

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH40M 101800-1215 - Front Left Wheel Hub

Sample No: LH06046470

Oil Type: GEAR OIL SAE 80W90



**DIEHL AND NUEMAIER**  
 5466 NORWAY GROVE SCHOOL RD  
 DE FOREST, WI  
 US 53532  
 Contact: ELLIOT DIEHL  
 diehlneumaier@yahoo.com  
 T: (608)846-4824  
 F: (608)846-2077



#### SAMPLE INFORMATION

Sample Number	<b>LH06046470</b>	LH05688608	LH05182645	LHMC98630
Sample Date	<b>27 Dec 2023</b>	07 Nov 2022	14 Feb 2021	20 Nov 2019
Machine Hours	<b>6013</b>	5008	2992	2034
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Not Changd	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL



#### OIL CONDITION

Visc @ 40°C	cSt	<b>166</b>	177	183	182
-------------	-----	------------	-----	-----	-----



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	<b>15</b>	12	12	22
Sodium	ppm	<b>22</b>	24	20	16
Potassium	ppm	<b>3</b>	2	3	2



#### WEAR METALS

Iron	ppm	<b>160</b>	117	145	151
Copper	ppm	<b>17</b>	16	23	37
Lead	ppm	<b>0</b>	0	<1	0
Tin	ppm	<b>&lt;1</b>	<1	0	0
Aluminum	ppm	<b>1</b>	2	<1	<1
Chromium	ppm	<b>&lt;1</b>	<1	<1	1
Molybdenum	ppm	<b>0</b>	<1	<1	0
Nickel	ppm	<b>0</b>	0	<1	<1
Titanium	ppm	<b>&lt;1</b>	0	<1	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>3</b>	2	3	4
Vanadium	ppm	<b>0</b>	0	0	0



#### ADDITIVES

Calcium	ppm	<b>69</b>	70	76	117
Magnesium	ppm	<b>1</b>	2	3	2
Zinc	ppm	<b>27</b>	25	30	58
Phosphorus	ppm	<b>1889</b>	2179	2123	1982
Barium	ppm	<b>0</b>	0	0	<1
Boron	ppm	<b>3</b>	3	10	3

#### Diagnosis

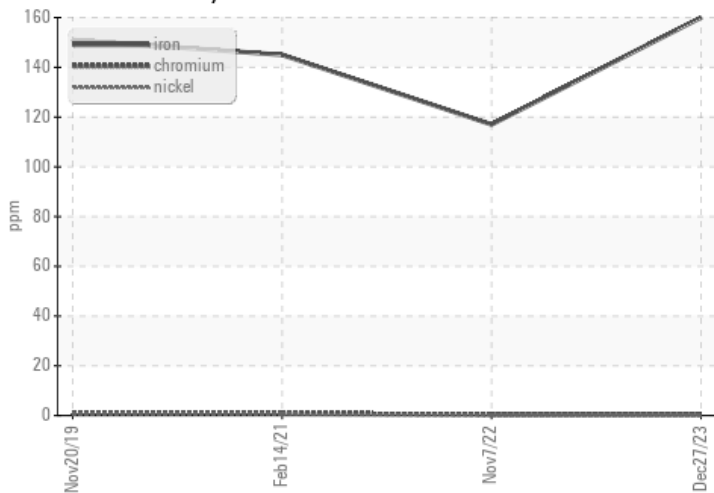
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: DIEDEF  
 Unique No: 10807078  
 Signed: Jonathan Hester  
 Report Date: 29 Dec 2023

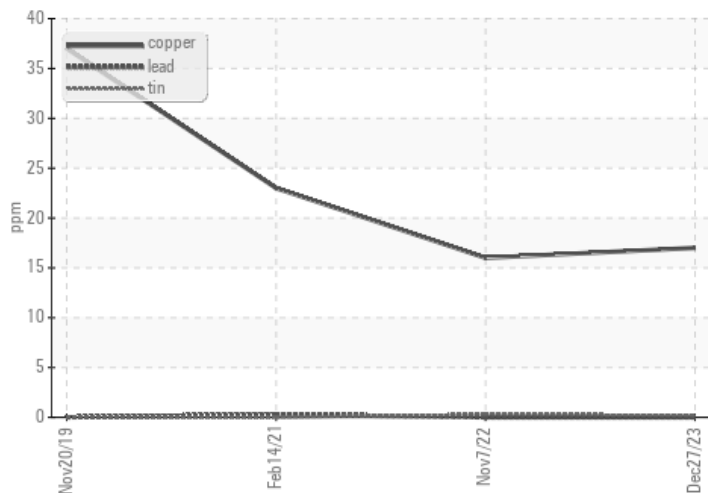


### GRAPHS

#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

