

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR R930 056356-1716 - Diesel Engine

Sample No: LH0258968

Oil Type: LIEBHERR MOTOROIL 10W-40 LOW ASH



SAMPLE INFORMATION

Sample Number	LH0258968	LH0243975	---	---
Sample Date	10 Oct 2023	22 May 2023	---	---
Machine Hours	1035	475	---	---
Oil Hours	560	475	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	ABNORMAL	---	---

ACECO
10119 RESIDENCY ROAD
MANASSAS, VA
US 20110
Contact: RON BROCK



OIL CONDITION

Visc @ 100°C	cSt	13.1	11.9	---	---
Base Number (BN)	mg KOH/g	6.4	5.0	---	---
Oxidation (PA)	%	108	200	---	---

T: (703)392-0111
F: (703)331-5604



CONTAMINATION

Soot %	%	0.1	0.1	---	---
Nitration (PA)	%	85	100	---	---
Sulfation (PA)	%	64	107	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	11	13	---	---
Sodium	ppm	0	2	---	---
Potassium	ppm	4	2	---	---

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



WEAR METALS

Iron	ppm	6	10	---	---
Copper	ppm	59	265	---	---
Lead	ppm	<1	2	---	---
Tin	ppm	0	2	---	---
Aluminum	ppm	2	4	---	---
Chromium	ppm	<1	1	---	---
Molybdenum	ppm	8	45	---	---
Nickel	ppm	0	0	---	---
Titanium	ppm	0	<1	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

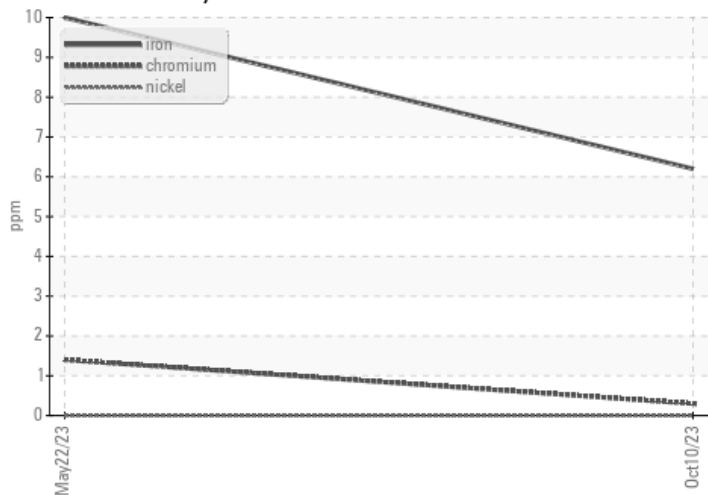
Calcium	ppm	1336	1435	---	---
Magnesium	ppm	818	909	---	---
Zinc	ppm	934	916	---	---
Phosphorus	ppm	704	738	---	---
Barium	ppm	6	30	---	---
Boron	ppm	70	100	---	---

Depot: ACEMAN
Unique No: 10735884
Signed: Angela Borella
Report Date: 10 Nov 2023

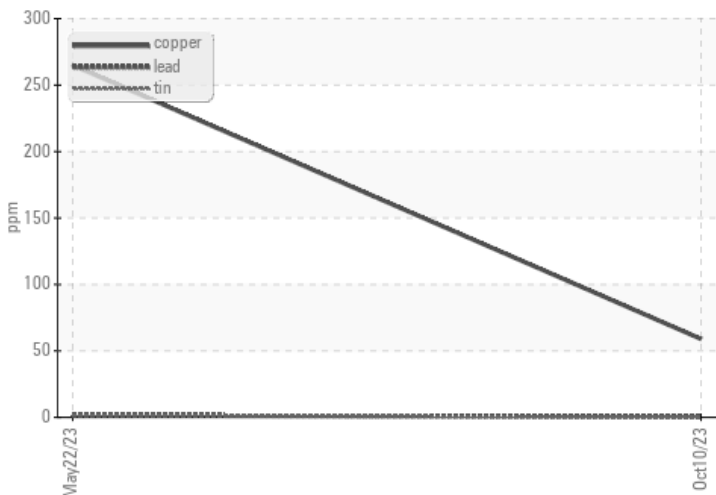


GRAPHS

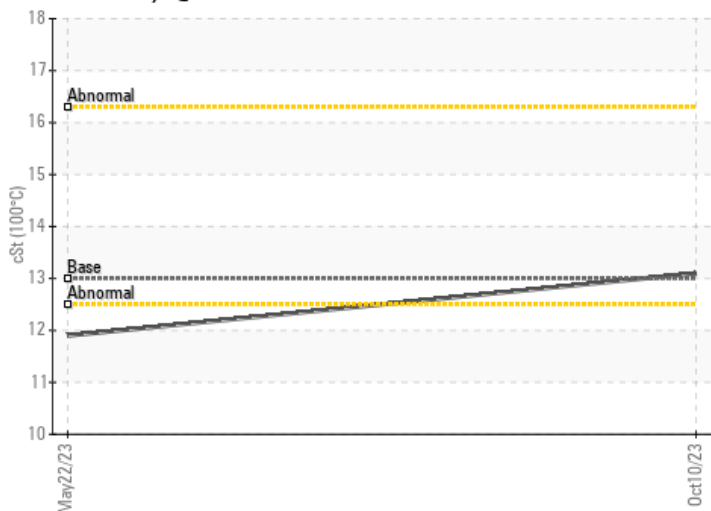
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

