



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**056255-1007**  
Component  
**Hydraulic System**

Fluid  
**PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0292223</b>	LH0270059	LH
Sample Date		Client Info		<b>26 Jun 2024</b>	14 Jul 2023	27 Jun 2022
Machine Age	hrs	Client Info		<b>17524</b>	16930	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>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	ATTENTION	ABNORMAL

### WEAR

All component wear rates are normal.

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

### CONTAMINATION

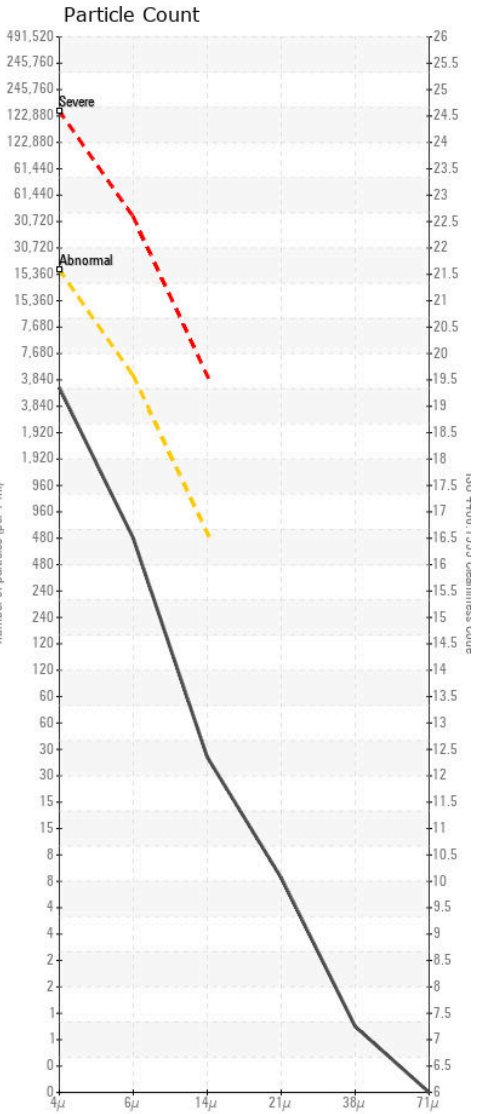
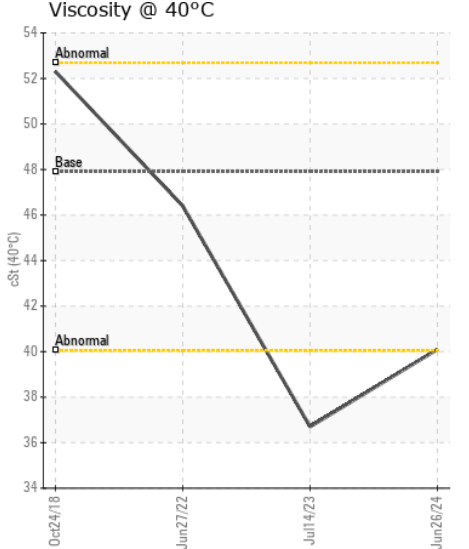
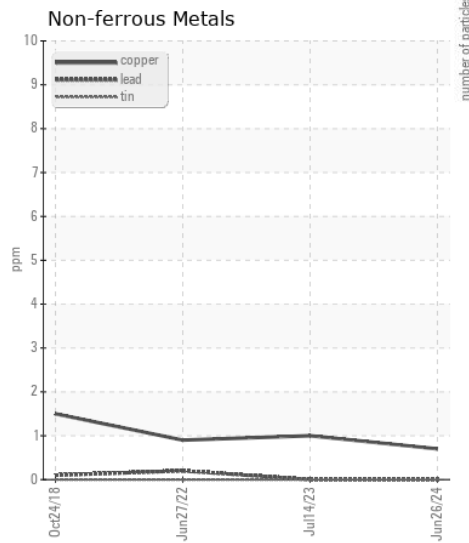
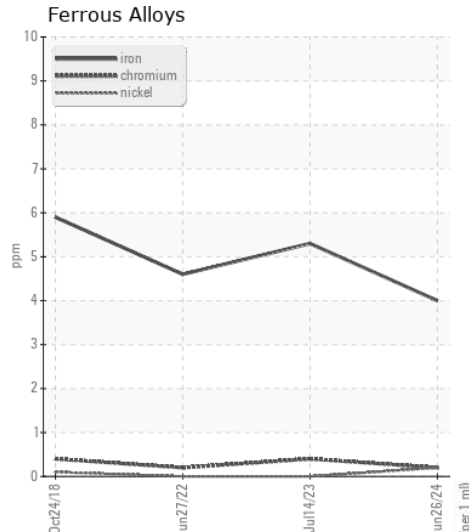
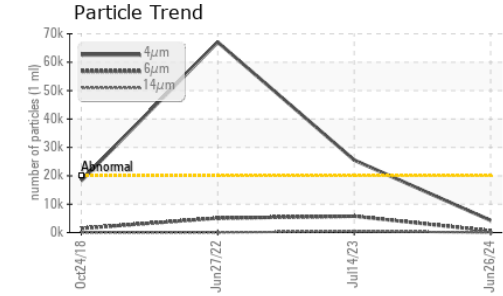
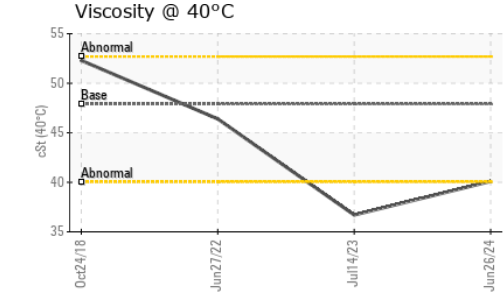
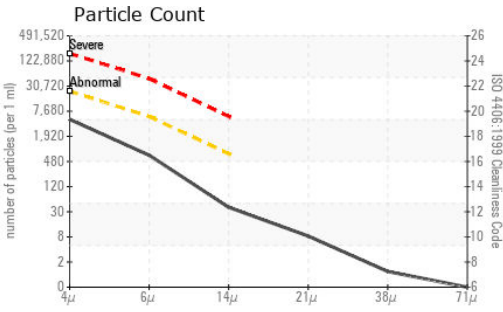
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>17	<b>&lt;1</b>	2	1
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	<1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>4282</b>	● 25532	▲ 67049
Particles >6µm		ASTM D7647	>5000	<b>595</b>	● 5762	● 5089
Particles >14µm		ASTM D7647	>640	<b>34</b>	422	54
Particles >21µm		ASTM D7647	>160	<b>7</b>	135	6
Particles >38µm		ASTM D7647	>40	<b>1</b>	13	2
Particles >71µm		ASTM D7647	>10	<b>0</b>	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>19/16/12</b>	● 22/20/16	▲ 23/20/13
Silt	scalar	Visual*	NONE	<b>NONE</b>	VLITE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	VLITE	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

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	2	<1
Boron	ppm	ASTM D5185(m)	0	<b>5</b>	10	<1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>3</b>	7	<1
Manganese	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	0	<b>42</b>	80	4
Calcium	ppm	ASTM D5185(m)	100	<b>186</b>	266	98
Phosphorus	ppm	ASTM D5185(m)	670	<b>592</b>	607	524
Zinc	ppm	ASTM D5185(m)	850	<b>763</b>	682	652
Sulfur	ppm	ASTM D5185(m)	1600	<b>1609</b>	1663	1455
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	<b>40.1</b>	36.7	46.4



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0292223 **Received** : 03 Jul 2024  
**Lab Number** : 02645282 **Tested** : 04 Jul 2024  
**Unique Number** : 5802821 **Diagnosed** : 04 Jul 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

**American Iron and Metal**  
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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.