



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR L586 053143-1334**  
Component  
**Front Differential**  
Fluid  
**LIEBHERR GEAR BASIC 90 LS (--- GAL)**

### RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.  
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0291233</b>	LH0225804	LH0251338
Sample Date		Client Info		<b>20 Jun 2024</b>	21 Sep 2023	09 Jan 2023
Machine Age	hrs	Client Info		<b>5171</b>	4021	2980
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>None</b>	None	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>1500	<b>97</b>	54	133
Chromium	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>200	<b>25</b>	26	30
Tin	ppm	ASTM D5185(m)	>10	<b>1</b>	<1	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

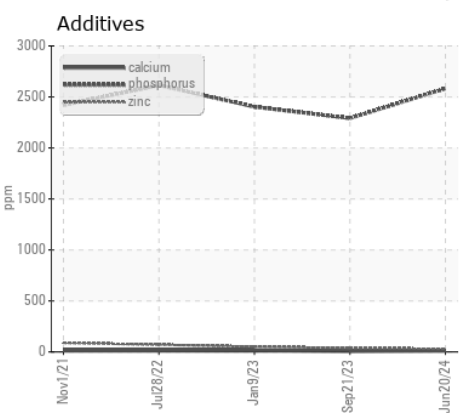
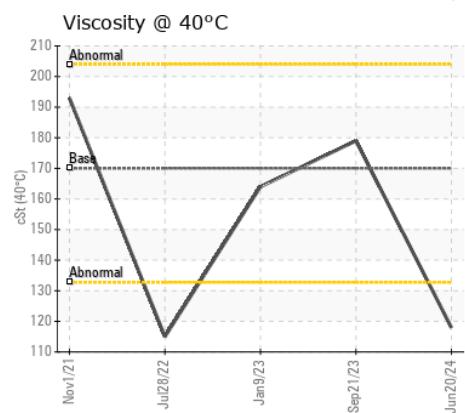
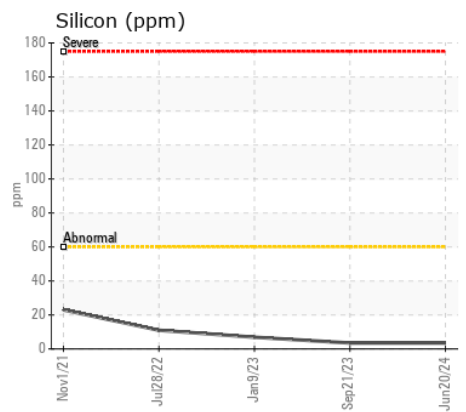
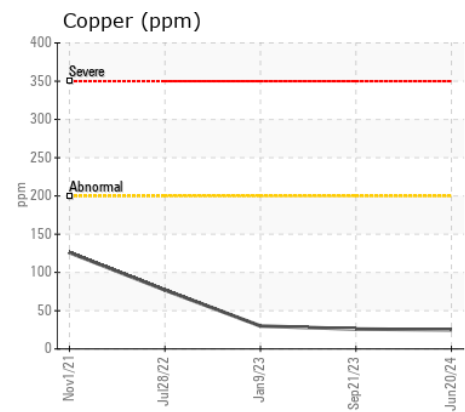
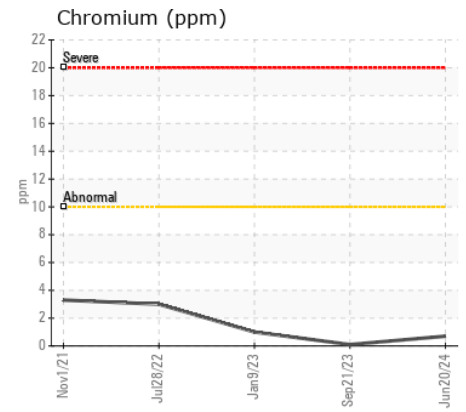
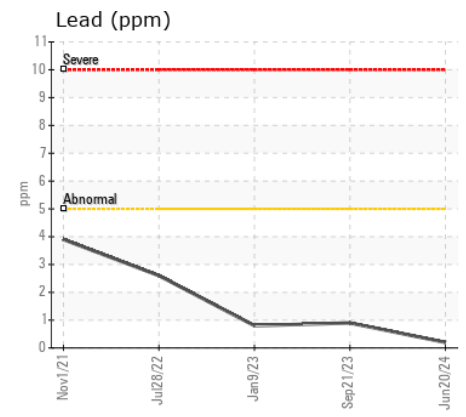
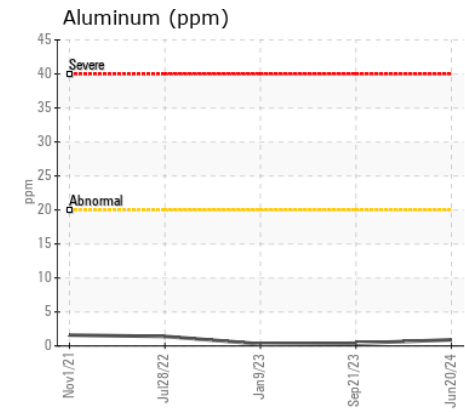
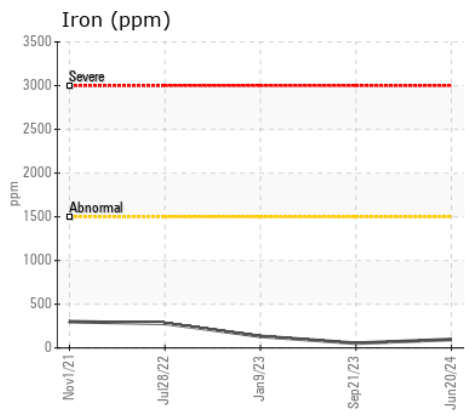
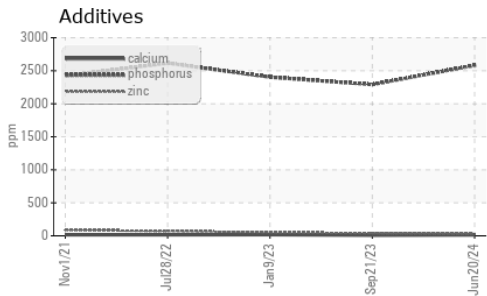
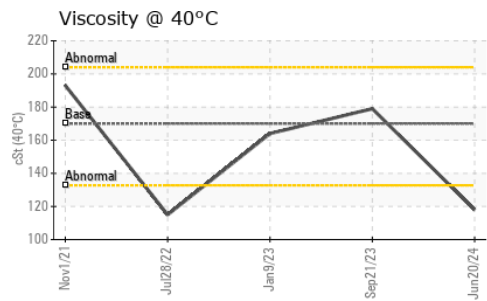
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	<b>4</b>	4	7
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Water		WC Method	>.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*	>.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

Viscosity of sample indicates oil is within SAE 90 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>6</b>	1	2
Boron	ppm	ASTM D5185(m)	0	<b>159</b>	22	54
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	0	<b>2</b>	1	4
Magnesium	ppm	ASTM D5185(m)	<1	<b>2</b>	<1	2
Calcium	ppm	ASTM D5185(m)	<1	<b>13</b>	9	17
Phosphorus	ppm	ASTM D5185(m)	2143	<b>2582</b>	2291	2403
Zinc	ppm	ASTM D5185(m)	<1	<b>29</b>	38	51
Sulfur	ppm	ASTM D5185(m)	23468	<b>21698</b>	26326	30722
Visc @ 40°C	cSt	ASTM D7279(m)	170	<b>118</b>	179	164



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0291233  
**Lab Number** : 02643469  
**Unique Number** : 5801008  
**Test Package** : MOB 1  
**Received** : 21 Jun 2024  
**Tested** : 21 Jun 2024  
**Diagnosed** : 21 Jun 2024 - Kevin Marson

**WILLIS KERR CONTRACTING**  
 1088 COUNTY ROAD 1  
 OSGOODE, ON  
 CA K0A 2W0  
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

T:  
F: