



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL



Machine Id  
**LIEBHERR LB36 115823**  
Component  
**Hydraulic System**  
Fluid  
**{not provided} (800 LTR)**

### RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor. 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		LH0286391	---	---
Sample Date		Client Info		21 Mar 2024	---	---
Machine Age	hrs	Client Info		4383	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ATTENTION	---	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	2	---	---
Chromium	ppm	ASTM D5185(m)	>10	0	---	---
Nickel	ppm	ASTM D5185(m)	>10	0	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>10	<1	---	---
Lead	ppm	ASTM D5185(m)	>10	0	---	---
Copper	ppm	ASTM D5185(m)	>75	1	---	---
Tin	ppm	ASTM D5185(m)	>10	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

### CONTAMINATION

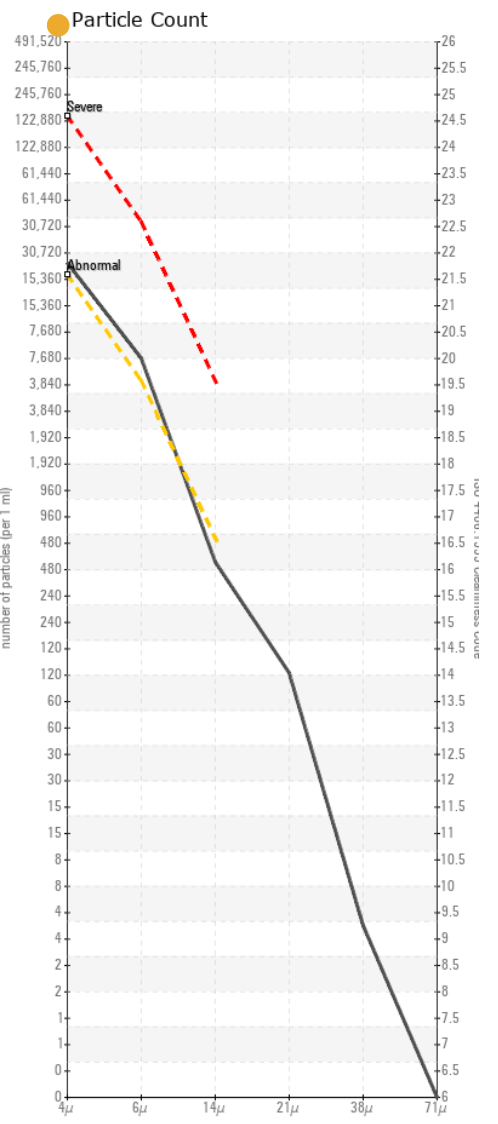
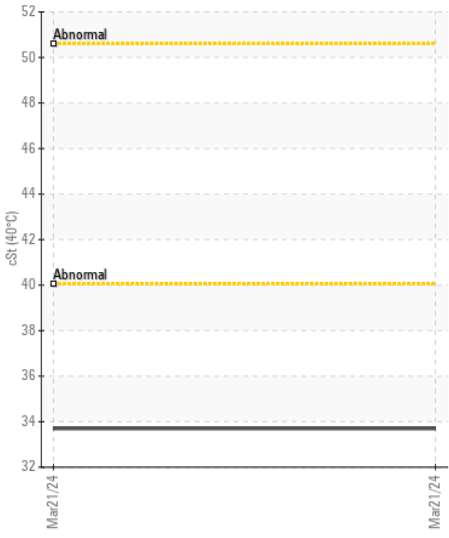
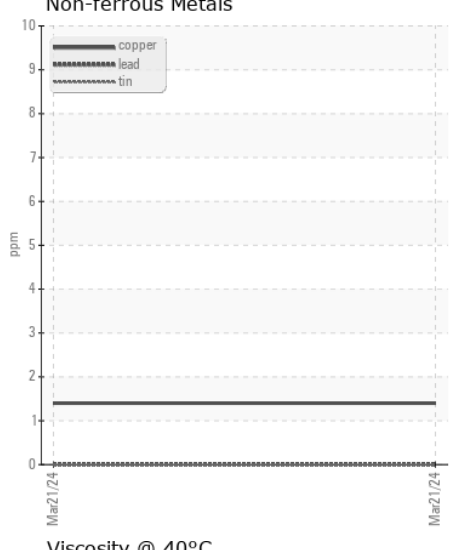
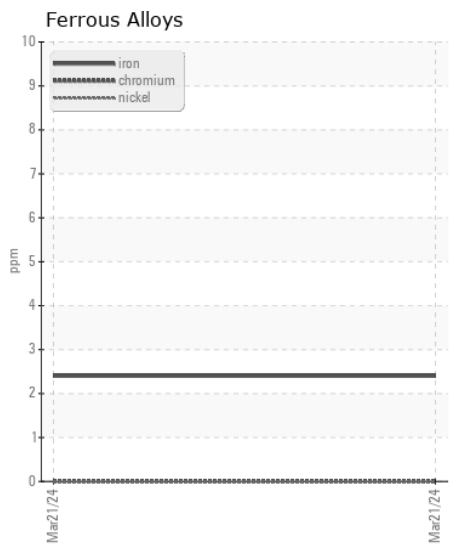
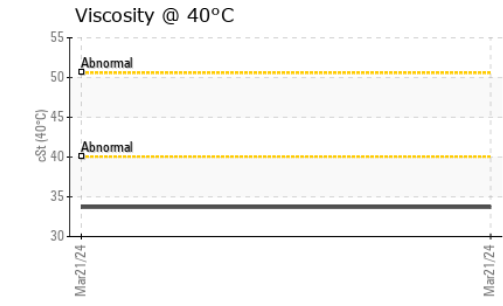
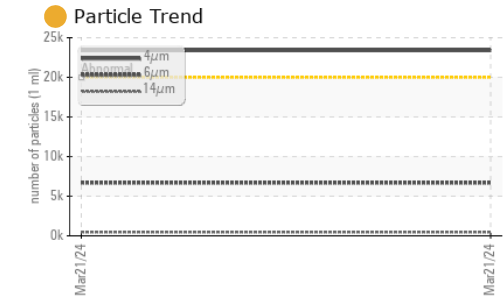
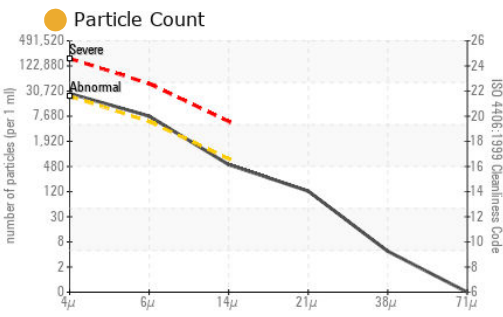
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>20	0	---	---
Potassium	ppm	ASTM D5185(m)	>20	0	---	---
Water		WC Method	>0.1	NEG	---	---
Particles >4µm		ASTM D7647	>20000	23389	---	---
Particles >6µm		ASTM D7647	>5000	6704	---	---
Particles >14µm		ASTM D7647	>640	467	---	---
Particles >21µm		ASTM D7647	>160	109	---	---
Particles >38µm		ASTM D7647	>40	4	---	---
Particles >71µm		ASTM D7647	>10	0	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	22/20/16	---	---
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*	>0.1	NEG	---	---

### FLUID CONDITION

Viscosity of sample indicates oil is within ISO 32 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		0	---	---
Boron	ppm	ASTM D5185(m)		1	---	---
Barium	ppm	ASTM D5185(m)		0	---	---
Molybdenum	ppm	ASTM D5185(m)		12	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)		4	---	---
Calcium	ppm	ASTM D5185(m)		32	---	---
Phosphorus	ppm	ASTM D5185(m)		451	---	---
Zinc	ppm	ASTM D5185(m)		213	---	---
Sulfur	ppm	ASTM D5185(m)		1496	---	---
Visc @ 40°C	cSt	ASTM D7279(m)		33.7	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0286391 **Received** : 01 Apr 2024  
**Lab Number** : 02625734 **Tested** : 02 Apr 2024  
**Unique Number** : 5750853 **Diagnosed** : 02 Apr 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

**DOUBLE STAR DRILLING**  
 50 TEHCNOLOGY WAY SE  
 CALAGARY, AB  
 CA T3S 0B5  
 Contact: Chris Laine

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: