



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH40M 146308-1215**

Component  
**Front Right Wheel Hub**

Fluid  
**PETRO CANADA TRAXON SYNTHETIC 75W90 (--- GAL)**

### RECOMMENDATION

The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0281094</b>	---	---
Sample Date		Client Info		<b>03 Jan 2024</b>	---	---
Machine Age	hrs	Client Info		<b>511</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Filter Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>Changed</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

### WEAR

Iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

PQ		ASTM D8184*	>500	<b>0</b>	---	---
Iron	ppm	ASTM D5185(m)	>650	<b>▲ 651</b>	---	---
Chromium	ppm	ASTM D5185(m)	>4	<b>1</b>	---	---
Nickel	ppm	ASTM D5185(m)	>4	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185(m)	>4	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>25	<b>2</b>	---	---
Lead	ppm	ASTM D5185(m)	>4	<b>1</b>	---	---
Copper	ppm	ASTM D5185(m)	>60	<b>51</b>	---	---
Tin	ppm	ASTM D5185(m)	>4	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
White Metal	scalar	Visual*	NONE	<b>VLITE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

### CONTAMINATION

There is no indication of any contamination in the oil.

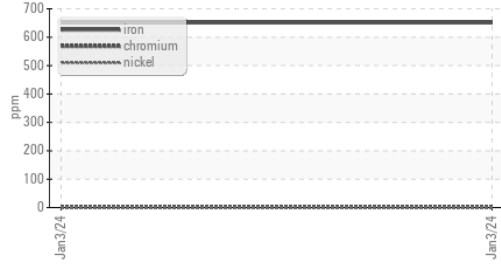
Silicon	ppm	ASTM D5185(m)	>75	<b>3</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	---	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	---	---

### FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<b>21</b>	---	---
Boron	ppm	ASTM D5185(m)	328	<b>24</b>	---	---
Barium	ppm	ASTM D5185(m)	1	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)		<b>0</b>	---	---
Manganese	ppm	ASTM D5185(m)		<b>8</b>	---	---
Magnesium	ppm	ASTM D5185(m)	1	<b>2</b>	---	---
Calcium	ppm	ASTM D5185(m)	7	<b>25</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	1145	<b>1405</b>	---	---
Zinc	ppm	ASTM D5185(m)	3	<b>68</b>	---	---
Sulfur	ppm	ASTM D5185(m)	17909	<b>24234</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	99.6	<b>129</b>	---	---

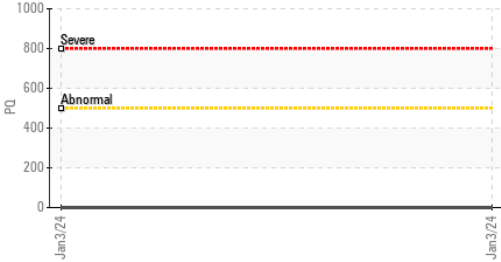
▲ Ferrous Alloys



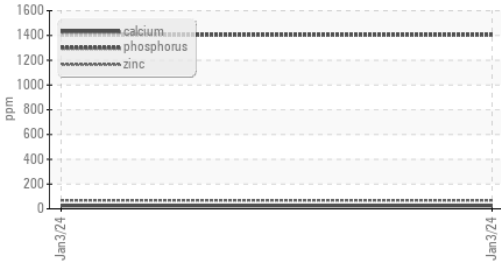
Viscosity @ 40°C



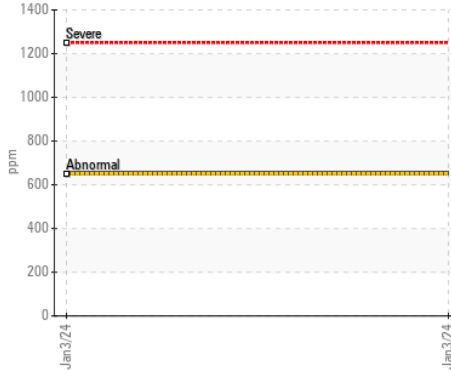
PQ



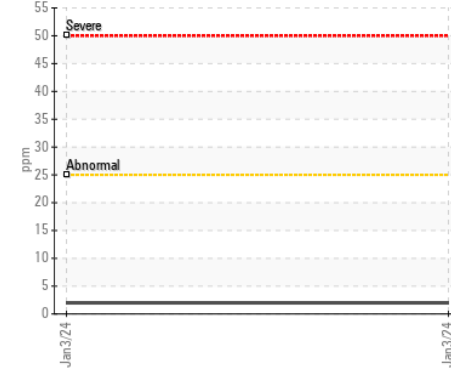
Additives



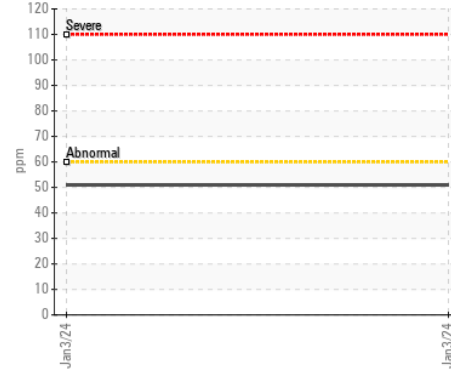
▲ Iron (ppm)



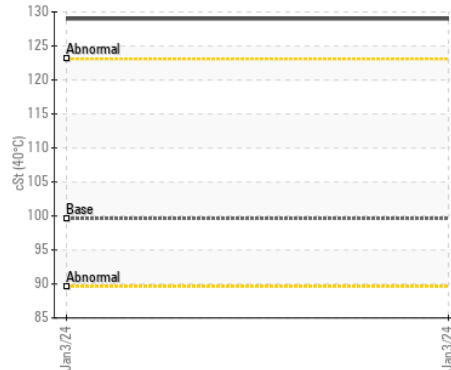
Aluminum (ppm)



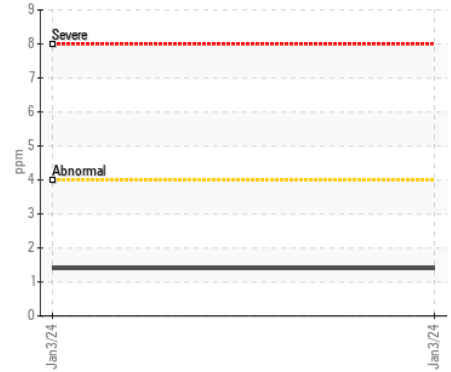
Copper (ppm)



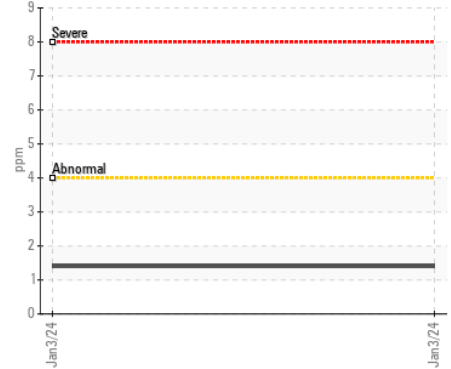
Viscosity @ 40°C



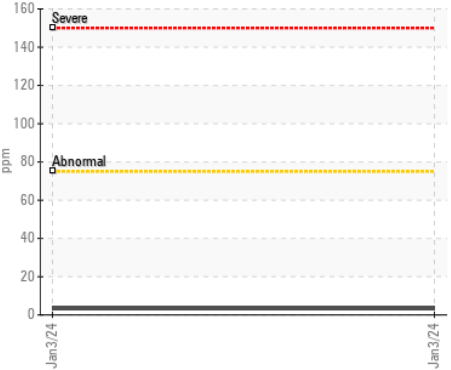
Lead (ppm)



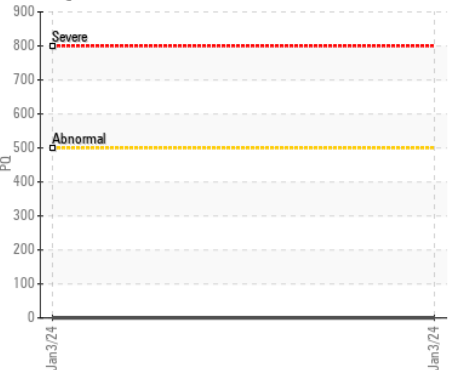
Chromium (ppm)



Silicon (ppm)



PQ



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0281094 **Received** : 08 Jan 2024  
**Lab Number** : 02607268 **Diagnosed** : 09 Jan 2024  
**Unique Number** : 5708354 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PQ )

**RICHMOND STEEL RECYCLING**  
 955 ORD ROAD  
 KAMLOOPS, BC  
 CA V2B 7B5  
 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.

T:  
F: