



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id  
**116431-1217**  
Component  
**Front Left 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		LH0278994	LH0215989	LH0239235
Sample Date		Client Info		08 Jan 2024	09 May 2023	29 Aug 2022
Machine Age	hrs	Client Info		8104	7133	6053
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		None	None	None
Sample Status				NORMAL	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>650	26	42	34
Chromium	ppm	ASTM D5185(m)	>4	0	<1	0
Nickel	ppm	ASTM D5185(m)	>4	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>4	0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>4	<1	0	<1
Copper	ppm	ASTM D5185(m)	>60	6	7	13
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

### CONTAMINATION

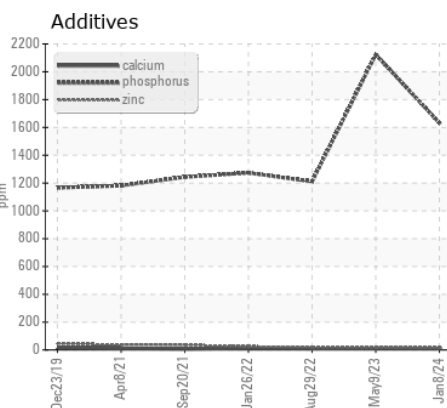
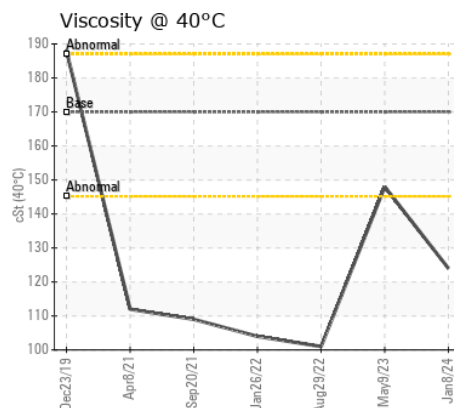
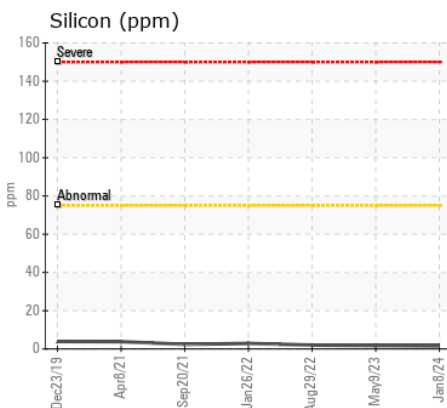
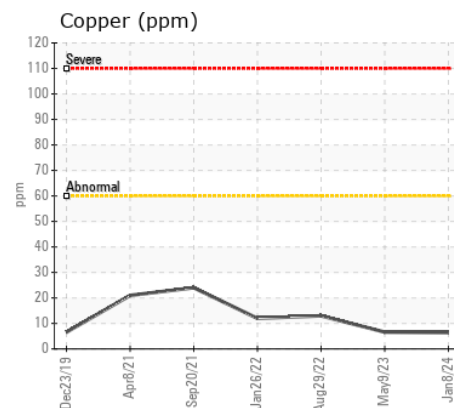
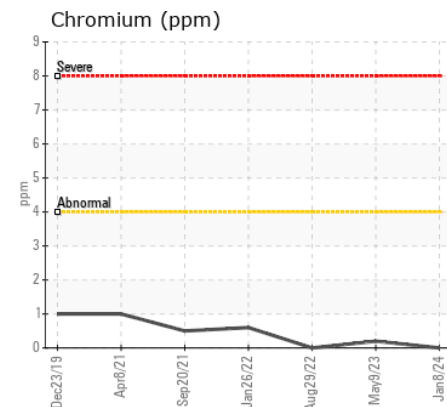
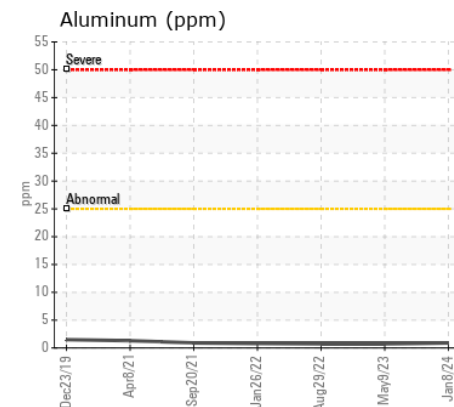
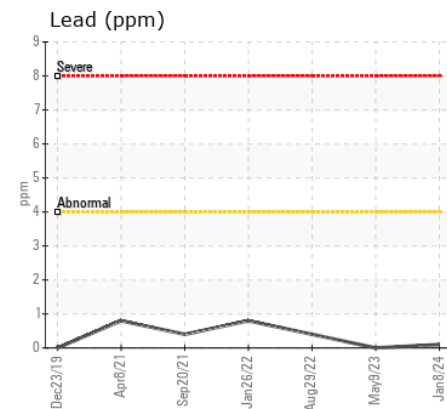
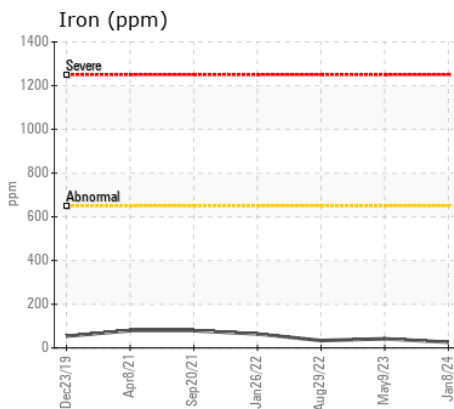
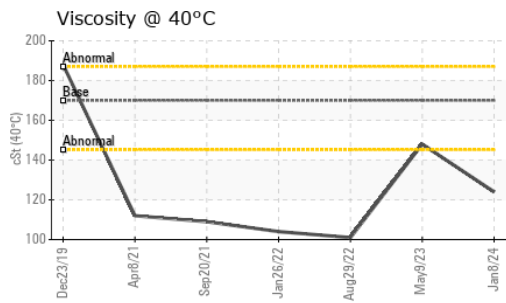
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>75	2	2	2
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	LIGHT	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<1	<1	1
Boron	ppm	ASTM D5185(m)	0	191	97	299
Barium	ppm	ASTM D5185(m)	0	3	5	15
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	<1	1	<1	2
Calcium	ppm	ASTM D5185(m)	<1	10	12	10
Phosphorus	ppm	ASTM D5185(m)	2143	1632	2124	1211
Zinc	ppm	ASTM D5185(m)	<1	15	17	21
Sulfur	ppm	ASTM D5185(m)	23468	22307	25789	21337
Visc @ 40°C	cSt	ASTM D7279(m)	170	124	148	101



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0278994 **Received** : 23 Jan 2024  
**Lab Number** : 02610671 **Diagnosed** : 23 Jan 2024  
**Unique Number** : 5711757 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1

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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.