



LIEBHERR

OIL ANALYSIS REPORT



Area

(371127)

Machine Id

137622-1216

Component

Hydraulic System

Fluid

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

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0288385	LH0221623	---
Sample Date		Client Info		07 Jun 2024	23 Jan 2023	---
Machine Age	hrs	Client Info		4549	1580	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	27	14	---
Chromium	ppm	ASTM D5185(m)	>5	<1	0	---
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		0	0	---
Aluminum	ppm	ASTM D5185(m)	>2	<1	<1	---
Lead	ppm	ASTM D5185(m)	>4	<1	<1	---
Copper	ppm	ASTM D5185(m)	>10	3	2	---
Tin	ppm	ASTM D5185(m)	>2	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

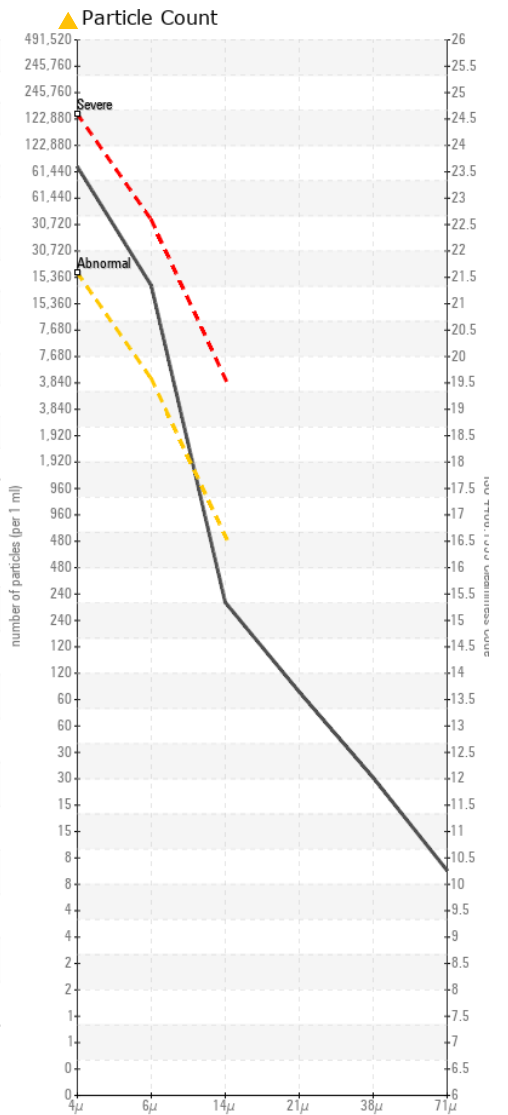
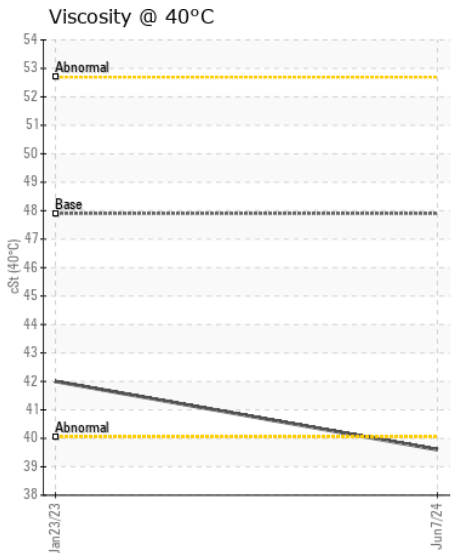
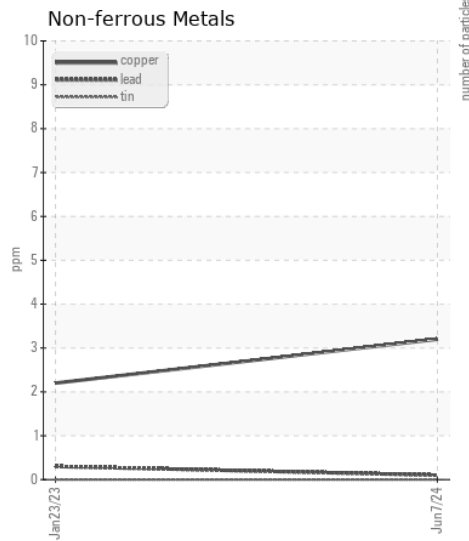
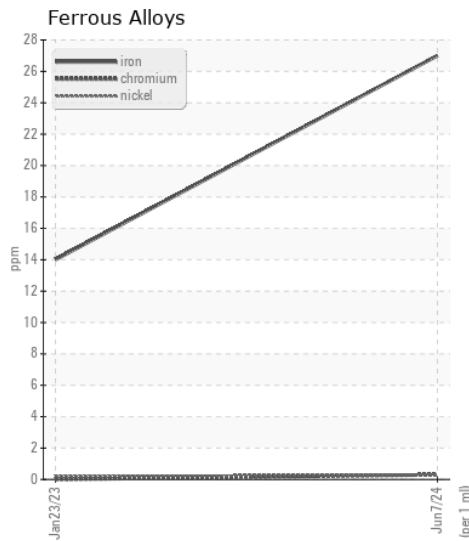
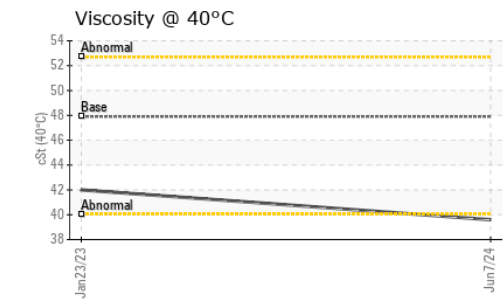
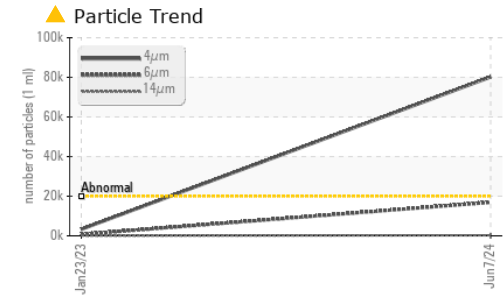
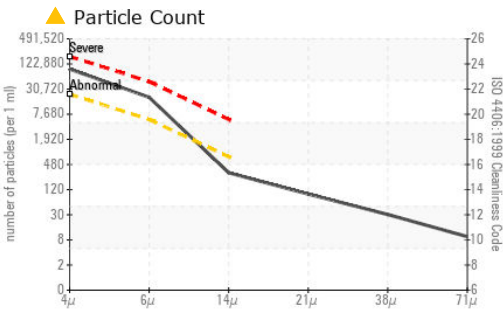
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>17	2	3	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>20000	▲ 80212	3307	---
Particles >6µm		ASTM D7647	>5000	▲ 16917	733	---
Particles >14µm		ASTM D7647	>640	268	67	---
Particles >21µm		ASTM D7647	>160	83	16	---
Particles >38µm		ASTM D7647	>40	27	0	---
Particles >71µm		ASTM D7647	>10	8	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 24/21/15	19/17/13	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	VLITE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	---

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 10W range, advise investigate. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		2	2	---
Boron	ppm	ASTM D5185(m)	0	1	<1	---
Barium	ppm	ASTM D5185(m)	0	<1	0	---
Molybdenum	ppm	ASTM D5185(m)	0	0	0	---
Manganese	ppm	ASTM D5185(m)	1	<1	<1	---
Magnesium	ppm	ASTM D5185(m)	0	3	3	---
Calcium	ppm	ASTM D5185(m)	100	825	1233	---
Phosphorus	ppm	ASTM D5185(m)	670	542	625	---
Zinc	ppm	ASTM D5185(m)	850	651	658	---
Sulfur	ppm	ASTM D5185(m)	1600	3154	4012	---
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	39.6	42.0	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288385 **Received** : 28 Jun 2024
Lab Number : 02644612 **Tested** : 02 Jul 2024
Unique Number : 5802151 **Diagnosed** : 02 Jul 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

American Iron and Metal
 100 INDUSTRIAL ROAD
 NORTH BAY, ON
 CA P1B 8K3
 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: