

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH60C1212-70843 - Swing Drive

Sample No: LH0229411

Oil Type: LIEBHERR GEAR BASIC 90 LS



**MIDDLE GROUND MARINE INC**  
 500 BARNES RD  
 CHESAPEAKE, VA  
 US 23324  
 Contact:

T:  
 F:



#### SAMPLE INFORMATION

Sample Number	LH0229411	LHMC94880	---	---
Sample Date	18 Aug 2023	01 Dec 2015	---	---
Machine Hours	3522	340	---	---
Oil Hours	3522	340	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	NORMAL	---	---



#### OIL CONDITION

Visc @ 40°C	cSt	193	181.6	---	---
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#### CONTAMINATION

Silicon	ppm	4	6	---	---
Sodium	ppm	2	4	---	---
Potassium	ppm	<1	6	---	---



#### WEAR METALS

Iron	ppm	244	181	---	---
Copper	ppm	59	34	---	---
Lead	ppm	0	<1	---	---
Tin	ppm	3	0	---	---
Aluminum	ppm	<1	<1	---	---
Chromium	ppm	3	<1	---	---
Molybdenum	ppm	0	0	---	---
Nickel	ppm	<1	<1	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	1	1	---	---
Vanadium	ppm	<1	0	---	---



#### ADDITIVES

Calcium	ppm	16	45	---	---
Magnesium	ppm	2	2	---	---
Zinc	ppm	21	30	---	---
Phosphorus	ppm	2191	1816	---	---
Barium	ppm	0	2	---	---
Boron	ppm	<1	6	---	---

#### Diagnosis

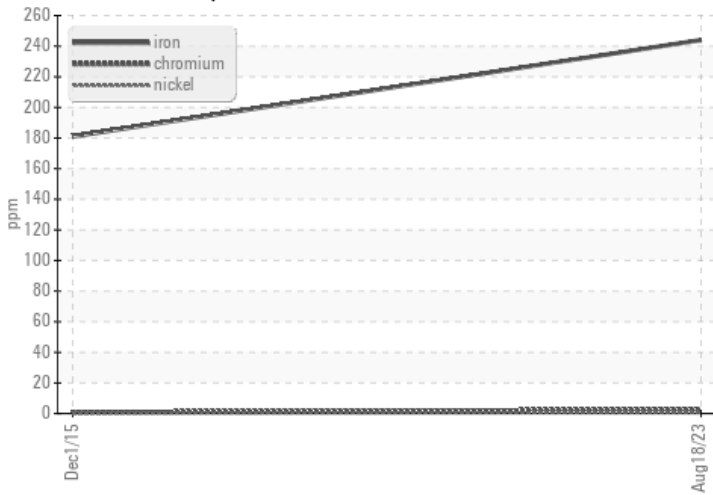
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

Depot: MIDCHE  
 Unique No: 10615840  
 Signed: Sean Felton  
 Report Date: 23 Aug 2023

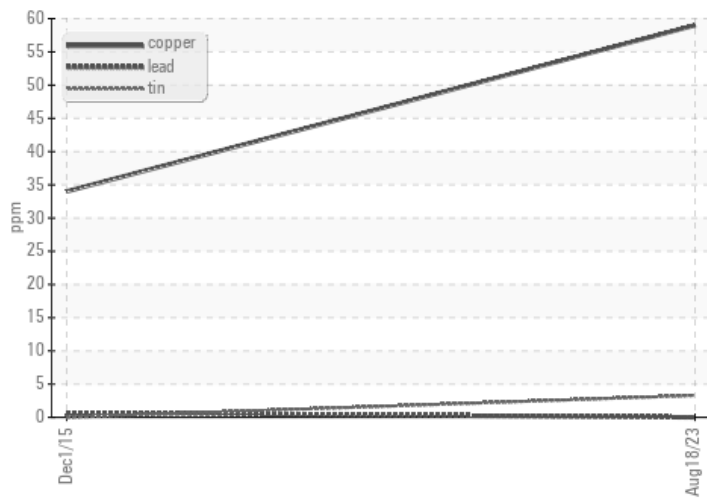


### GRAPHS

#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 40°C

