



# LIEBHERR

## OIL ANALYSIS REPORT



Area

(354956)

Machine Id

LIEBHERR A922 128674-1509

Component

Front Left Wheel Hub

Fluid

LIEBHERR GEAR BASIC 90 LS (3 LTR)

WEAR  
CONTAMINATION  
FLUID CONDITION

ABNORMAL

NORMAL

NORMAL

### RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH	LH0274099	LH0238915
Sample Date		Client Info		18 Apr 2024	01 Sep 2023	20 Jan 2023
Machine Age	hrs	Client Info		3800	2993	2095
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	N/A
Filter Changed		Client Info		None	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

### WEAR

Chromium ppm levels are abnormal.

Iron	ppm	ASTM D5185(m)	>650	638	340	469
Chromium	ppm	ASTM D5185(m)	>4	▲ 14	5	13
Nickel	ppm	ASTM D5185(m)	>4	2	<1	2
Titanium	ppm	ASTM D5185(m)	>4	<1	<1	<1
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	9	4	11
Lead	ppm	ASTM D5185(m)	>4	0	<1	<1
Copper	ppm	ASTM D5185(m)	>60	13	8	25
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	<1
White Metal	scalar	Visual*	NONE	VLITE	NONE	VLITE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

### CONTAMINATION

There is no indication of any contamination in the oil.

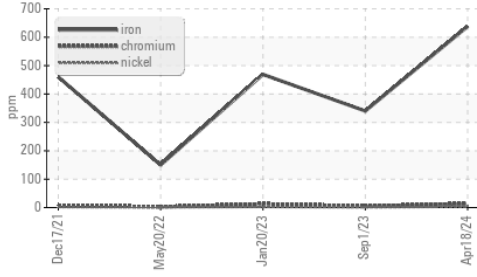
Silicon	ppm	ASTM D5185(m)	>75	5	3	5
Potassium	ppm	ASTM D5185(m)	>20	<1	2	1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	VLITE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

### FLUID CONDITION

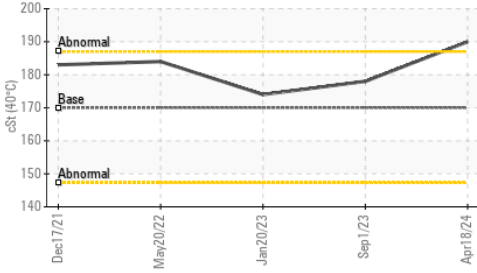
Viscosity of sample indicates oil is within SAE 90 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		2	4	9
Boron	ppm	ASTM D5185(m)	0	<1	1	16
Barium	ppm	ASTM D5185(m)	0	1	13	66
Molybdenum	ppm	ASTM D5185(m)	0	0	0	<1
Manganese	ppm	ASTM D5185(m)	0	6	6	6
Magnesium	ppm	ASTM D5185(m)	<1	1	1	2
Calcium	ppm	ASTM D5185(m)	<1	6	4	8
Phosphorus	ppm	ASTM D5185(m)	2143	2230	2215	2188
Zinc	ppm	ASTM D5185(m)	<1	14	24	27
Sulfur	ppm	ASTM D5185(m)	23468	23948	27242	34083
Visc @ 40°C	cSt	ASTM D7279(m)	170	190	178	174

