



# LIEBHERR

## OIL ANALYSIS REPORT



Area  
**(344091)**  
Machine Id  
**LIEBHERR LH40M 120553-1215**  
Component  
**Transmission (Manual)**  
Fluid  
**PETRO CANADA 10W40 (--- GAL)**

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

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0193878</b>	LH0193864	LH0193850
Sample Date		Client Info		<b>13 Feb 2024</b>	21 Feb 2023	11 Oct 2021
Machine Age	hrs	Client Info		<b>4086</b>	2835	1021
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>30</b>	38	19
Chromium	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)	>7	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	<b>2</b>	2	3
Lead	ppm	ASTM D5185(m)	>45	<b>&lt;1</b>	1	1
Copper	ppm	ASTM D5185(m)	>225	<b>26</b>	33	29
Tin	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
White Metal	scalar	Visual*	NONE	<b>NONE</b>	VLITE	LIGHT
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

There is no indication of any contamination in the fluid.

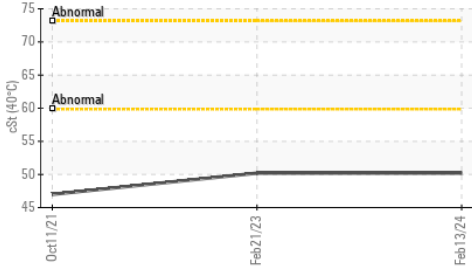
Silicon	ppm	ASTM D5185(m)	>125	<b>3</b>	4	2
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	4
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Silt	scalar	Visual*	NONE	<b>VLITE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	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

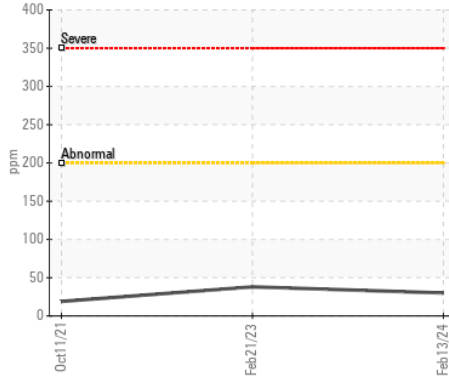
Viscosity of sample indicates oil is within SAE 10W range, advise investigate. The condition of the fluid is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>20	<b>17</b>	29	44
Boron	ppm	ASTM D5185(m)		<b>4</b>	4	4
Barium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	1
Molybdenum	ppm	ASTM D5185(m)		<b>43</b>	26	<1
Manganese	ppm	ASTM D5185(m)		<b>6</b>	11	10
Magnesium	ppm	ASTM D5185(m)		<b>696</b>	415	7
Calcium	ppm	ASTM D5185(m)		<b>1811</b>	2483	3245
Phosphorus	ppm	ASTM D5185(m)		<b>1122</b>	1182	1123
Zinc	ppm	ASTM D5185(m)		<b>1205</b>	1185	1141
Sulfur	ppm	ASTM D5185(m)		<b>4786</b>	5964	8083
Visc @ 40°C	cSt	ASTM D7279(m)		<b>▲ 50.2</b>	▲ 50.2	▲ 47.0

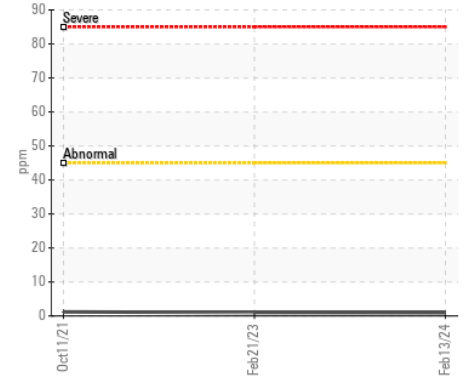
▲ Viscosity @ 40°C



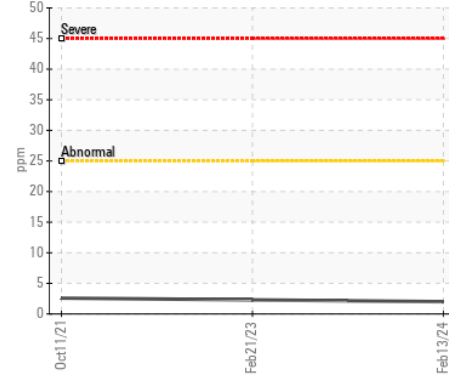
Iron (ppm)



