

# PROBLEM SUMMARY

Sample Rating Trend

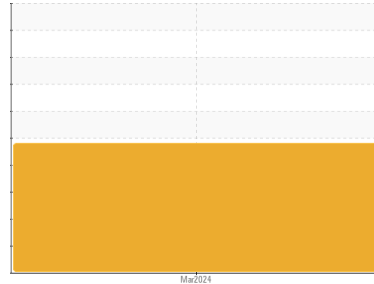
ISO



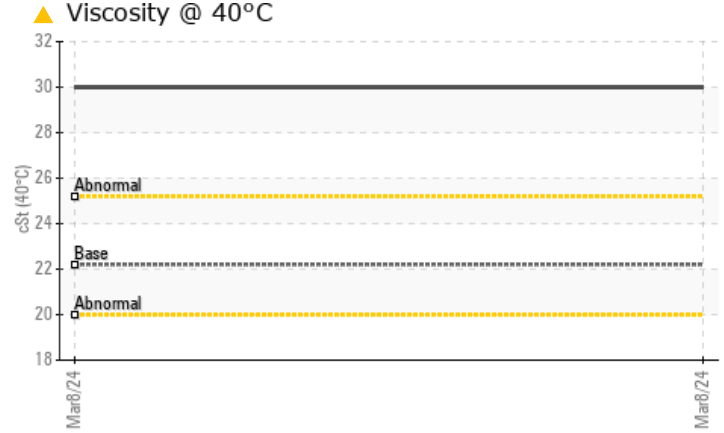
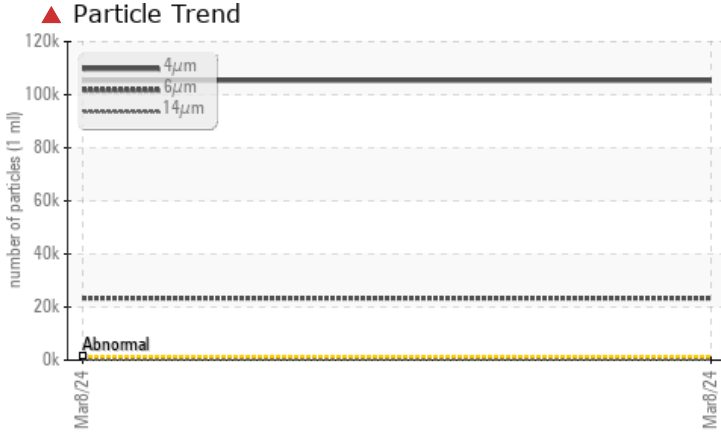
Machine Id  
**429845**

Component  
**Hydraulic System**

Fluid  
**PETRO CANADA HYDREX MV 22 (--- LTR)**



## COMPONENT CONDITION SUMMARY



## RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

## PROBLEMATIC TEST RESULTS

Sample Status	ASTM D7647	SEVERE	---	---
Particles >4µm	>1300	▲ 105389	---	---
Particles >6µm	>320	▲ 23345	---	---
Particles >14µm	>80	▲ 413	---	---
Particles >21µm	>20	▲ 61	---	---
Oil Cleanliness	ISO 4406 (c) >17/15/13	▲ 24/22/16	---	---
Visc @ 40°C	cSt ASTM D7279(m) 22.2	▲ 30	---	---

Customer Id: BLU410MIS  
Sample No.: PC0081136  
Lab Number: 02623731  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
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Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.

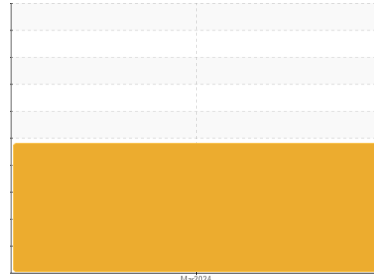
## HISTORICAL DIAGNOSIS



Machine Id  
**429845**

Component  
**Hydraulic System**

Fluid  
**PETRO CANADA HYDREX MV 22 (--- LTR)**



## DIAGNOSIS

### ▲ Recommendation

We advise that you check all areas where contaminants can enter the system. The oil change at the time of sampling has been noted. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### ▲ Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code.

### ▲ Fluid Condition

Viscosity of sample indicates oil is within ISO 32 range, advise investigate. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>PC0081136</b>	---	---
Sample Date	Client Info		<b>08 Mar 2024</b>	---	---
Machine Age	yrs	Client Info	<b>6</b>	---	---
Oil Age	yrs	Client Info	<b>6</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>SEVERE</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.05	<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >20	<b>9</b>	---	---
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	---	---
Nickel	ppm	ASTM D5185(m) >20	<b>0</b>	---	---
Titanium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m)	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185(m) >20	<b>0</b>	---	---
Lead	ppm	ASTM D5185(m) >20	<b>0</b>	---	---
Copper	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	---	---
Tin	ppm	ASTM D5185(m) >20	<b>0</b>	---	---
Antimony	ppm	ASTM D5185(m)	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
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>4</b>	---	---
Manganese	ppm	ASTM D5185(m) 1	<b>0</b>	---	---
Magnesium	ppm	ASTM D5185(m) 0	<b>10</b>	---	---
Calcium	ppm	ASTM D5185(m) 50	<b>71</b>	---	---
Phosphorus	ppm	ASTM D5185(m) 330	<b>313</b>	---	---
Zinc	ppm	ASTM D5185(m) 430	<b>401</b>	---	---
Sulfur	ppm	ASTM D5185(m) 760	<b>714</b>	---	---
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---

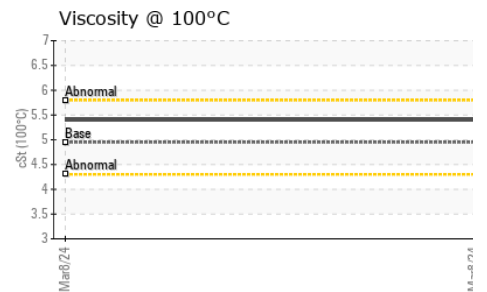
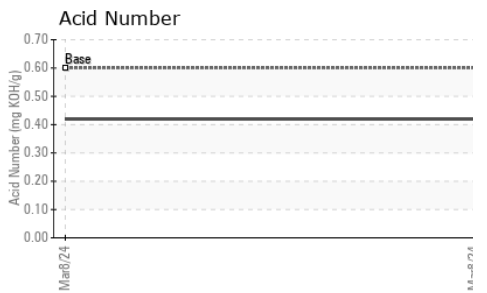
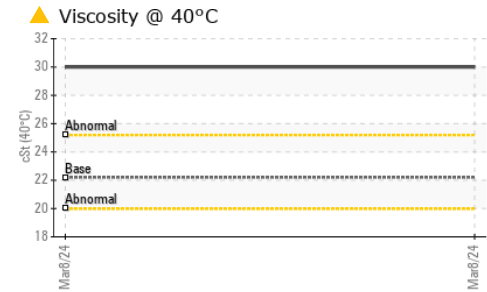
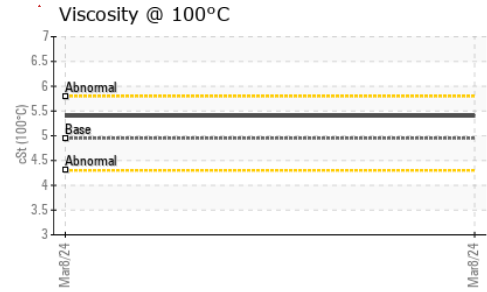
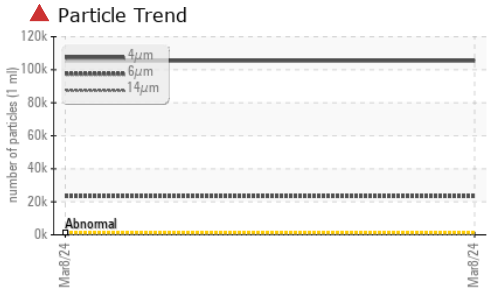
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<b>2</b>	---	---
Sodium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---
Potassium	ppm	ASTM D5185(m) >20	<b>0</b>	---	---

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>1300	<b>▲ 105389</b>	---	---
Particles >6µm	ASTM D7647	>320	<b>▲ 23345</b>	---	---
Particles >14µm	ASTM D7647	>80	<b>▲ 413</b>	---	---
Particles >21µm	ASTM D7647	>20	<b>▲ 61</b>	---	---
Particles >38µm	ASTM D7647	>4	<b>2</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>1</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>17/15/13	<b>▲ 24/22/16</b>	---	---

# OIL ANALYSIS REPORT



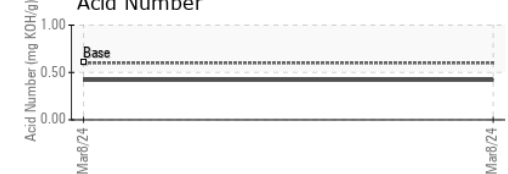
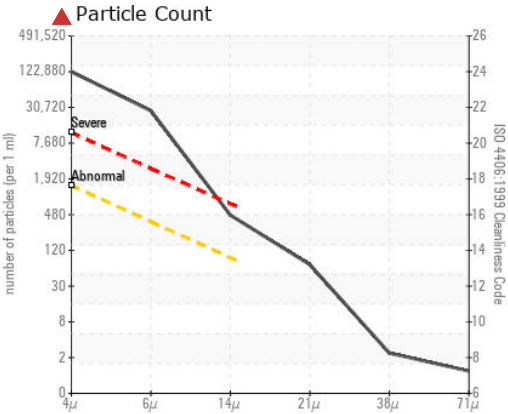
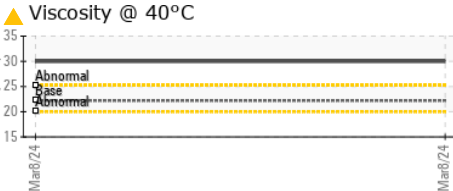
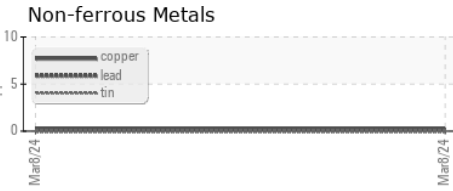
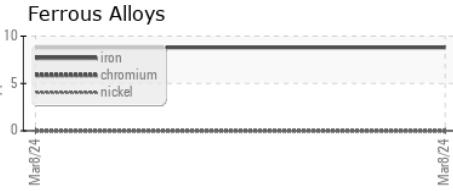
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	<b>0.42</b>	---	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	---	---
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	---	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	---	---
Debris	scalar	Visual*	NONE	<b>NONE</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*	>0.05	<b>NEG</b>	---	---
Free Water	scalar	Visual*		<b>NEG</b>	---	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	22.2	<b>▲ 30</b>	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	4.95	<b>5.4</b>	---	---
Viscosity Index (VI)	Scale	ASTM D2270*	156	<b>115</b>	---	---

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color				no image	no image	
Bottom				no image	no image	

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0081136 **Received** : 21 Mar 2024  
**Lab Number** : **02623731** **Tested** : 22 Mar 2024  
**Unique Number** : 5748850 **Diagnosed** : 22 Mar 2024 - Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: KV100, VI )

**Blue Giant Equipment Corporation**  
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 F: (905)457-2313

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.