

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH40M 124711-1215 - Swing Drive

Sample No: LH0253935

Oil Type: 80W90 LS HARTLAND



#### SAMPLE INFORMATION

Sample Number	<b>LH0253935</b>	LH0236479	LH0220539	LH0220662
Sample Date	<b>26 Sep 2023</b>	21 Apr 2023	07 Nov 2022	05 Aug 2022
Machine Hours	<b>4000</b>	3125	2024	1520
Oil Hours	<b>0</b>	500	1000	500
Oil Changed	<b>Changed</b>	Changed	Changed	Not Changd
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**AMERICAN STATE EQUIPMENT CO.**  
 2400 NORTH 14TH AVENUE  
 WAUSAU, WI  
 US 54401  
 Contact: CHRIS BARTNIK  
 cbartnik@amstate.com  
 T: (715)675-6900  
 F: (715)675-9748



#### OIL CONDITION

Visc @ 40°C	cSt	<b>141</b>	142	168	164
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#### CONTAMINATION

Silicon	ppm	<b>&lt;1</b>	1	1	<1
Sodium	ppm	<b>1</b>	0	3	4
Potassium	ppm	<b>1</b>	1	0	0



#### WEAR METALS

Iron	ppm	<b>135</b>	97	181	151
Copper	ppm	<b>38</b>	20	30	32
Lead	ppm	<b>0</b>	<1	0	0
Tin	ppm	<b>5</b>	1	1	<1
Aluminum	ppm	<b>0</b>	0	<1	<1
Chromium	ppm	<b>&lt;1</b>	<1	1	<1
Molybdenum	ppm	<b>&lt;1</b>	3	<1	1
Nickel	ppm	<b>&lt;1</b>	<1	0	0
Titanium	ppm	<b>&lt;1</b>	<1	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>1</b>	<1	2	2
Vanadium	ppm	<b>0</b>	0	0	0



#### ADDITIVES

Calcium	ppm	<b>33</b>	48	30	24
Magnesium	ppm	<b>12</b>	10	0	2
Zinc	ppm	<b>32</b>	35	24	29
Phosphorus	ppm	<b>1011</b>	951	1223	1533
Barium	ppm	<b>1</b>	0	0	4
Boron	ppm	<b>2</b>	7	4	8

#### Diagnosis

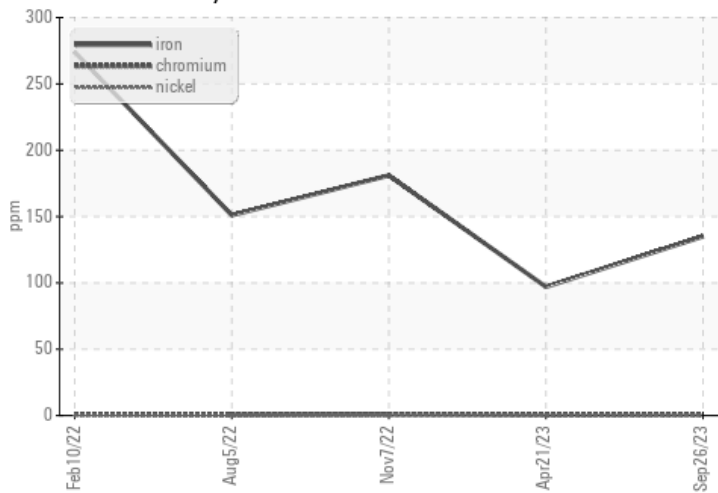
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

**Depot:** LEC0008  
**Unique No:** 10736252  
**Signed:** Sean Felton  
**Report Date:** 10 Nov 2023

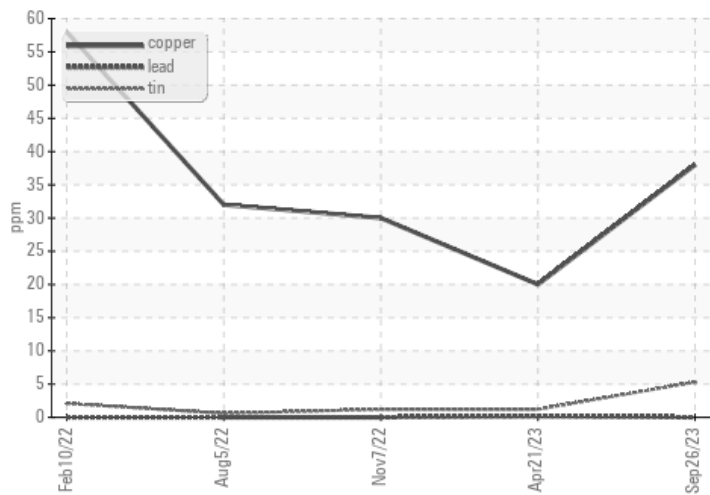


### GRAPHS

#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

