



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**LIEBHERR A944 038730-194**  
Component  
**Front Left Final Drive**  
Fluid  
**GEAR OIL SAE 80W90 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0258823</b>	LH0264406	LH0185259
Sample Date		Client Info		<b>14 Feb 2024</b>	28 Jun 2023	29 Jan 2021
Machine Age	hrs	Client Info		<b>30984</b>	29970	27384
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	SEVERE

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>350	<b>38</b>	51	▲ 863
Chromium	ppm	ASTM D5185m	>5	<b>0</b>	<1	▲ 10
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	3
Titanium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	2
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>15	<b>0</b>	<1	13
Lead	ppm	ASTM D5185m	>8	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>60	<b>10</b>	16	▲ 223
Tin	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	▲ MODER
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

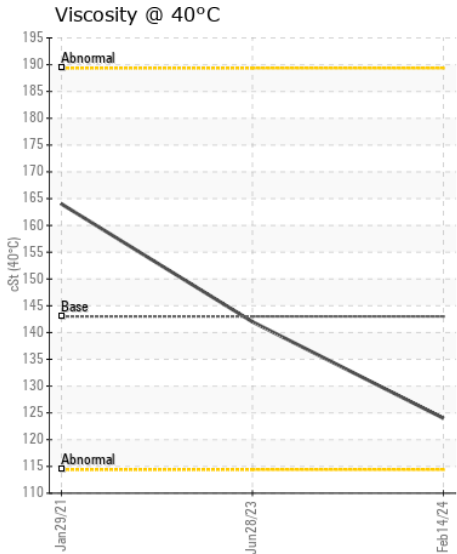
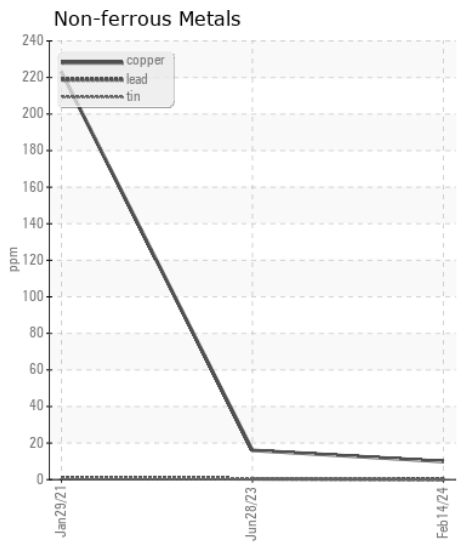
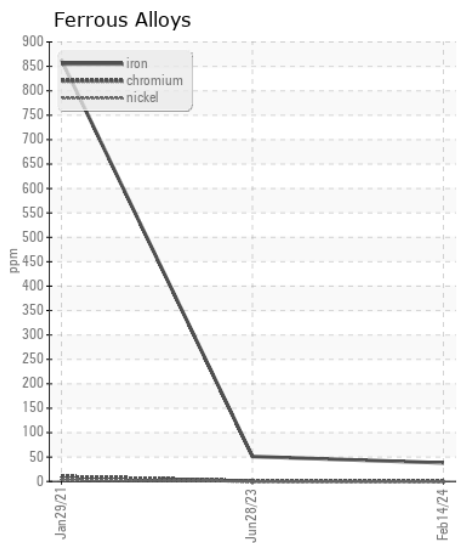
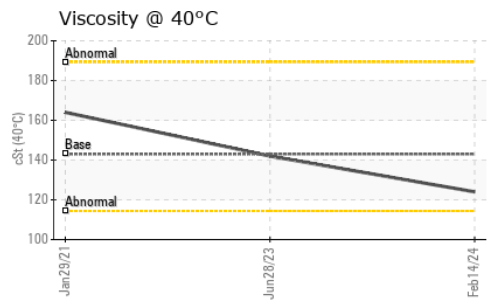
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	<b>&lt;1</b>	2	21
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	5	9
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>170	<b>2</b>	0	8
Boron	ppm	ASTM D5185m	400	<b>4</b>	21	28
Barium	ppm	ASTM D5185m	200	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	12	<b>0</b>	<1	5
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	13
Magnesium	ppm	ASTM D5185m	12	<b>2</b>	9	7
Calcium	ppm	ASTM D5185m	150	<b>33</b>	37	122
Phosphorus	ppm	ASTM D5185m	1650	<b>666</b>	692	837
Zinc	ppm	ASTM D5185m	125	<b>12</b>	45	242
Sulfur	ppm	ASTM D5185m	22500	<b>19056</b>	30539	25056
Visc @ 40°C	cSt	ASTM D445	143	<b>124</b>	142	164



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0258823  
**Lab Number** : 06098697  
**Unique Number** : 10896927  
**Test Package** : CONST  
**Received** : 23 Feb 2024  
**Tested** : 26 Feb 2024  
**Diagnosed** : 26 Feb 2024 - Wes Davis

**ALTER METAL**  
 2080 SPINDT DR  
 WAUPACA, WI  
 US 54981

Contact: BRAD DORMADY  
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 T:  
 F:

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)