

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH40M 1202-69200 - Swing Drive

Sample No: LH0254506

Oil Type: TEXACO HAVOLINE GEAR OIL 80W90



#### SAMPLE INFORMATION

Sample Number	LH0254506	LH0191278	LH0190796	LH0157303
Sample Date	11 Jul 2023	16 Nov 2021	15 Jun 2021	14 Sep 2020
Machine Hours	17245	13455	12675	11501
Oil Hours	0	1000	0	0
Oil Changed	N/A	N/A	Changed	Changed
Sample Status	SEVERE	SEVERE	SEVERE	SEVERE

**HEAVY MACHINES INC**  
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 THEODORE, AL  
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 Contact: DAVID MIANO  
 dmiano@heavymachinesinc.com  
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#### OIL CONDITION

Visc @ 40°C	cSt	140	151	146	168
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#### CONTAMINATION

Water	%	---	1.37	---	1.23
Silicon	ppm	9	4	5	8
Sodium	ppm	22	<1	<1	2
Potassium	ppm	4	0	<1	4



#### WEAR METALS

Iron	ppm	853	1423	1328	1768
Copper	ppm	445	590	408	741
Lead	ppm	<1	0	1	<1
Tin	ppm	20	0	24	34
Aluminum	ppm	3	<1	2	2
Chromium	ppm	8	13	13	16
Molybdenum	ppm	2	0	1	2
Nickel	ppm	2	2	3	4
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	10	2
Manganese	ppm	7	11	11	15
Vanadium	ppm	0	<1	0	0



#### ADDITIVES

Calcium	ppm	40	10	21	58
Magnesium	ppm	1	0	7	10
Zinc	ppm	40	20	35	59
Phosphorus	ppm	1669	1246	1615	1595
Barium	ppm	0	0	0	0
Boron	ppm	350	218	340	299

#### Diagnosis

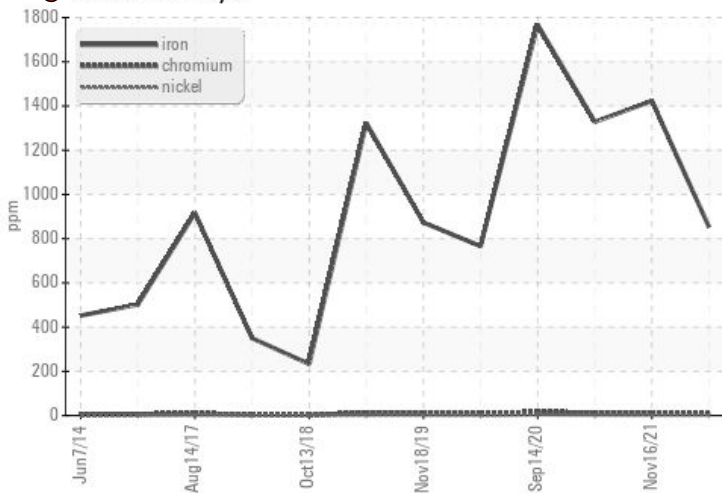
We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Gear wear is indicated. Bearing and/or bushing wear is indicated. The water content is negligible. There is no indication of any contamination in the oil. The oil is no longer serviceable due to the presence of contaminants.

Depot: HEATHE  
 Unique No: 10564293  
 Signed: Don Baldrige  
 Report Date: 21 Jul 2023

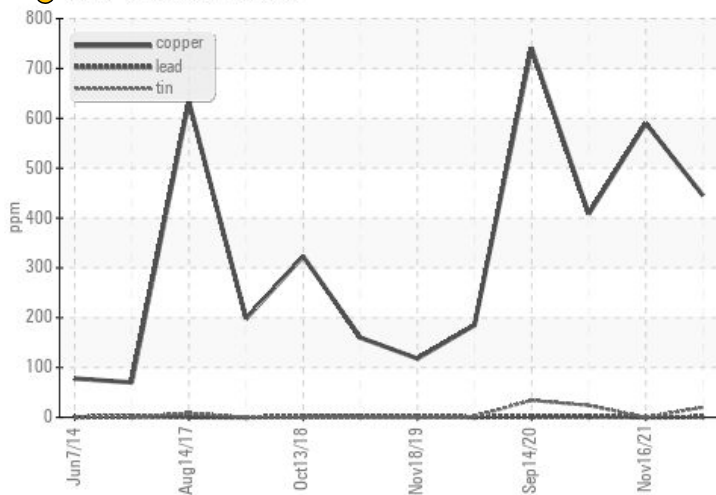


### GRAPHS

#### ● Ferrous Alloys



#### ● Non-ferrous Metals



#### Viscosity @ 40°C

