



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**096750-1204**  
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>LH0291291</b>	LH0285140	LH0274879
Sample Date		Client Info		<b>07 Jun 2024</b>	05 Feb 2024	31 Oct 2023
Machine Age	hrs	Client Info		<b>11518</b>	10945	10469
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>	Changed	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	MARGINAL	NORMAL

#### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>60	<b>9</b>	8	7
Chromium	ppm	ASTM D5185(m)	>40	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>15	<b>3</b>	2	2
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
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>NONE</b>	NONE	NONE

#### CONTAMINATION

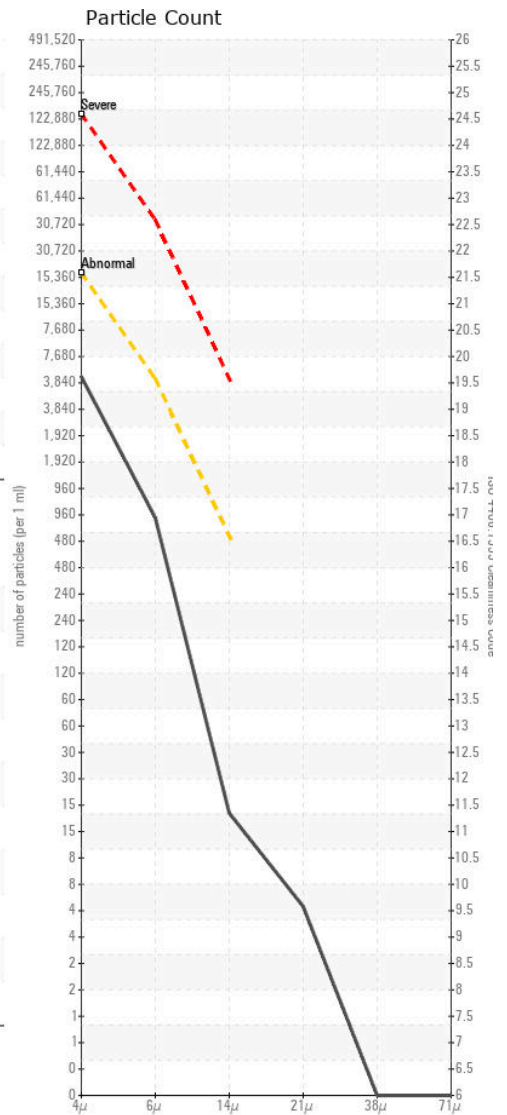
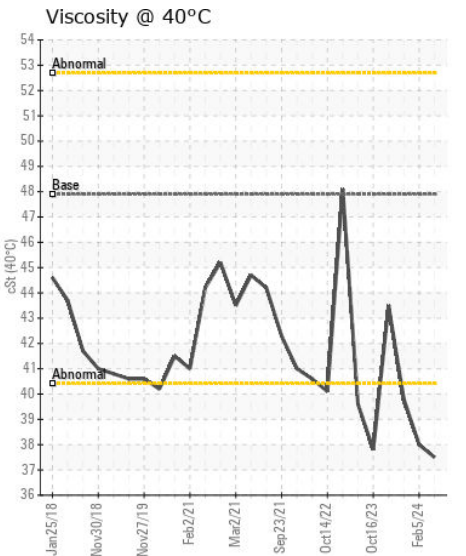
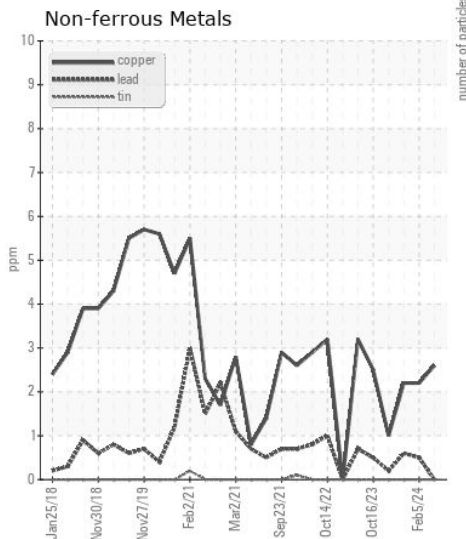
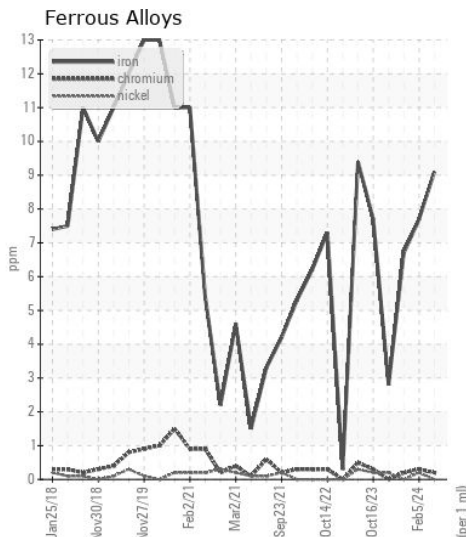
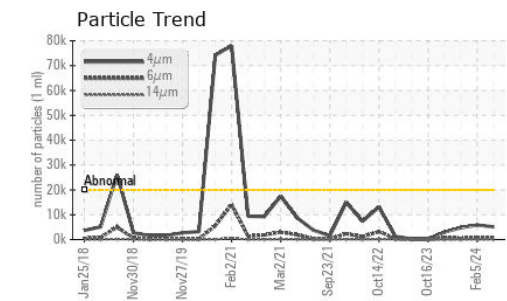
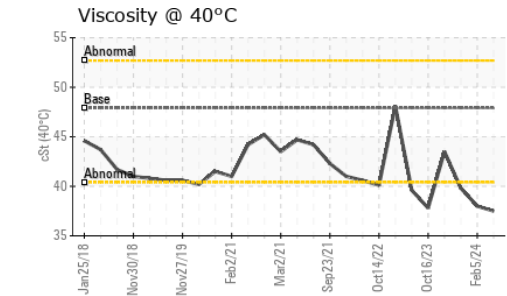
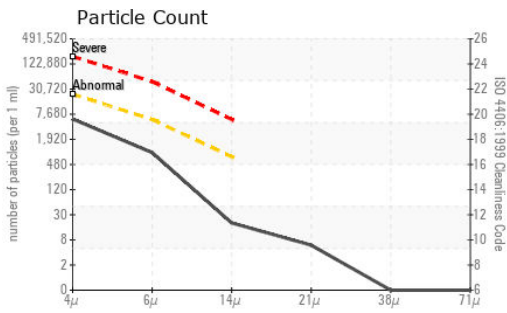
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>5132</b>	5844	4761
Particles >6µm		ASTM D7647	>5000	<b>811</b>	541	469
Particles >14µm		ASTM D7647	>640	<b>17</b>	18	12
Particles >21µm		ASTM D7647	>160	<b>5</b>	6	3
Particles >38µm		ASTM D7647	>40	<b>0</b>	2	1
Particles >71µm		ASTM D7647	>10	<b>0</b>	1	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>20/17/11</b>	20/16/11	19/16/11
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

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

Sodium	ppm	ASTM D5185(m)		<b>2</b>	1	1
Boron	ppm	ASTM D5185(m)	0	<b>1</b>	<1	<1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	<b>1</b>	2	2
Manganese	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	0	<b>4</b>	4	3
Calcium	ppm	ASTM D5185(m)	100	<b>402</b>	366	213
Phosphorus	ppm	ASTM D5185(m)	670	<b>555</b>	596	612
Zinc	ppm	ASTM D5185(m)	850	<b>702</b>	710	762
Sulfur	ppm	ASTM D5185(m)	1600	<b>1811</b>	1950	1870
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	<b>37.5</b>	38.0	39.8



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0291291 **Received** : 12 Jun 2024  
**Lab Number** : 02641442 **Tested** : 13 Jun 2024  
**Unique Number** : 5798981 **Diagnosed** : 13 Jun 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

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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