MOB I

LIEBHERR

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR L566 054116-1484
Component
Front Left Wheel Hub
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

WEAR

Nickel ppm levels are severe. Tin ppm levels are abnormal. Bearing and/or bushing wear is indicated.

CONTAMINATION

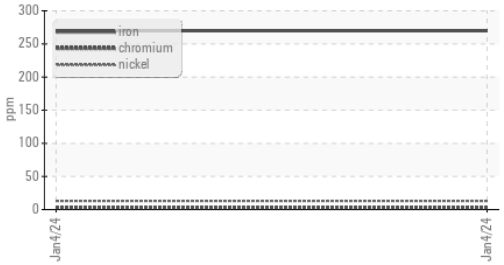
There is no indication of any contamination in the oil.

FLUID CONDITION

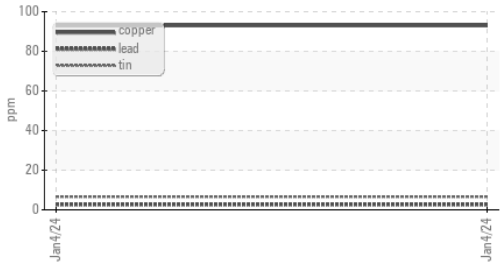
Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within SAE 90 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0281155	---	---
Sample Date		Client Info		04 Jan 2024	---	---
Machine Age	hrs	Client Info		9598	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				SEVERE	---	---
Iron	ppm	ASTM D5185(m)	>500	270	---	---
Chromium	ppm	ASTM D5185(m)	>8	3	---	---
Nickel	ppm	ASTM D5185(m)	>5	⬢ 13	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>5	2	---	---
Lead	ppm	ASTM D5185(m)	>5	3	---	---
Copper	ppm	ASTM D5185(m)	>50	93	---	---
Tin	ppm	ASTM D5185(m)		▲ 7	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Silicon	ppm	ASTM D5185(m)	>25	29	---	---
Potassium	ppm	ASTM D5185(m)	>20	<1	---	---
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	---	---
Sodium	ppm	ASTM D5185(m)		6	---	---
Boron	ppm	ASTM D5185(m)	0	2	---	---
Barium	ppm	ASTM D5185(m)	0	<1	---	---
Molybdenum	ppm	ASTM D5185(m)	0	0	---	---
Manganese	ppm	ASTM D5185(m)	0	43	---	---
Magnesium	ppm	ASTM D5185(m)	<1	4	---	---
Calcium	ppm	ASTM D5185(m)	<1	4	---	---
Phosphorus	ppm	ASTM D5185(m)	2143	2232	---	---
Zinc	ppm	ASTM D5185(m)	<1	26	---	---
Sulfur	ppm	ASTM D5185(m)	23468	24461	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	170	193	---	---

