



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH22 157673-1525**

Component  
**Hydraulic System**

Fluid  
**PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- 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>LH0288059</b>	---	---
Sample Date		Client Info		<b>02 May 2024</b>	---	---
Machine Age	hrs	Client Info		<b>515</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Filter Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>Not Changd</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	<b>27</b>	---	---
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	---	---
Lead	ppm	ASTM D5185(m)	>4	<b>0</b>	---	---
Copper	ppm	ASTM D5185(m)	>10	<b>4</b>	---	---
Tin	ppm	ASTM D5185(m)	>2	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	---	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---

### CONTAMINATION

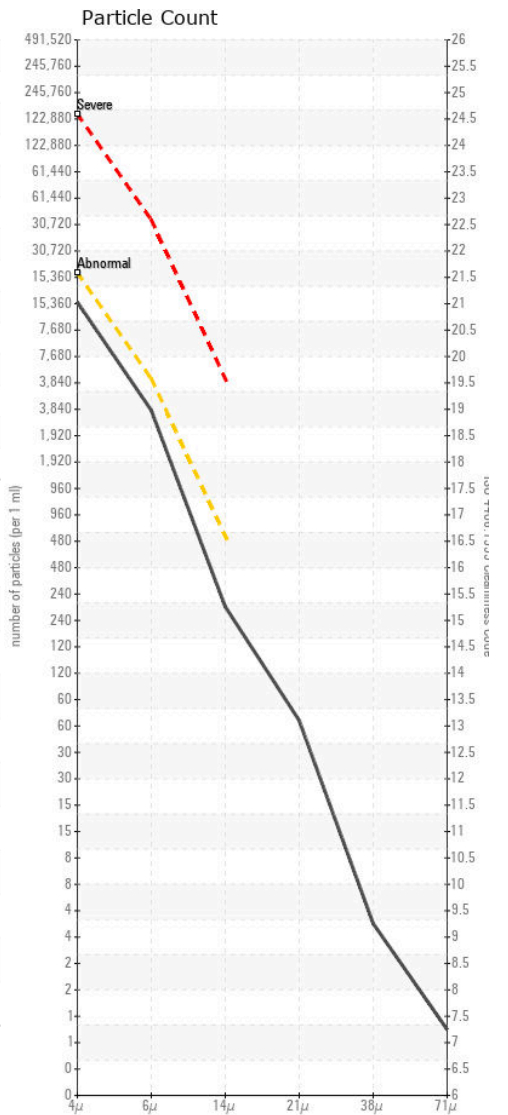
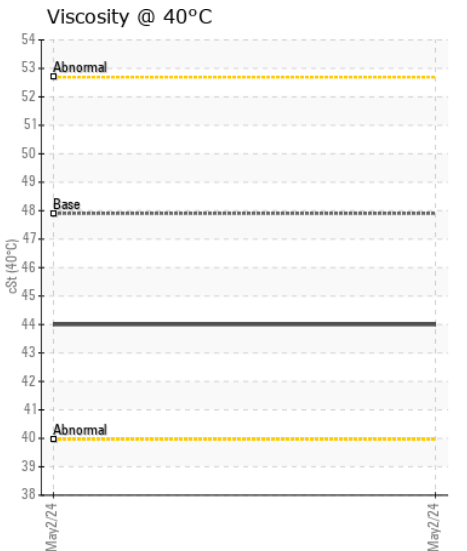
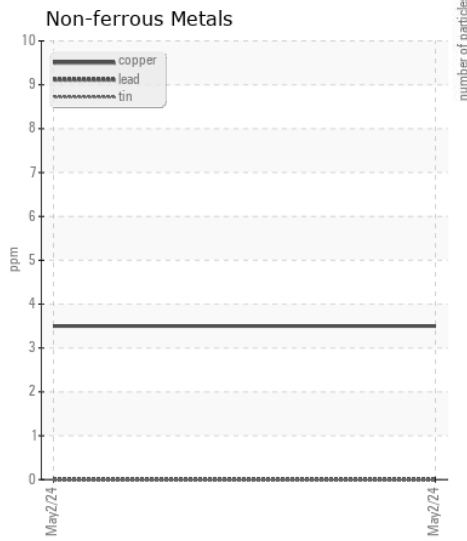
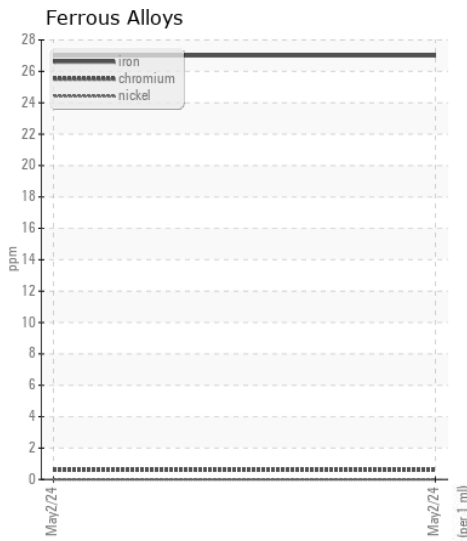
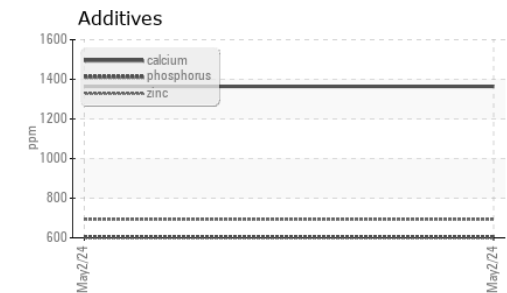
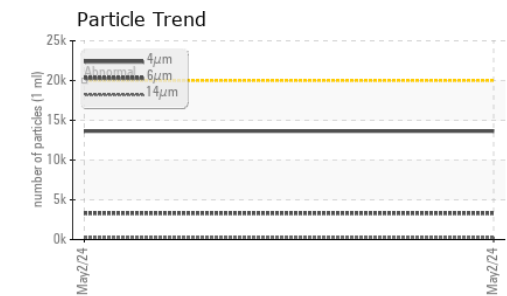
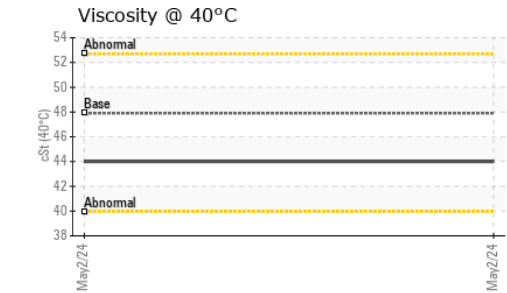
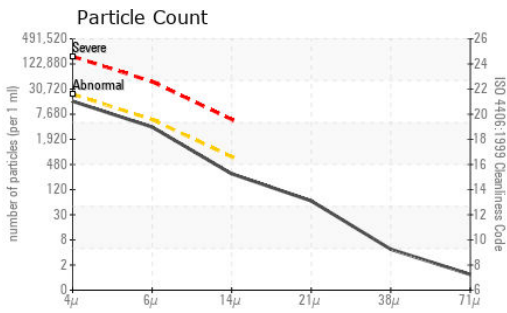
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>17	<b>3</b>	---	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	---	---
Water		WC Method	>0.1	<b>NEG</b>	---	---
Particles >4µm		ASTM D7647	>20000	<b>13633</b>	---	---
Particles >6µm		ASTM D7647	>5000	<b>3304</b>	---	---
Particles >14µm		ASTM D7647	>640	<b>253</b>	---	---
Particles >21µm		ASTM D7647	>160	<b>57</b>	---	---
Particles >38µm		ASTM D7647	>40	<b>4</b>	---	---
Particles >71µm		ASTM D7647	>10	<b>1</b>	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>21/19/15</b>	---	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>VLITE</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*	>0.1	<b>NEG</b>	---	---

### 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>1</b>	---	---
Boron	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	---	---
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	---	---
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	---	---
Manganese	ppm	ASTM D5185(m)	1	<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185(m)	0	<b>7</b>	---	---
Calcium	ppm	ASTM D5185(m)	100	<b>1364</b>	---	---
Phosphorus	ppm	ASTM D5185(m)	670	<b>603</b>	---	---
Zinc	ppm	ASTM D5185(m)	850	<b>693</b>	---	---
Sulfur	ppm	ASTM D5185(m)	1600	<b>4052</b>	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	<b>44.0</b>	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0288059 **Received** : 10 May 2024  
**Lab Number** : 02634640 **Tested** : 13 May 2024  
**Unique Number** : 5775793 **Diagnosed** : 13 May 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

**ECOWASTE INDUSTRIES LTD.**  
 15111 WILLIAMS ROAD  
 RICHMOND, BC  
 CA V6W 1G9  
 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: (604)277-1410  
 F: