



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[CLEVELAND CLIFF]
Machine Id
LIEBHERR LH60M 119014-1217
Component
Front Right Wheel Hub
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0258929	---	---
Sample Date		Client Info		14 Mar 2024	---	---
Machine Age	hrs	Client Info		2268	---	---
Oil Age	hrs	Client Info		1000	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>650	31	---	---
Chromium	ppm	ASTM D5185m	>4	0	---	---
Nickel	ppm	ASTM D5185m	>4	0	---	---
Titanium	ppm	ASTM D5185m	>4	0	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>25	0	---	---
Lead	ppm	ASTM D5185m	>4	0	---	---
Copper	ppm	ASTM D5185m	>60	13	---	---
Tin	ppm	ASTM D5185m	>4	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

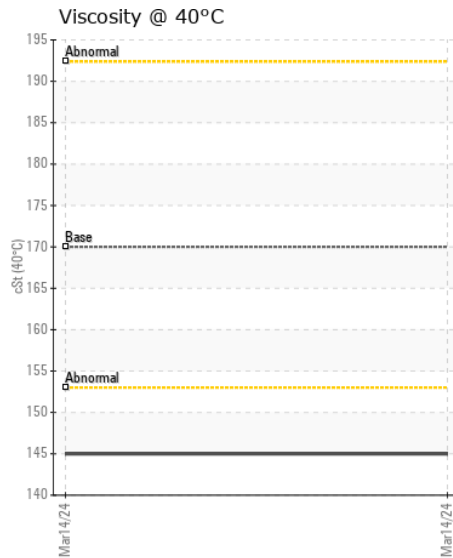
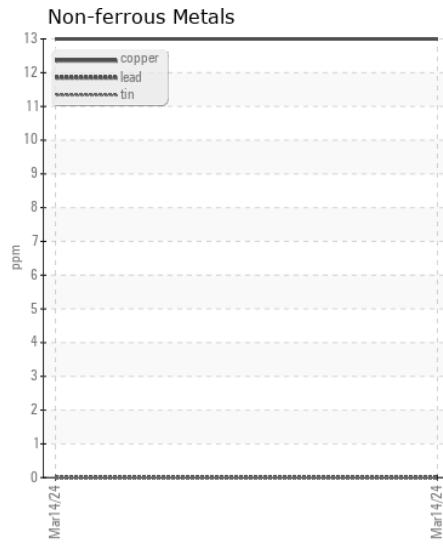
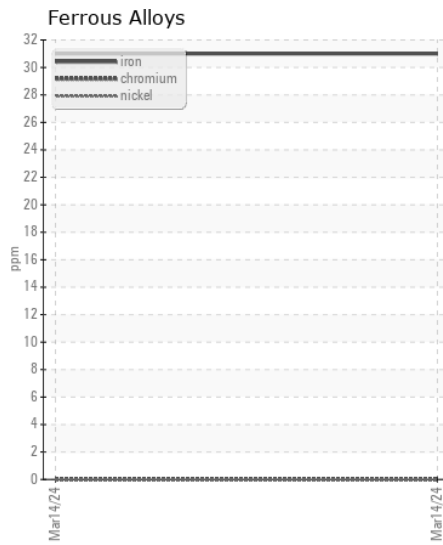
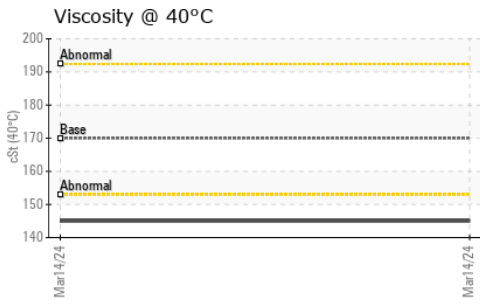
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	1	---	---
Potassium	ppm	ASTM D5185m	>20	0	---	---
Water		WC Method	>0.2	NEG	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		1	---	---
Boron	ppm	ASTM D5185m	0	0	---	---
Barium	ppm	ASTM D5185m	0	46	---	---
Molybdenum	ppm	ASTM D5185m	0	0	---	---
Manganese	ppm	ASTM D5185m	0	0	---	---
Magnesium	ppm	ASTM D5185m	<1	0	---	---
Calcium	ppm	ASTM D5185m	<1	7	---	---
Phosphorus	ppm	ASTM D5185m	2143	685	---	---
Zinc	ppm	ASTM D5185m	<1	10	---	---
Sulfur	ppm	ASTM D5185m	23468	25719	---	---
Visc @ 40°C	cSt	ASTM D445	170	145	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : LH0258929

Lab Number : 06146815

Unique Number : 10976893

Test Package : CONST

Received : 11 Apr 2024

Tested : 12 Apr 2024

Diagnosed : 15 Apr 2024 - Sean Felton

FINKBINER EQUIPMENT CO.

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US 60527

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To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)