

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [[HAWAIIAN CEMENT]] LIEBHERR R9150B 45.1992301 (S/N 38178) - Right Final Drive

Sample No: LH0267639

Oil Type: BP ENERGEAR HYPO 80W90



#### SAMPLE INFORMATION

Sample Number	LH0267639	---	---	---
Sample Date	04 Dec 2023	---	---	---
Machine Hours	424	---	---	---
Oil Hours	424	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

**LIEBHERR MINING EQUIPMENT CO**  
 5800 S DOUGLAS HWY  
 GILLETTE, WY  
 US 82718  
 Contact: SCOTT BRADLEY  
 scott.bradley@liebherr.com  
 T:  
 F:



#### OIL CONDITION

Visc @ 40°C	cSt	448	---	---	---
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#### CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	4	---	---	---
Sodium	ppm	0	---	---	---
Potassium	ppm	<1	---	---	---

#### Diagnosis

The oil change at the time of sampling has been noted. 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 oil viscosity is higher than normal. Confirm oil type.



#### WEAR METALS

Iron	ppm	32	---	---	---
Copper	ppm	5	---	---	---
Lead	ppm	0	---	---	---
Tin	ppm	<1	---	---	---
Aluminum	ppm	1	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	0	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	2	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



#### ADDITIVES

Calcium	ppm	21	---	---	---
Magnesium	ppm	<1	---	---	---
Zinc	ppm	0	---	---	---
Phosphorus	ppm	360	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	13	---	---	---

Depot: LIEGIL  
 Unique No: 10781652  
 Signed: Sean Felton  
 Report Date: 14 Dec 2023

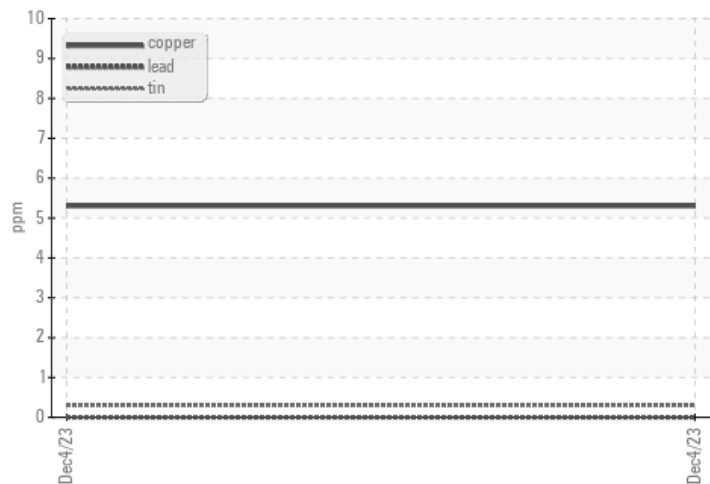


### GRAPHS

#### Ferrous Alloys



#### Non-ferrous Metals



#### ● Viscosity @ 40°C

