



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH60C 106512-1528**  
Component  
**Swing Drive**  
Fluid  
**LIEBHERR GEAR BASIC 90 LS (--- GAL)**

### RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.  
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0288231</b>	LH0278579	LH
Sample Date		Client Info		<b>29 Apr 2024</b>	05 Jan 2024	23 Aug 2023
Machine Age	hrs	Client Info		<b>23144</b>	21976	0
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>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>750	<b>667</b>	▲ 1432	558
Chromium	ppm	ASTM D5185(m)	>10	<b>6</b>	▲ 15	6
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	2	1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>5	<b>4</b>	3	2
Copper	ppm	ASTM D5185(m)	>250	<b>187</b>	123	37
Tin	ppm	ASTM D5185(m)	>10	<b>3</b>	3	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>LIGHT</b>	VLITE	VLITE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

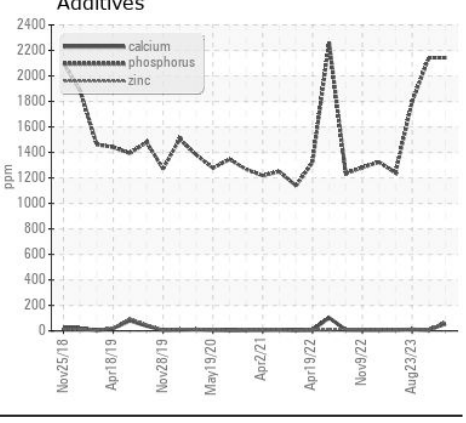
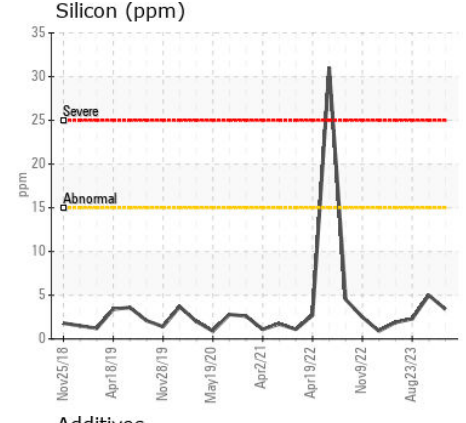
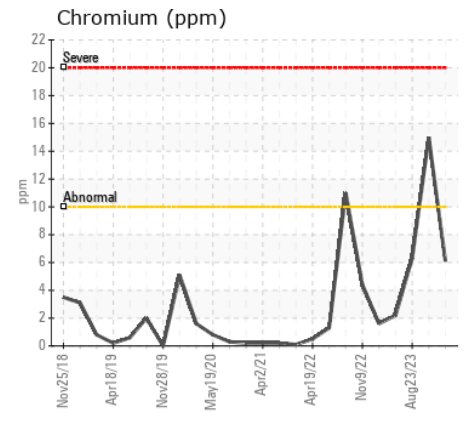
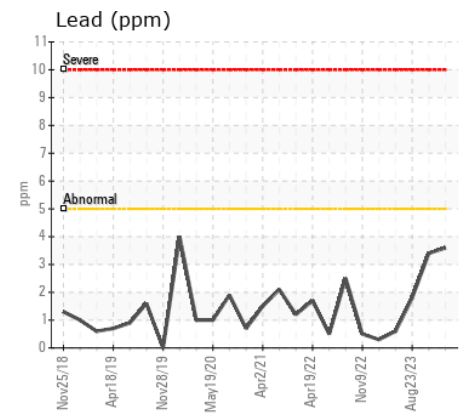
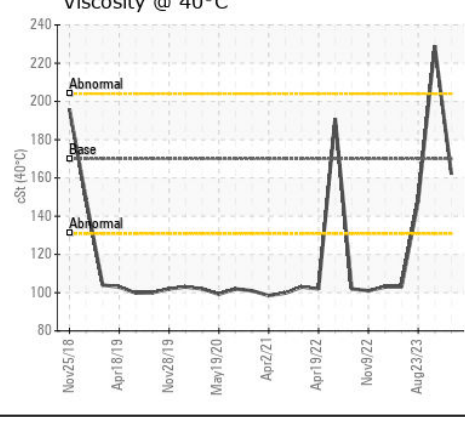
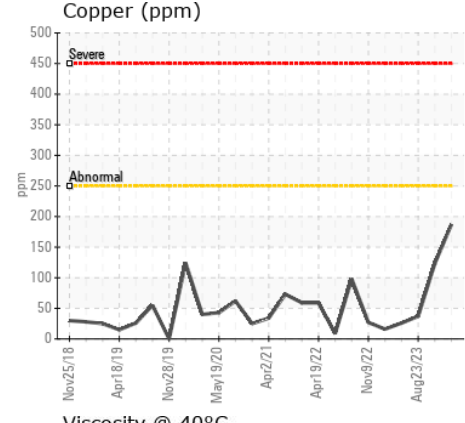
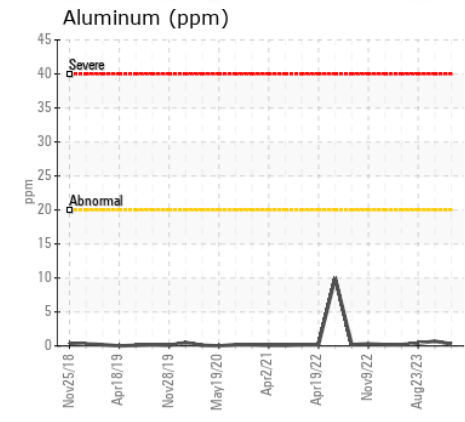
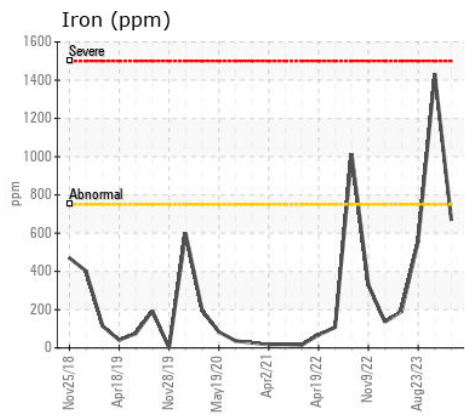
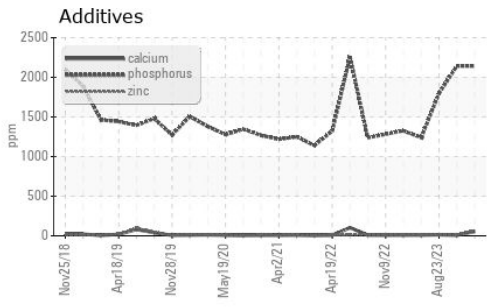
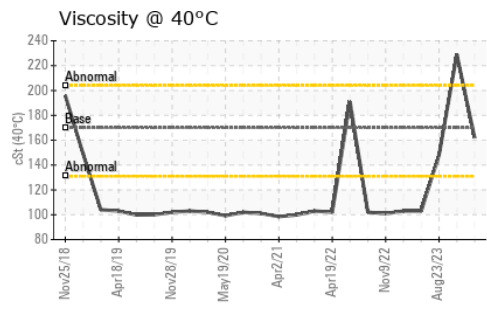
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>3</b>	5	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</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*	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil.  
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)	0	<b>43</b>	38	36
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>3</b>	0	<1
Manganese	ppm	ASTM D5185(m)	0	<b>4</b>	10	4
Magnesium	ppm	ASTM D5185(m)	<1	<b>58</b>	1	1
Calcium	ppm	ASTM D5185(m)	<1	<b>55</b>	7	13
Phosphorus	ppm	ASTM D5185(m)	2143	<b>2143</b>	2143	1798
Zinc	ppm	ASTM D5185(m)	<1	<b>73</b>	11	11
Sulfur	ppm	ASTM D5185(m)	23468	<b>22707</b>	24099	24572
Visc @ 40°C	cSt	ASTM D7279(m)	170	<b>162</b>	229	148



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0288231  
**Lab Number** : 02633285  
**Unique Number** : 5774438  
**Test Package** : MOB 1  
**Received** : 03 May 2024  
**Tested** : 03 May 2024  
**Diagnosed** : 03 May 2024 - Wes Davis

**Gerdau - Mandak Metal Processors Ltd.,**  
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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.