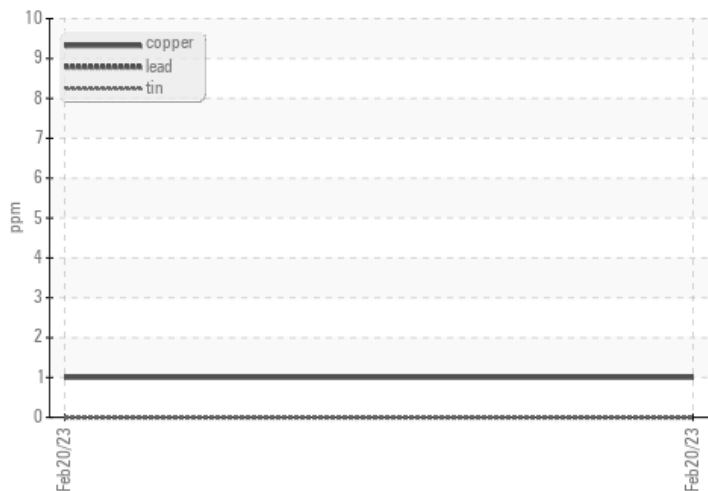


GRAPHS

Ferrous Alloys



Non-ferrous Metals



● Viscosity @ 100°C



Base Number

