



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR L580 048547-1464**  
Component  
**Hydraulic System**  
Fluid  
**{not provided} (--- GAL)**

### RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend you service the filters on this component. We recommend an early resample to monitor this condition. 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>LH0290956</b>	LH0281484	LH0251459
Sample Date		Client Info		<b>27 May 2024</b>	07 Dec 2023	16 Feb 2023
Machine Age	hrs	Client Info		<b>10162</b>	9037	7024
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>	Not Changd	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

### WEAR

Iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

PQ		ASTM D8184*		<b>0</b>	0	---
Iron	ppm	ASTM D5185(m)	>20	<b>▲ 28</b>	▲ 28	18
Chromium	ppm	ASTM D5185(m)	>10	<b>5</b>	5	4
Nickel	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	<b>4</b>	4	2
Lead	ppm	ASTM D5185(m)	>10	<b>9</b>	10	8
Copper	ppm	ASTM D5185(m)	>75	<b>5</b>	5	4
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

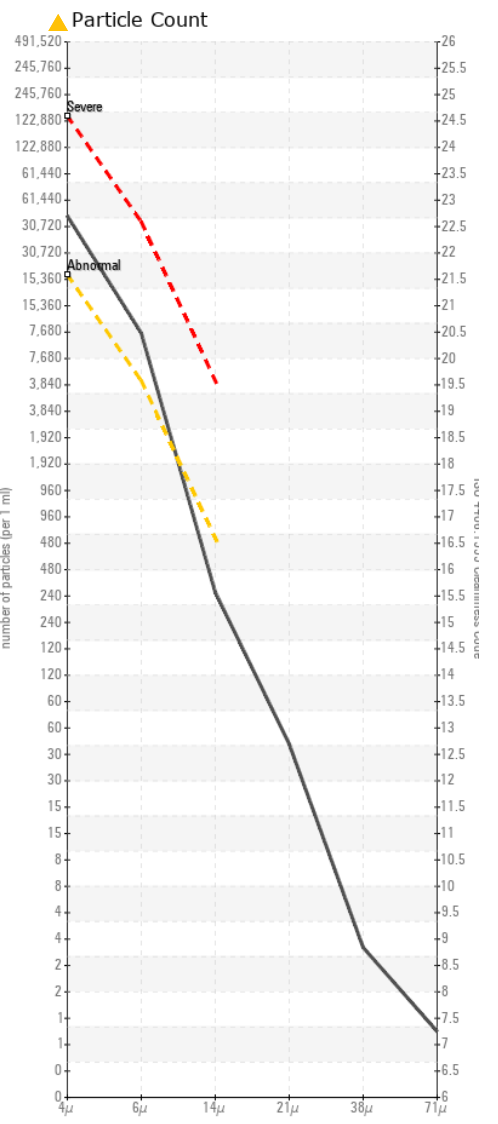
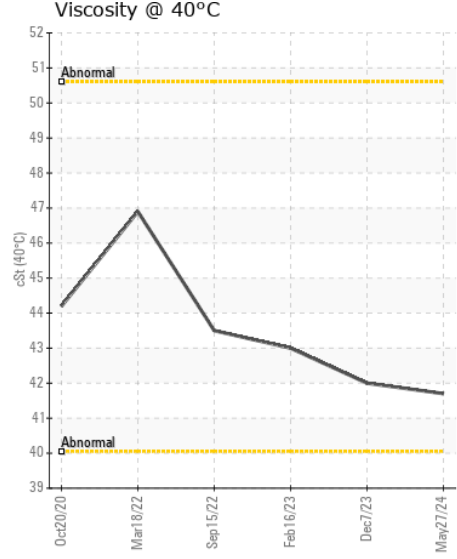
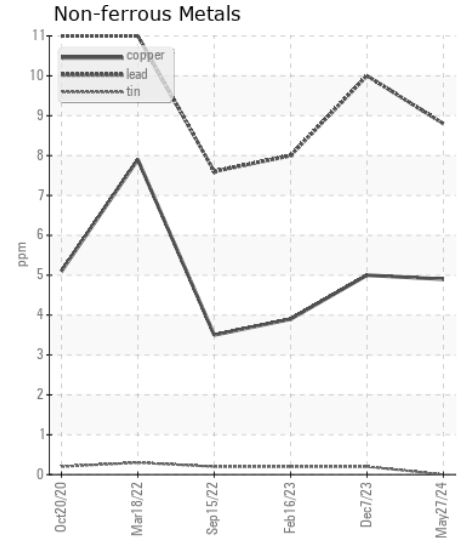
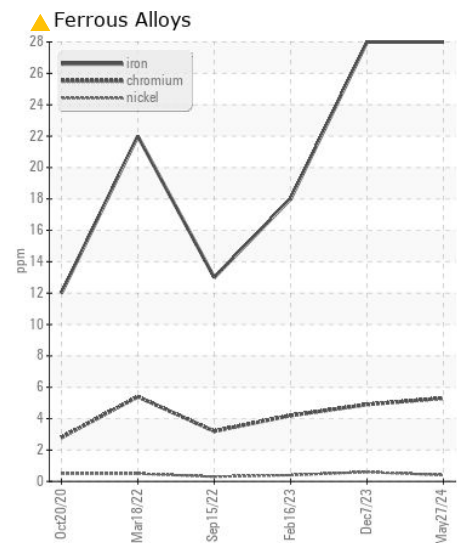
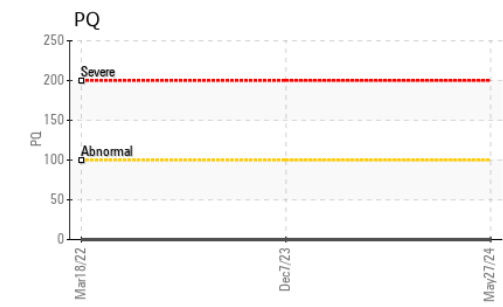
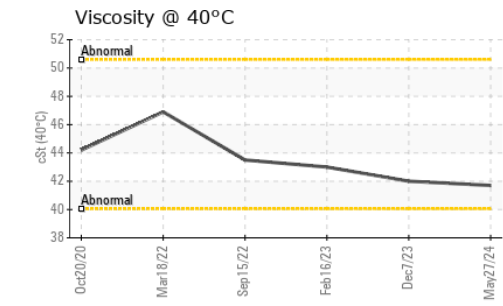
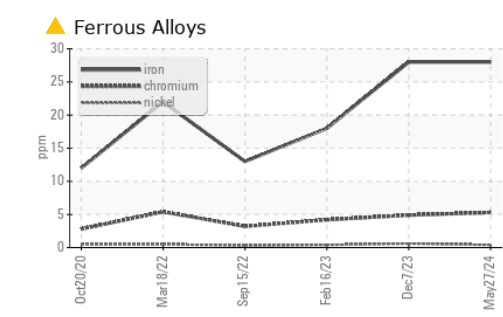
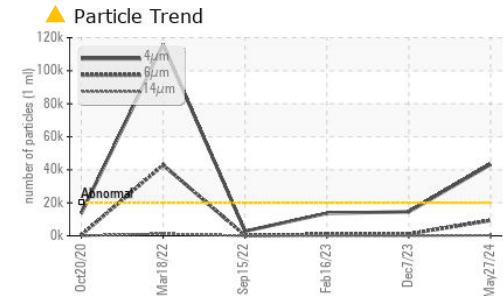
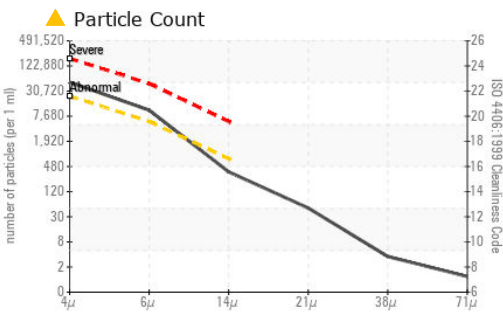