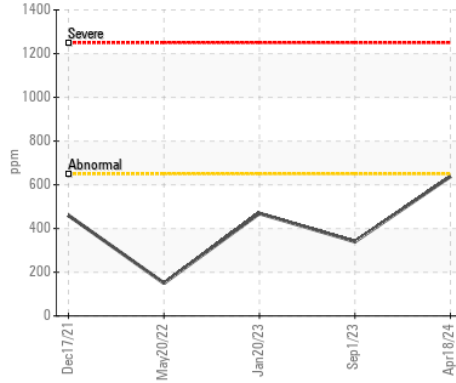
▲ Ferrous Alloys



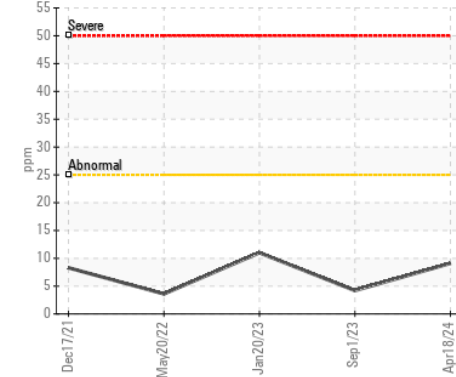
Viscosity @ 40°C



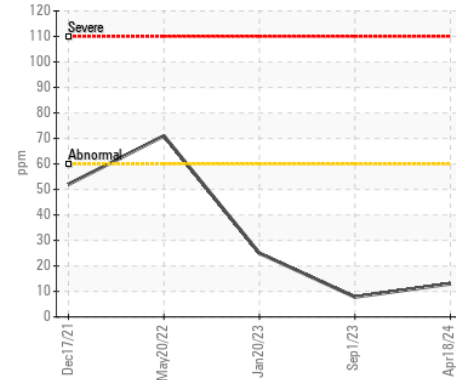
Iron (ppm)



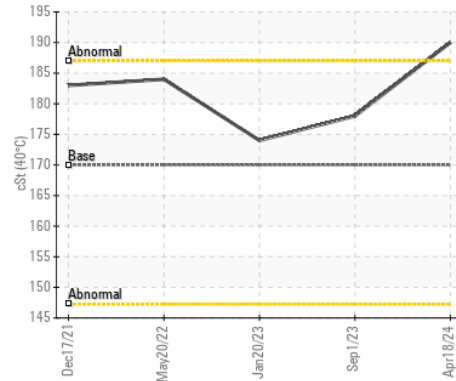
Aluminum (ppm)



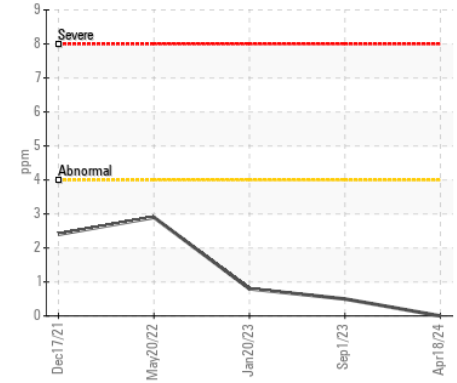
Copper (ppm)



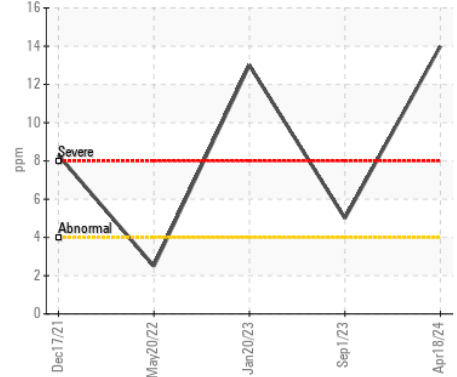
Viscosity @ 40°C



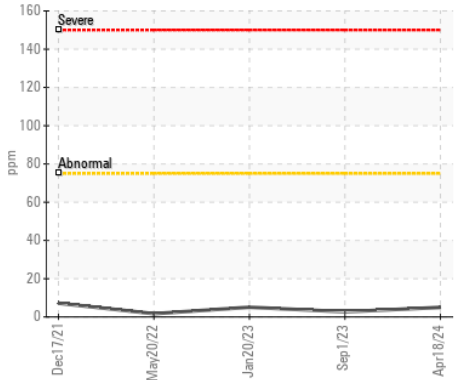
Lead (ppm)



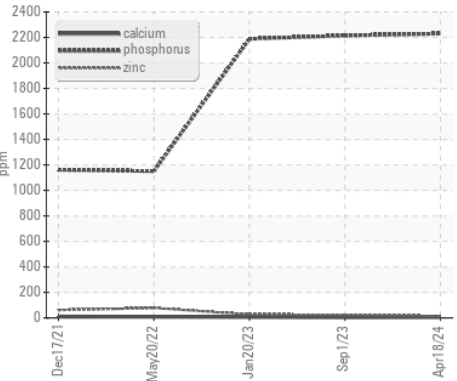
Chromium (ppm)



Silicon (ppm)



Additives



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH  
**Lab Number** : 02631056  
**Unique Number** : 5772209  
**Test Package** : MOB 1  
**Received** : 23 Apr 2024  
**Tested** : 23 Apr 2024  
**Diagnosed** : 23 Apr 2024 - Kevin Marson

**Transelec Common Inc.**  
 2075 Boul. Fortin  
 Laval, QC  
 CA H7S 1P4  
 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: