



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH40M 112208-1215**  
Component  
**Transmission (Manual)**  
Fluid  
**PETRO CANADA 10W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0278766</b>	LH0256578	LH0193033
Sample Date		Client Info		<b>22 Feb 2024</b>	22 Mar 2023	13 Jul 2021
Machine Age	hrs	Client Info		<b>12935</b>	11044	6336
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>None</b>	None	None
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>200	<b>17</b>	35	16
Chromium	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)	>7	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>2</b>	2	1
Lead	ppm	ASTM D5185(m)	>45	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185(m)	>225	<b>14</b>	39	24
Tin	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	2	1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	VLITE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>VLITE</b>	NONE	NONE

### CONTAMINATION

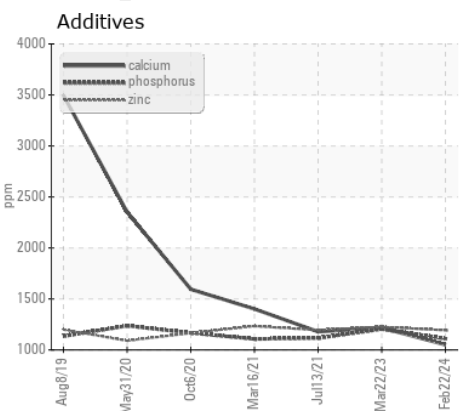
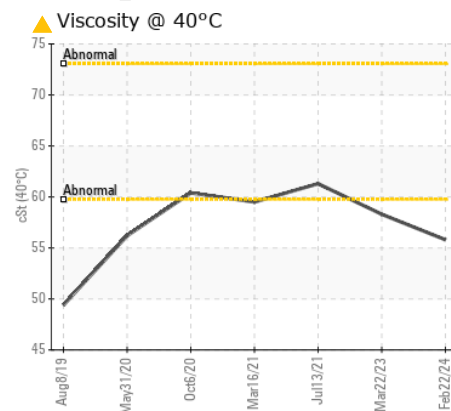
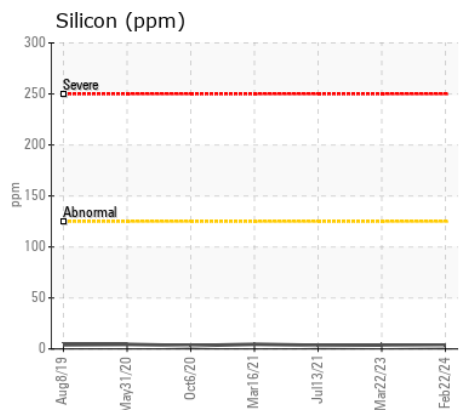
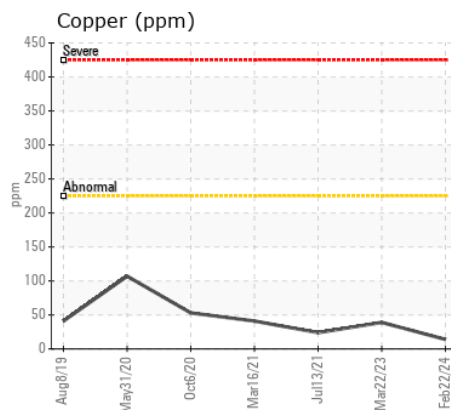
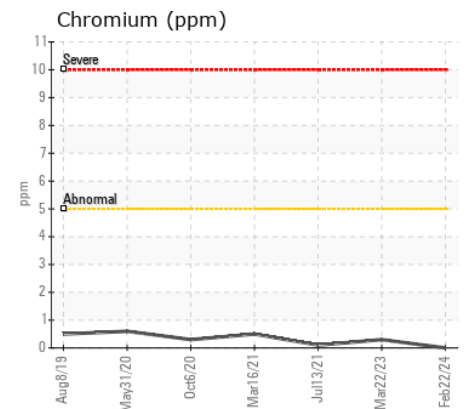
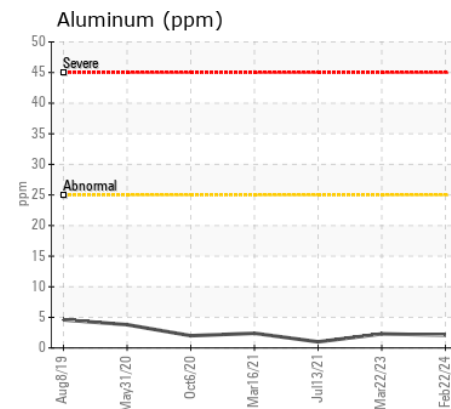
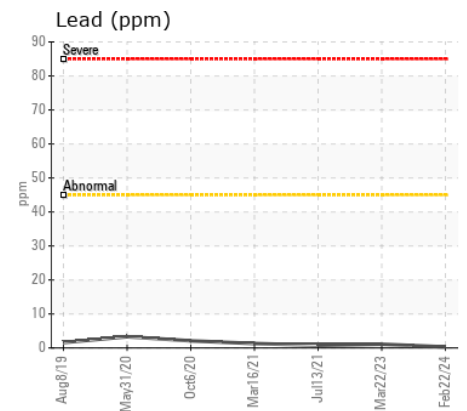
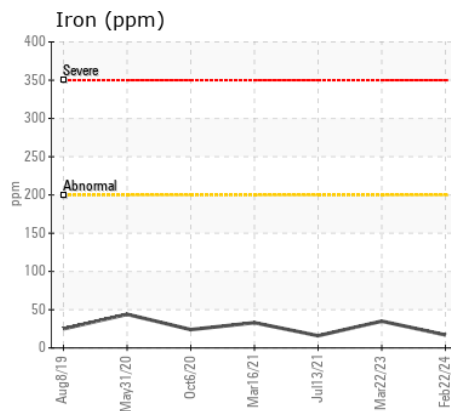
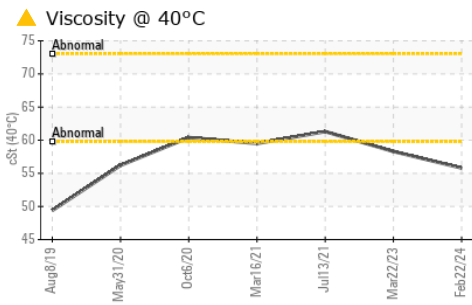
There is no indication of any contamination in the fluid.

Silicon	ppm	ASTM D5185(m)	>125	<b>3</b>	4	4
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	1
Water		WC Method	>0.1	<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*	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

Viscosity of sample indicates oil is within SAE 20 range, advise investigate. The condition of the fluid is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>20	<b>3</b>	4	5
Boron	ppm	ASTM D5185(m)		<b>16</b>	6	5
Barium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)		<b>59</b>	60	53
Manganese	ppm	ASTM D5185(m)		<b>3</b>	8	5
Magnesium	ppm	ASTM D5185(m)		<b>1000</b>	953	881
Calcium	ppm	ASTM D5185(m)		<b>1051</b>	1217	1179
Phosphorus	ppm	ASTM D5185(m)		<b>1111</b>	1204	1116
Zinc	ppm	ASTM D5185(m)		<b>1193</b>	1226	1194
Sulfur	ppm	ASTM D5185(m)		<b>3152</b>	3347	3601
Visc @ 40°C	cSt	ASTM D7279(m)		<b>▲ 55.8</b>	▲ 58.3	▲ 61.3



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0278766 **Received** : 01 Mar 2024  
**Lab Number** : 02619318 **Tested** : 01 Mar 2024  
**Unique Number** : 5736428 **Diagnosed** : 01 Mar 2024 - Kevin Marson  
**Test Package** : MOB 1

**KIMCO STEEL SALES 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.