

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50M 1203-75955 - Diesel Engine

Sample No: LH0268401

Oil Type: DIESEL ENGINE OIL SAE 5W40



#### Sample Information

Sample Number	LH0268401	LH0258882	LHMC115088	---
Sample Date	09 Jul 2024	12 Mar 2024	24 Aug 2017	---
Machine Hours	1517	1517	1056	---
Oil Hours	0	0	565	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	SEVERE	SEVERE	ABNORMAL	---

#### NORBORD MN

4409 NORTHWOOD RD NW  
SOLWAY, MN  
US 56678  
Contact: RIC BOWMAN  
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F: (218)751-2075



#### Oil Condition

Visc @ 100°C	cSt	9.1	7.8	14.92	---
Base Number (BN)	mg KOH/g	6.3	4.4	---	---
Oxidation (PA)	%	94	80	68	---



#### Contamination

Water	%	NEG	NEG	NEG	---
Soot %	%	1.7	1	0.6	---
Nitration (PA)	%	121	98	83	---
Sulfation (PA)	%	73	65	53	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	26.2	24.4	<1.0	---
Silicon	ppm	19	7	10	---
Sodium	ppm	9	5	3	---
Potassium	ppm	4	0	2	---



#### Wear Metals

Iron	ppm	81	40	35	---
Copper	ppm	11	10	157	---
Lead	ppm	2	2	4	---
Tin	ppm	1	1	1	---
Aluminum	ppm	8	4	16	---
Chromium	ppm	3	<1	2	---
Molybdenum	ppm	11	25	0	---
Nickel	ppm	4	0	<1	---
Titanium	ppm	47	7	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	1	1	<1	---
Vanadium	ppm	<1	0	0	---



#### Additives

Calcium	ppm	1181	1179	1242	---
Magnesium	ppm	467	303	767	---
Zinc	ppm	967	832	1086	---
Phosphorus	ppm	784	683	836	---
Barium	ppm	0	0	3	---
Boron	ppm	0	12	24	---

#### Diagnosis

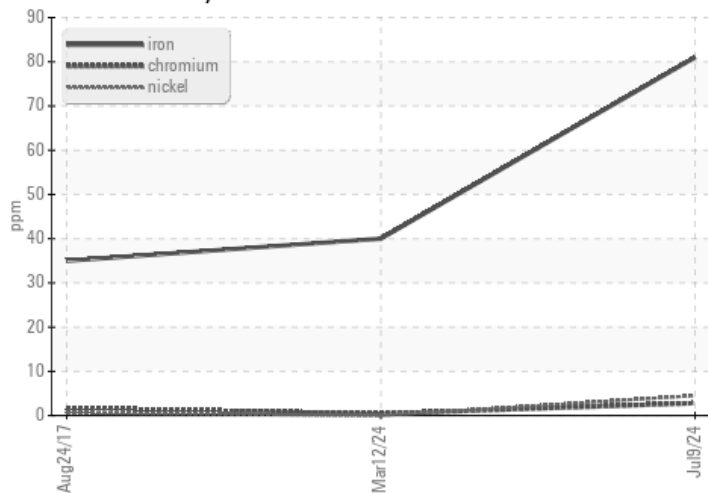
We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Depot: NORSOLLH  
Unique No: 11126138  
Signed: Don Baldrige  
Report Date: 17 Jul 2024

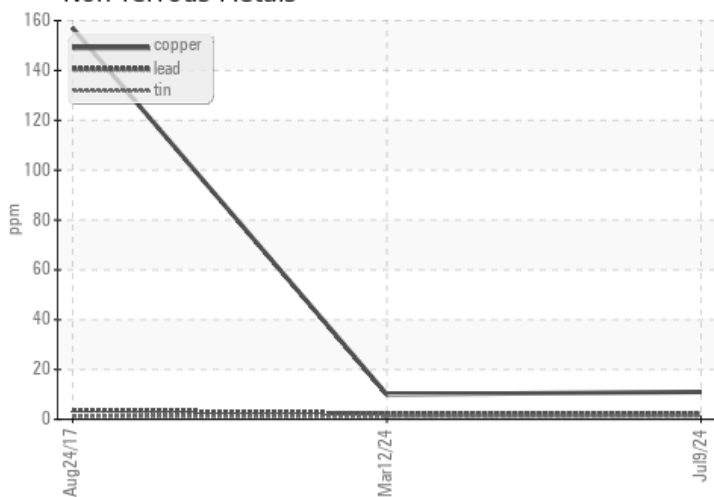


### Graphs

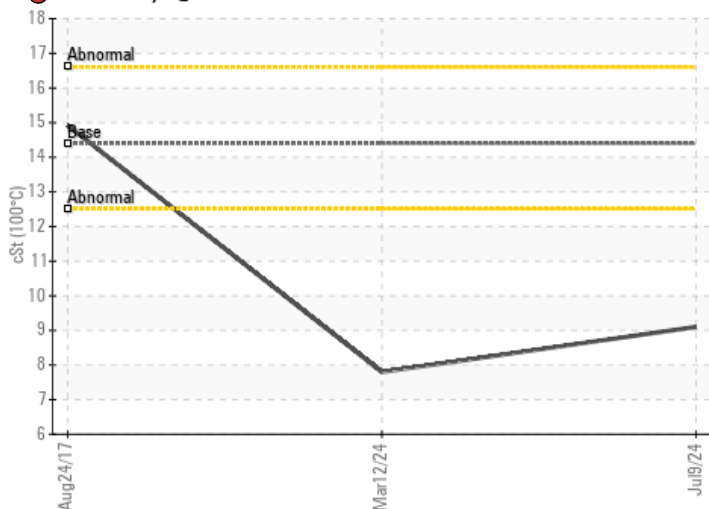
#### Ferrous Alloys



#### Non-ferrous Metals



#### ● Viscosity @ 100°C



#### Base Number