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>20	<b>8</b>	7	5
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	<1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>▲ 43240</b>	14551	13670
Particles >6µm		ASTM D7647	>5000	<b>● 9330</b>	1133	917
Particles >14µm		ASTM D7647	>640	<b>314</b>	25	8
Particles >21µm		ASTM D7647	>160	<b>43</b>	6	3
Particles >38µm		ASTM D7647	>40	<b>3</b>	1	0
Particles >71µm		ASTM D7647	>10	<b>1</b>	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>▲ 23/20/15</b>	21/17/12	21/17/10
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>VLITE</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*	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<b>1</b>	<1	<1
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185(m)		<b>6</b>	5	4
Calcium	ppm	ASTM D5185(m)		<b>465</b>	514	546
Phosphorus	ppm	ASTM D5185(m)		<b>610</b>	589	666
Zinc	ppm	ASTM D5185(m)		<b>764</b>	755	764
Sulfur	ppm	ASTM D5185(m)		<b>2257</b>	2450	2471
Visc @ 40°C	cSt	ASTM D7279(m)		<b>41.7</b>	42.0	43.0



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0290956 **Received** : 28 May 2024  
**Lab Number** : 02638118 **Tested** : 30 May 2024  
**Unique Number** : 5787280 **Diagnosed** : 30 May 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PQ, PrtCount )

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.

**Summit Aggregates**  
 2686 Greenfield Blvd.  
 Ayr, ON  
 CA N0B 1E0  
 Contact: Bill .  
 bill@summitagg.com  
 T: (519)500-8146  
 F: