



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LB28 115540**  
Component  
**Hydraulic System**  
Fluid  
**AW HYDRAULIC OIL ISO 32 (--- LTR)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0291205</b>	LH0178457	LH0105242
Sample Date		Client Info		<b>04 May 2024</b>	05 Nov 2020	20 Oct 2016
Machine Age	hrs	Client Info		<b>12022</b>	9602	5825
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>Not Chngd</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>75	<b>2</b>	5	5
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
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

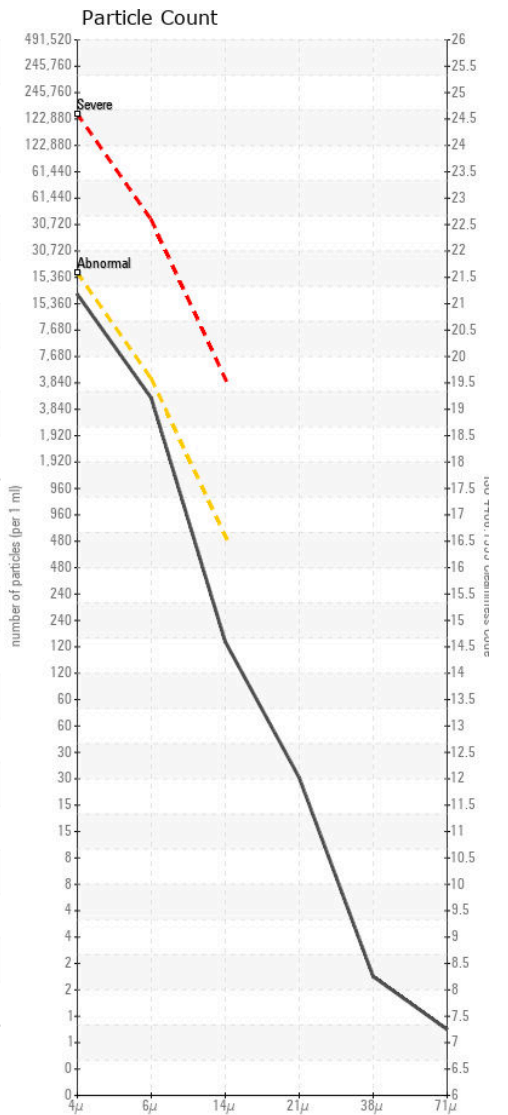
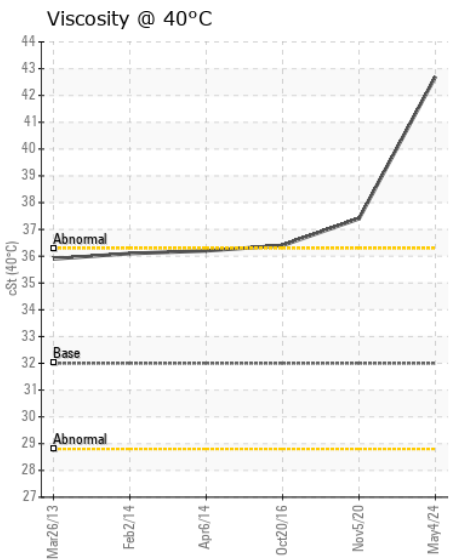
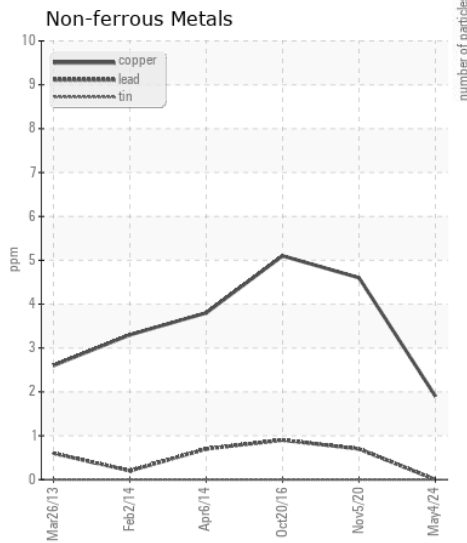
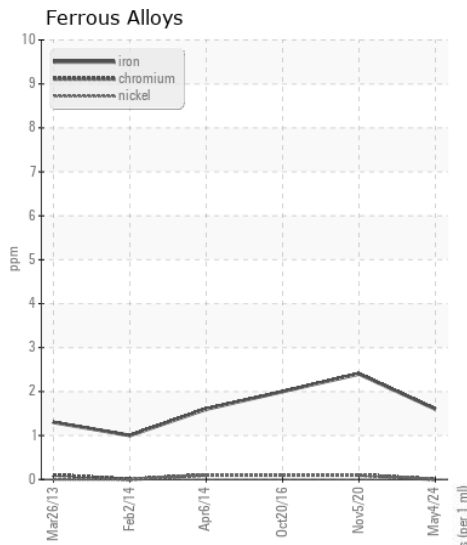
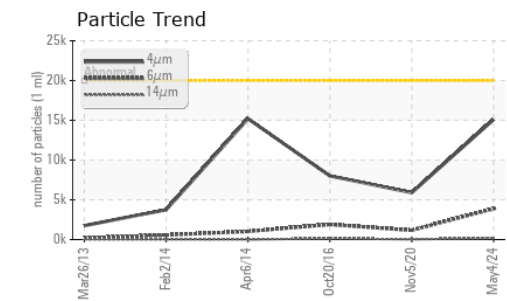
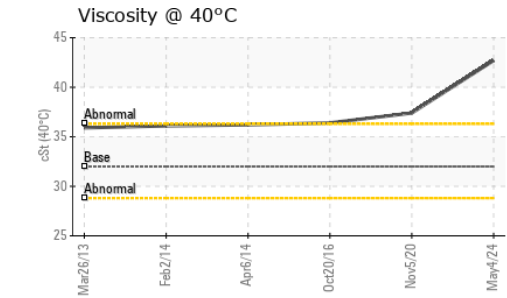
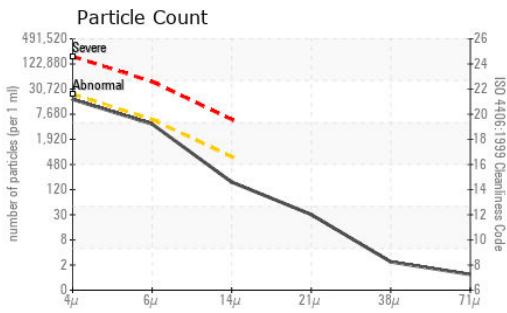
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>20	<b>0</b>	2	3
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>15096</b>	5901	8016
Particles >6µm		ASTM D7647	>5000	<b>3883</b>	1169	1908
Particles >14µm		ASTM D7647	>640	<b>160</b>	29	128
Particles >21µm		ASTM D7647	>160	<b>27</b>	4	18
Particles >38µm		ASTM D7647	>40	<b>2</b>	0	0
Particles >71µm		ASTM D7647	>10	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>21/19/14</b>	20/17/12	20/18/14
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
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

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	1
Boron	ppm	ASTM D5185(m)	5	<b>5</b>	7	5
Barium	ppm	ASTM D5185(m)	5	<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185(m)	5	<b>0</b>	<1	<1
Manganese	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	25	<b>11</b>	6	10
Calcium	ppm	ASTM D5185(m)	200	<b>173</b>	375	589
Phosphorus	ppm	ASTM D5185(m)	300	<b>502</b>	415	387
Zinc	ppm	ASTM D5185(m)	370	<b>620</b>	487	479
Sulfur	ppm	ASTM D5185(m)	2500	<b>1800</b>	2538	2869
Visc @ 40°C	cSt	ASTM D7279(m)	32	<b>42.7</b>	37.4	36.4



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0291205 **Received** : 07 May 2024  
**Lab Number** : 02633895 **Tested** : 08 May 2024  
**Unique Number** : 5775048 **Diagnosed** : 08 May 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

**Maple Site Solutions Inc.**  
 766 Old Hespeler Rd.  
 Cambridge, ON  
 CA N3H 5L8  
 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.

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