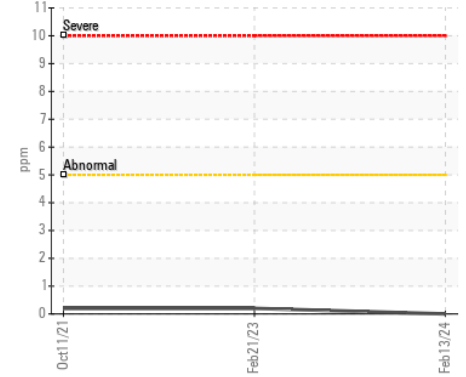
Lead (ppm)



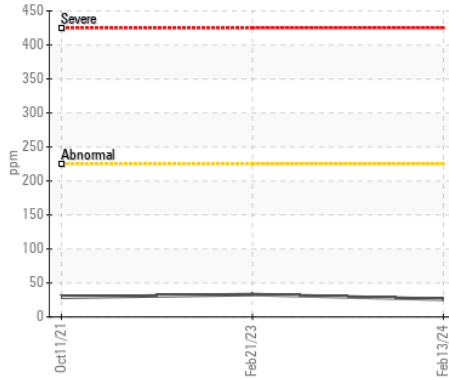
Aluminum (ppm)



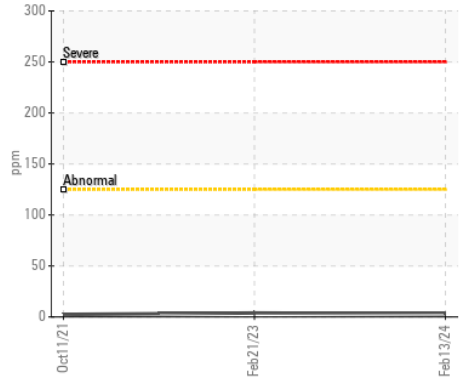
Chromium (ppm)



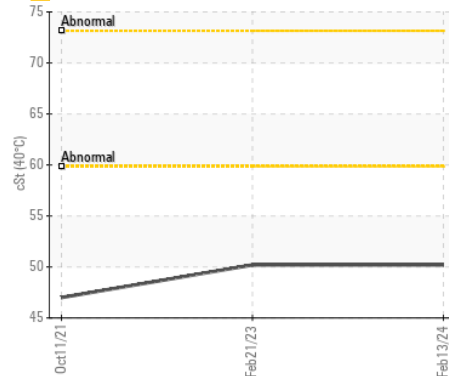
Copper (ppm)



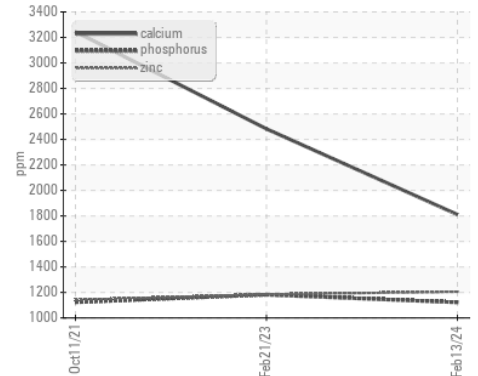
Silicon (ppm)



▲ Viscosity @ 40°C



Additives



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0193878 **Received** : 16 Feb 2024  
**Lab Number** : 02616306 **Tested** : 16 Feb 2024  
**Unique Number** : 5733416 **Diagnosed** : 16 Feb 2024 - Kevin Marson  
**Test Package** : MOBCE ( Additional Tests: Visual )

**Goodies Trading Ltd.**  
 8150 Aitken Road  
 Chilliwack, BC  
 CA V2R 4H5  
 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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F: