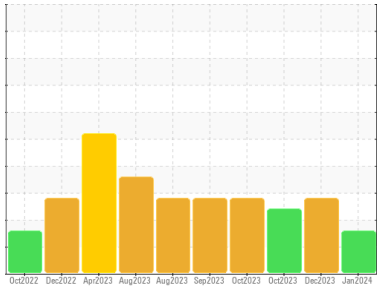
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
Steering Gears
Machine Id
Steering Gear Port
Component
Rear Left Steering
Fluid
PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)

DIAGNOSIS

Recommendation

We recommend that you drain the fluid from the component if this has not already been done. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

Copper and tin ppm levels are abnormal.

Contamination

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

Fluid Condition

The AN level is acceptable for this fluid. The fluid is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0877824**	WC0877821	WC0848613
Sample Date		Client Info		**07 Jan 2024**	05 Dec 2023	27 Oct 2023
Machine Age	hrs	Client Info		**60053**	59969	59531
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	Filtered	N/A
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>50	**2**	2	2
Chromium	ppm	ASTM D5185(m)	>15	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>5	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	<1	<1
Aluminum	ppm	ASTM D5185(m)	>5	**<1**	<1	0
Lead	ppm	ASTM D5185(m)	>10	**3**	3	3
Copper	ppm	ASTM D5185(m)	>50	▲ **102**	▲ 102	▲ 104
Tin	ppm	ASTM D5185(m)	>5	▲ **6**	▲ 6	▲ 6
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

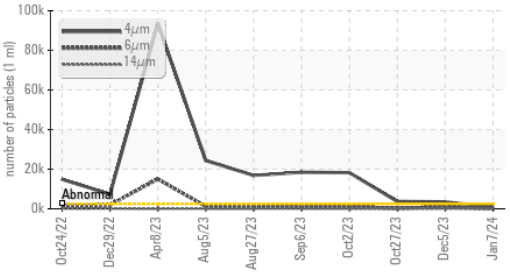
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**0**	<1	<1
Barium	ppm	ASTM D5185(m)	0	**0**	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	**0**	0	0
Manganese	ppm	ASTM D5185(m)	1	**0**	0	0
Magnesium	ppm	ASTM D5185(m)	0	**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)	100	**96**	94	97
Phosphorus	ppm	ASTM D5185(m)	670	**673**	629	659
Zinc	ppm	ASTM D5185(m)	850	**816**	828	838
Sulfur	ppm	ASTM D5185(m)	1600	**1672**	1552	1706
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**<1**	<1	<1
Sodium	ppm	ASTM D5185(m)		**0**	<1	0
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	0

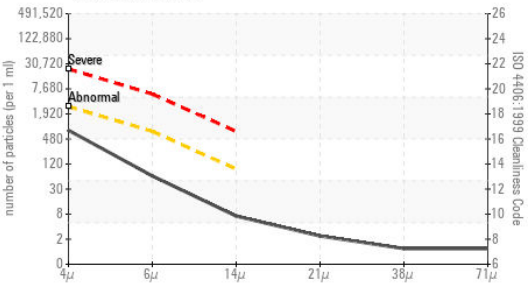
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	**681**	▲ 3512	▲ 3715
Particles >6µm		ASTM D7647	>640	**55**	▲ 903	262
Particles >14µm		ASTM D7647	>80	**6**	49	8
Particles >21µm		ASTM D7647	>20	**2**	10	3
Particles >38µm		ASTM D7647	>4	**1**	1	1
Particles >71µm		ASTM D7647	>3	**1**	0	1
Oil Cleanliness		ISO 4406 (c)	>18/16/13	**17/13/10**	▲ 19/17/13	▲ 19/15/10

OIL ANALYSIS REPORT

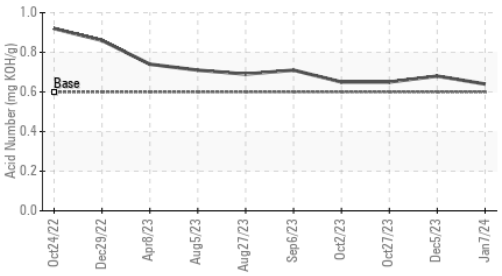
Particle Trend



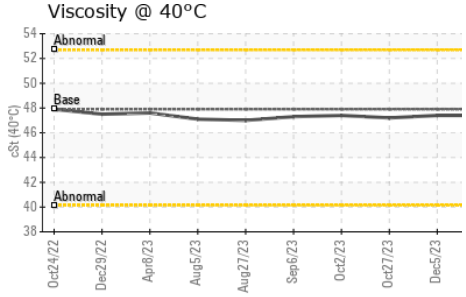
Particle Count



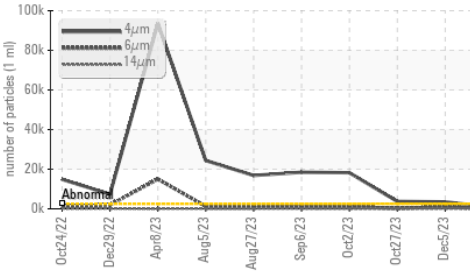
Acid Number



Viscosity @ 40°C



Particle Trend

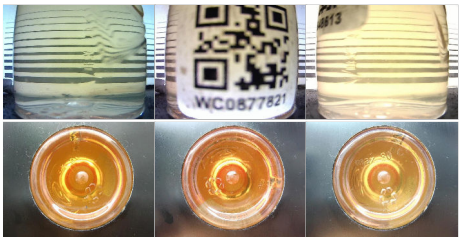


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	**0.64**	0.68	0.65

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

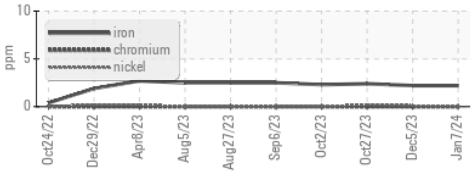
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	**47.4**	47.4	47.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

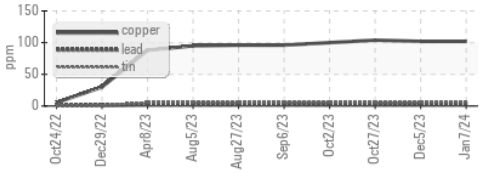


GRAPHS

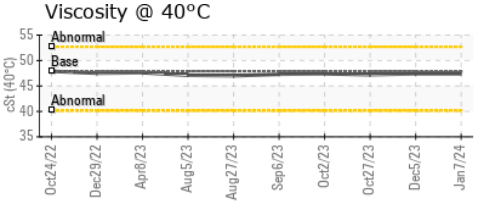
Ferrous Alloys



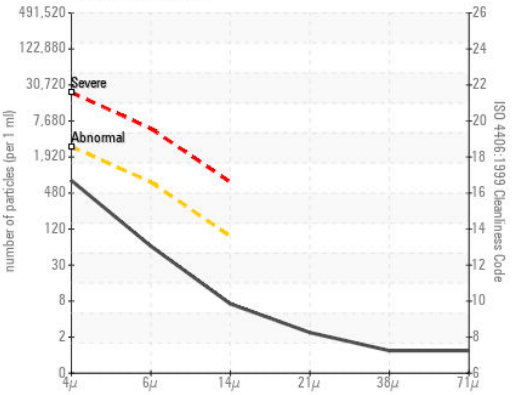
Non-ferrous Metals



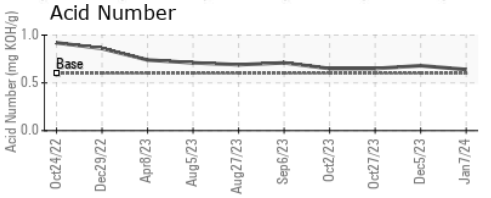
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0877824 **Recieved** : 15 Jan 2024
Lab Number : 02608725 **Diagnosed** : 16 Jan 2024
Unique Number : 5709811 **Diagnostician** : Kevin Marson
Test Package : MAR 2 (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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