

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH40M 1215-118496 - Diesel Engine

Sample No: LH0258960

Oil Type: LIEBHERR MOTOROIL 5W30



SAMPLE INFORMATION

Sample Number	LH0258960	LH0217265	LH0171020	LH0171006
Sample Date	27 Sep 2023	09 May 2022	04 Oct 2021	25 May 2021
Machine Hours	1144	4259	3168	2437
Oil Hours	0	1091	731	0
Oil Changed	Not Changd	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	ABNORMAL

RECYCLE MANAGEMENT LLC

1610 S MAIN STREET
HARRISONBURG, VA
US 22801

Contact: Service Manager



OIL CONDITION

Visc @ 100°C	cSt	11.3	11.5	11.5	13.0
Base Number (BN)	mg KOH/g	9.1	7.7	---	---
Oxidation (PA)	%	78	127	78	313

T:
F:



CONTAMINATION

Soot %	%	0.1	0.2	0.1	0.3
Nitration (PA)	%	153	191	133	263
Sulfation (PA)	%	62	76	58	137
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	9	10	7	14
Sodium	ppm	3	4	4	6
Potassium	ppm	4	4	<1	11

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	16	31	18	62
Copper	ppm	9	49	46	283
Lead	ppm	2	6	4	23
Tin	ppm	<1	2	2	4
Aluminum	ppm	4	4	3	3
Chromium	ppm	1	2	<1	2
Molybdenum	ppm	0	8	8	44
Nickel	ppm	<1	0	0	<1
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	<1	0	0
Manganese	ppm	<1	<1	<1	3
Vanadium	ppm	<1	<1	0	<1



ADDITIVES

Calcium	ppm	4327	4028	4229	1884
Magnesium	ppm	32	94	134	769
Zinc	ppm	1247	1208	1199	1027
Phosphorus	ppm	1150	1014	1017	768
Barium	ppm	0	6	0	39
Boron	ppm	232	170	191	88

Depot: RECHARVA

Unique No: 10713563

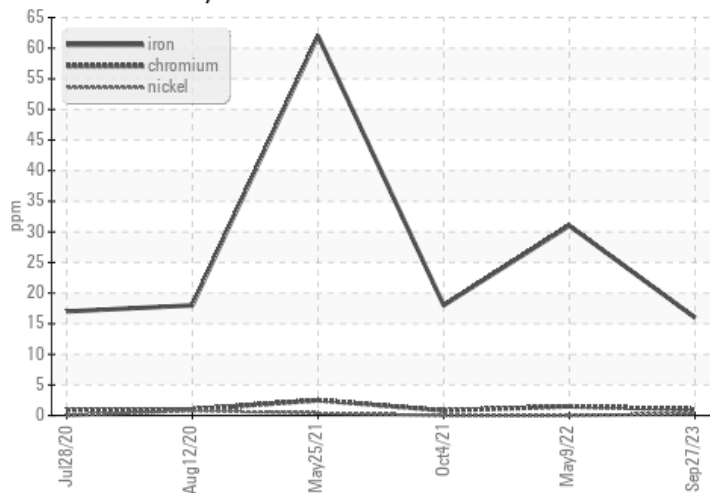
Signed: Wes Davis

Report Date: 27 Oct 2023

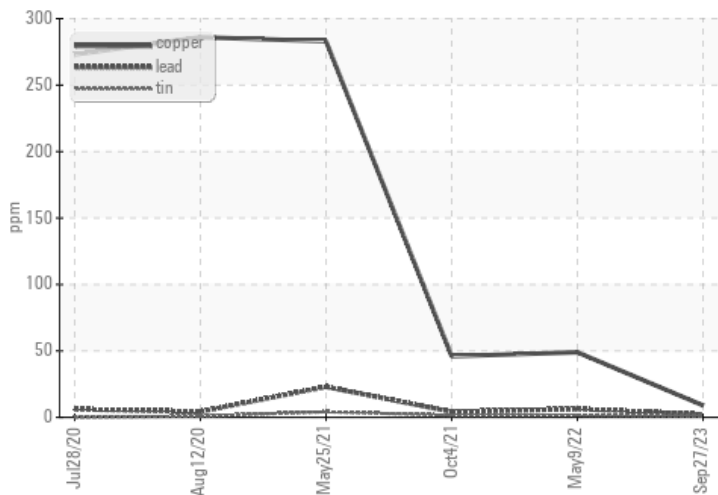


GRAPHS

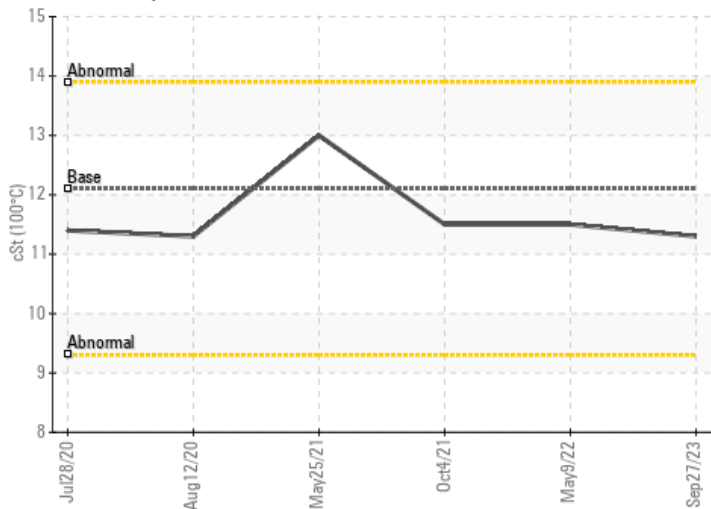
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