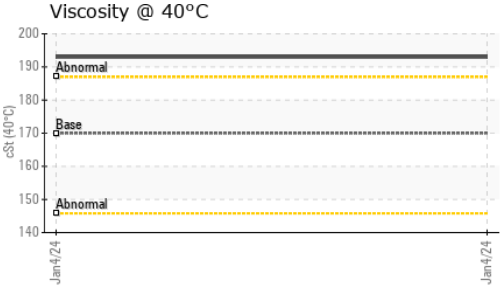
Ferrous Alloys



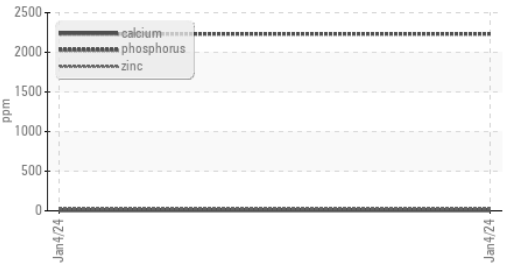
Non-ferrous Metals



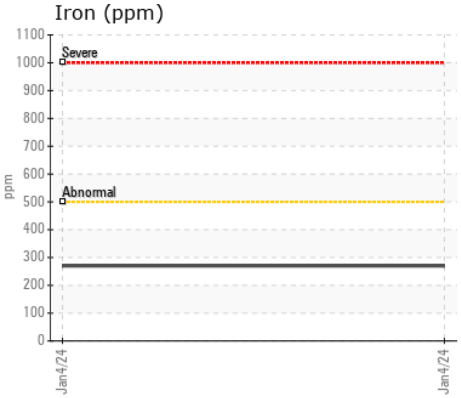
Viscosity @ 40°C



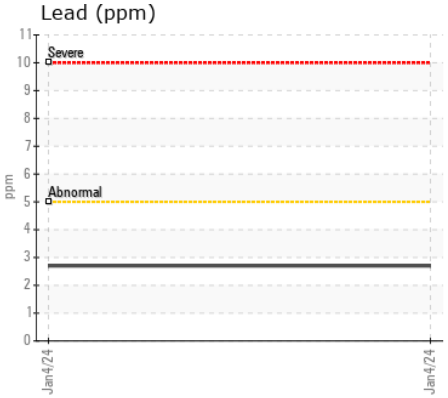
Additives



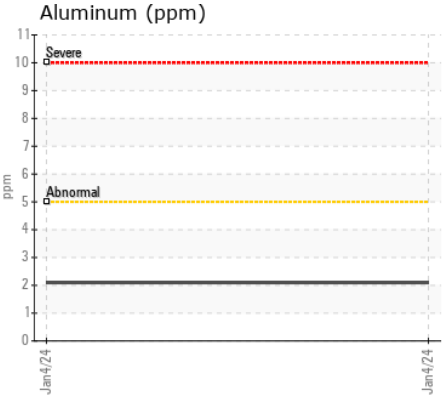
Iron (ppm)



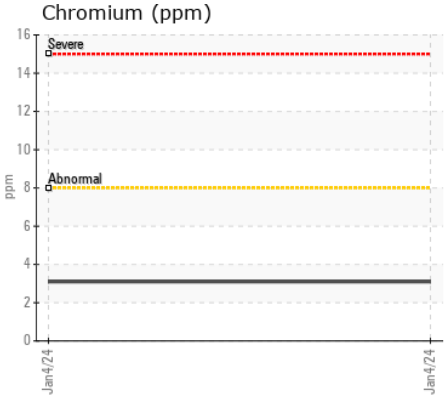
Lead (ppm)



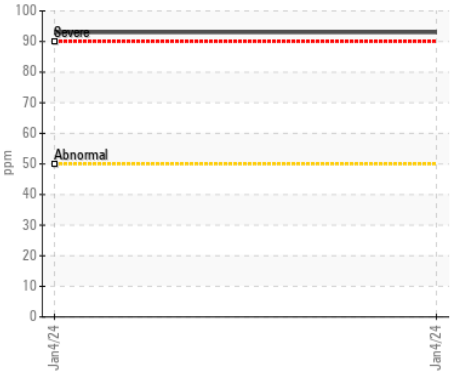
Aluminum (ppm)



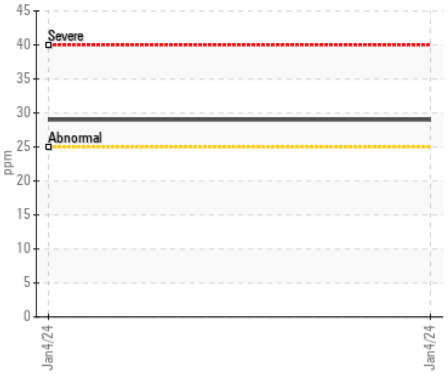
Chromium (ppm)



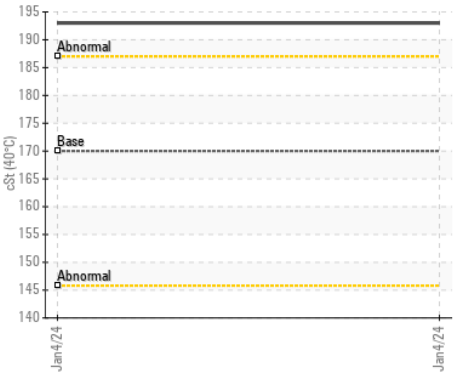
Copper (ppm)



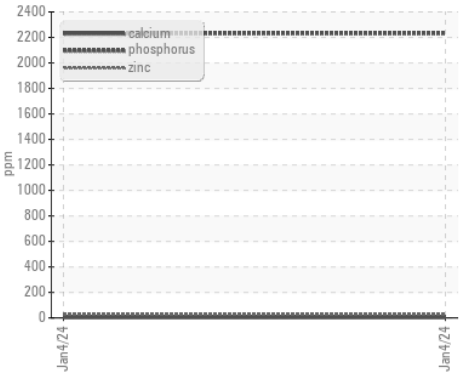
Silicon (ppm)



Viscosity @ 40°C



Additives



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9		
Sample No.	: LH0281155	**Recieved**	: 10 Jan 2024
Lab Number	: 02607954	**Diagnosed**	: 11 Jan 2024
Unique Number	: 5709040	**Diagnostician**	: Kevin Marson
Test Package	: MOB 1		

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.

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F: