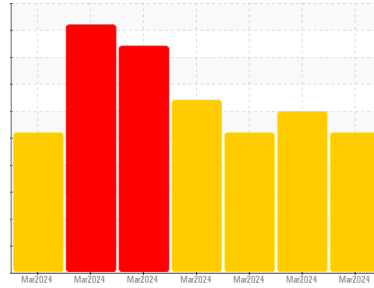




Machine Id  
**429845**

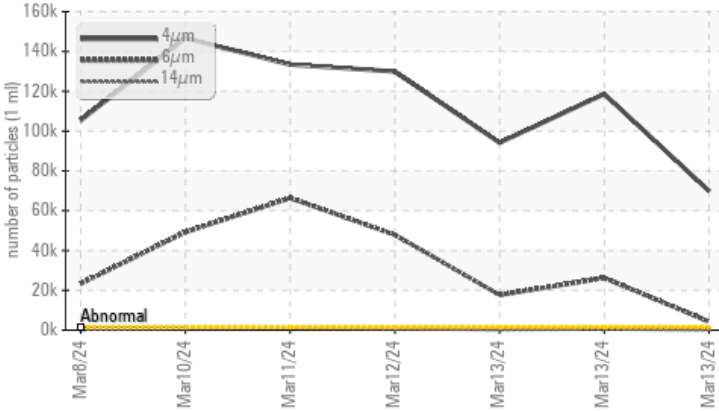
Component  
**Hydraulic System**

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

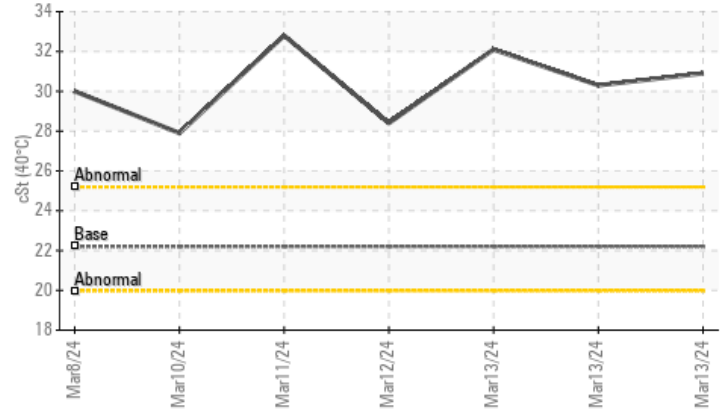


**COMPONENT CONDITION SUMMARY**

**▲ Particle Trend**



**▲ Viscosity @ 40°C**



**RECOMMENDATION**

Check seals and/or filters for points of contaminant entry. 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. We recommend you service the filters on this component. 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			SEVERE	SEVERE	SEVERE
Particles >4µm	ASTM D7647	>1300	▲ 94111	▲ 118642	▲ 69892
Particles >6µm	ASTM D7647	>320	▲ 17647	▲ 26278	▲ 4319
Particles >14µm	ASTM D7647	>80	▲ 181	▲ 440	● 127
Oil Cleanliness	ISO 4406 (c)	>17/15/13	▲ 24/21/15	▲ 24/22/16	▲ 23/19/14
Visc @ 40°C	cSt	ASTM D7279(m)	▲ 30.9	▲ 30.3	▲ 32.1
Viscosity Index (VI)	Scale	ASTM D2270*	▲ 109	▲ 113	▲ 107

Customer Id: BLU410MIS  
Sample No.: PC0081141  
Lab Number: 02623726  
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Kevin Marson +1 (289)291-4644 x4644  
[Kevin.Marson@wearcheck.com](mailto:Kevin.Marson@wearcheck.com)


To change component or sample information:  
Gloria Gonzalez +1 (289)291-4643 x4643  
[gloria.gonzalez@wearcheck.com](mailto:gloria.gonzalez@wearcheck.com)

## RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
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 Seals	---	---	?	Check seals and/or filters for points of contaminant entry.


## HISTORICAL DIAGNOSIS

ISO




**13 Mar 2024 Diag: Kevin Marson**  
 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. Iron ppm levels are noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. 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. Viscosity of sample indicates oil is within ISO 32 range, advise investigate. The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

view report




ISO




**13 Mar 2024 Diag: Kevin Marson**  
 Check seals and/or filters for points of contaminant entry. 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. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a high amount of silt (particulates < 14 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. 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.

view report




ISO



**12 Mar 2024 Diag:**

view report

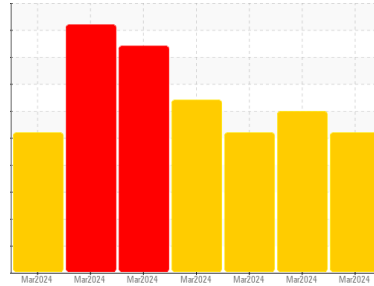




Machine Id  
**429845**

Component  
**Hydraulic System**

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



## DIAGNOSIS

### Recommendation

Check seals and/or filters for points of contaminant entry. 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. We recommend you service the filters on this component. 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 silt (particulates < 14 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>PC0081141</b>	PC0081137	PC0081135
Sample Date	Client Info	<b>13 Mar 2024</b>	13 Mar 2024	13 Mar 2024
Machine Age	yrs	Client Info	6	6
Oil Age	yrs	Client Info	6	6
Oil Changed	Client Info	<b>Changed</b>	Changed	Changed
Sample Status		<b>SEVERE</b>	SEVERE	SEVERE

## CONTAMINATION

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

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185(m) >20	<b>13</b>	28	5
Chromium	ppm ASTM D5185(m) >20	<b>0</b>	0	0
Nickel	ppm ASTM D5185(m) >20	<b>0</b>	0	0
Titanium	ppm ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm ASTM D5185(m)	<b>0</b>	0	0
Aluminum	ppm ASTM D5185(m) >20	<b>0</b>	0	0
Lead	ppm ASTM D5185(m) >20	<b>0</b>	0	0
Copper	ppm ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Tin	ppm ASTM D5185(m) >20	<b>0</b>	0	0
Antimony	ppm ASTM D5185(m)	<b>0</b>	0	0
Vanadium	ppm ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm ASTM D5185(m)	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 0	<b>1</b>	<1	2
Barium	ppm ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm ASTM D5185(m) 0	<b>3</b>	2	4
Manganese	ppm ASTM D5185(m) 1	<b>0</b>	0	0
Magnesium	ppm ASTM D5185(m) 0	<b>10</b>	14	13
Calcium	ppm ASTM D5185(m) 50	<b>65</b>	73	70
Phosphorus	ppm ASTM D5185(m) 330	<b>312</b>	318	307
Zinc	ppm ASTM D5185(m) 430	<b>392</b>	401	391
Sulfur	ppm ASTM D5185(m) 760	<b>718</b>	753	665
Lithium	ppm ASTM D5185(m)	<b>&lt;1</b>	<1	<1

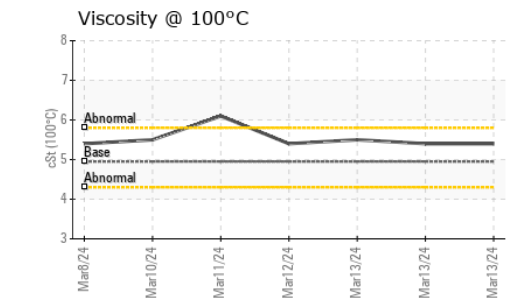
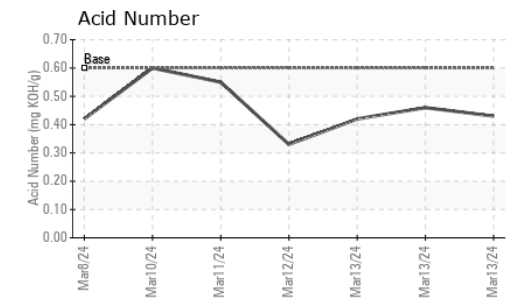
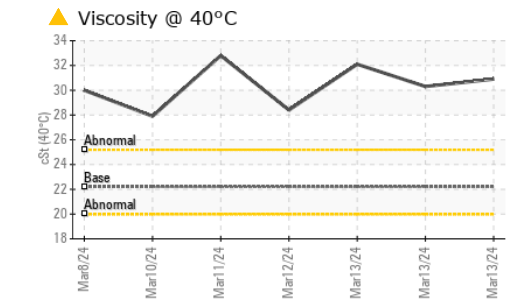
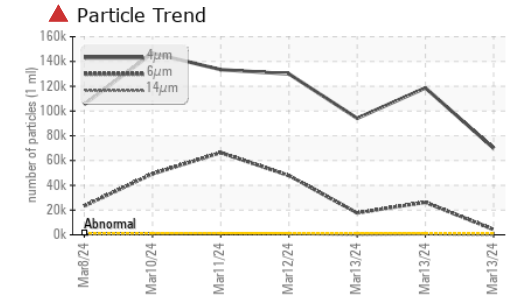
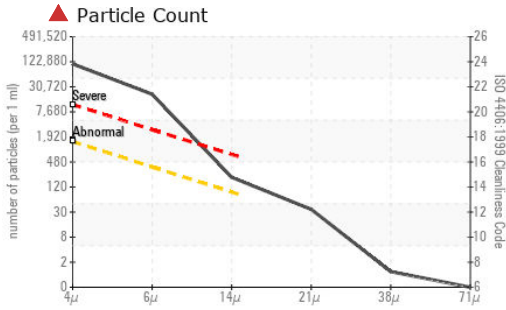
## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	<b>4</b>	2	0
Sodium	ppm ASTM D5185(m)	<b>&lt;1</b>	1	<1
Potassium	ppm ASTM D5185(m) >20	<b>0</b>	<1	0

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >1300	<b>▲ 94111</b>	▲ 118642	▲ 69892
Particles >6µm	ASTM D7647 >320	<b>▲ 17647</b>	▲ 26278	▲ 4319
Particles >14µm	ASTM D7647 >80	<b>▲ 181</b>	▲ 440	▲ 127
Particles >21µm	ASTM D7647 >20	<b>▲ 31</b>	▲ 92	▲ 37
Particles >38µm	ASTM D7647 >4	<b>1</b>	4	1
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >17/15/13	<b>▲ 24/21/15</b>	▲ 24/22/16	▲ 23/19/14

# OIL ANALYSIS REPORT



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0081141 **Received** : 21 Mar 2024  
**Lab Number** : **02623726** **Tested** : 22 Mar 2024  
**Unique Number** : 5748845 **Diagnosed** : 22 Mar 2024 - Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: KV100, VI )

**Blue Giant Equipment Corporation**  
 410 Admiral Boulevard  
 Mississauga, ON  
 CA L5T 2N6  
 Contact: Hugo Cristovao  
 hcristovao@bluegiant.com  
 T: (905)457-3900  
 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.

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	<b>0.43</b>	0.46	0.42

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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	22.2	<b>30.9</b>	30.3	32.1
Visc @ 100°C	cSt	ASTM D7279(m)	4.95	<b>5.4</b>	5.4	5.5
Viscosity Index (VI)	Scale	ASTM D2270*	156	<b>109</b>	113	107

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						