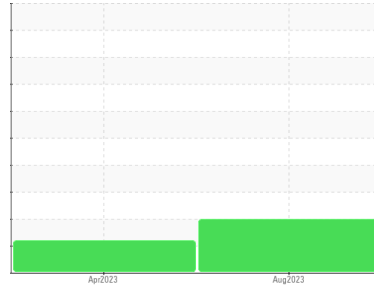




# PROBLEM SUMMARY

## Sample Rating Trend



ISO

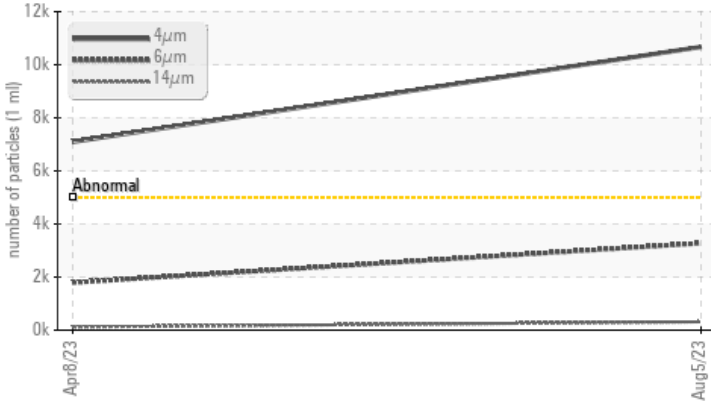


Area  
**Capstan**  
 Machine Id  
**Capstan**

Component  
**Rear Left Hydraulic System**  
 Fluid  
**PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

## PROBLEMATIC TEST RESULTS

Sample Status	ASTM D7647	ASTM D7647	ABNORMAL	ATTENTION	---
Particles >4µm	>5000	▲ <b>10671</b>	▲ 7094	---	
Particles >6µm	>1300	▲ <b>3273</b>	▲ 1791	---	
Particles >14µm	>160	▲ <b>315</b>	118	---	
Particles >21µm	>40	▲ <b>103</b>	34	---	
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ <b>21/19/15</b>	▲ 20/18/14	---	

Customer Id: VMASSEY  
 Sample No.: WC0810837  
 Lab Number: 02575919  
 Test Package: MAR 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
 Wes Davis +1 905-569-8600 x223  
[wesd@wearcheck.ca](mailto:wesd@wearcheck.ca)

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 advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

## HISTORICAL DIAGNOSIS

08 Apr 2023 Diag: Wes Davis

ISO



We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

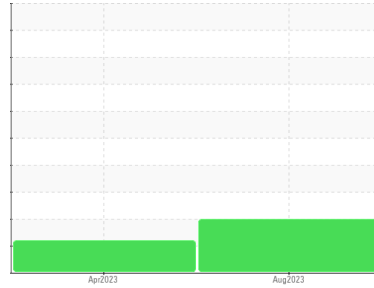
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**Capstan**  
 Machine Id  
**Capstan**

Component  
**Rear Left Hydraulic System**

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

## DIAGNOSIS

### Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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

All component wear rates are normal.

### Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

### Fluid Condition

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>WC0810837</b>	WC0763466	---
Sample Date	Client Info	<b>05 Aug 2023</b>	08 Apr 2023	---
Machine Age	hrs	Client Info	0	---
Oil Age	hrs	Client Info	0	---
Oil Changed	Client Info	<b>Oil Added</b>	N/A	---
Sample Status		<b>ABNORMAL</b>	ATTENTION	---

## WEAR METALS

method	limit/base	current	history1	history2		
Iron	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	---
Nickel	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	---
Lead	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	---
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	---
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	---

## ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	---
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	---
Manganese	ppm	ASTM D5185(m)	1	<b>0</b>	0	---
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	---
Calcium	ppm	ASTM D5185(m)	100	<b>104</b>	109	---
Phosphorus	ppm	ASTM D5185(m)	670	<b>689</b>	708	---
Zinc	ppm	ASTM D5185(m)	850	<b>855</b>	854	---
Sulfur	ppm	ASTM D5185(m)	1600	<b>1532</b>	1574	---
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	---

## CONTAMINANTS

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

## FLUID CLEANLINESS

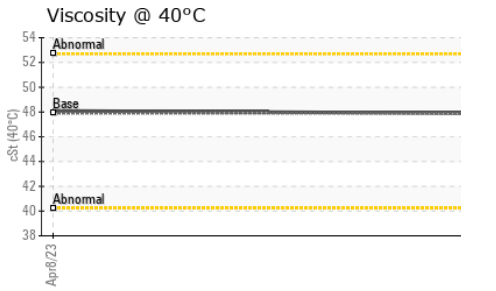
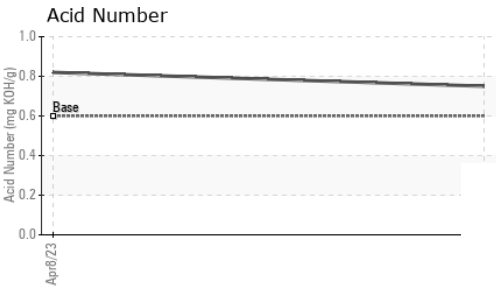
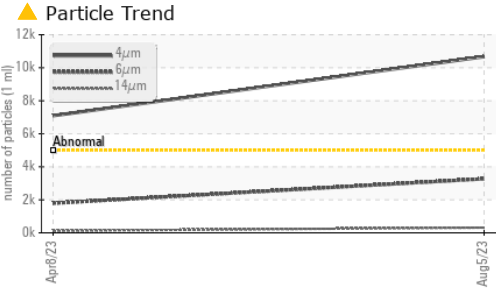
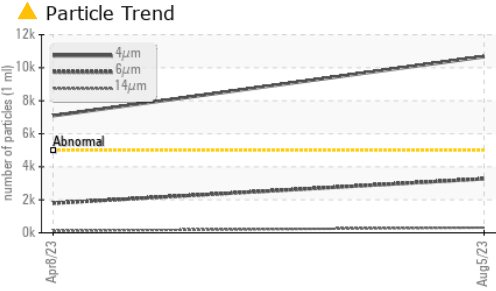
method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>5000	<b>▲ 10671</b>	▲ 7094	---
Particles >6µm	ASTM D7647	>1300	<b>▲ 3273</b>	▲ 1791	---
Particles >14µm	ASTM D7647	>160	<b>▲ 315</b>	118	---
Particles >21µm	ASTM D7647	>40	<b>▲ 103</b>	34	---
Particles >38µm	ASTM D7647	>10	<b>10</b>	2	---
Particles >71µm	ASTM D7647	>3	<b>1</b>	0	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>▲ 21/19/15</b>	▲ 20/18/14	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	<b>0.75</b>	0.82	---



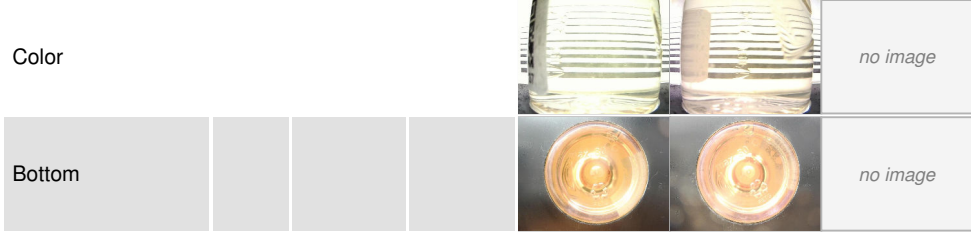
# OIL ANALYSIS REPORT



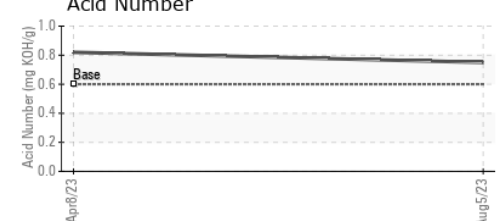
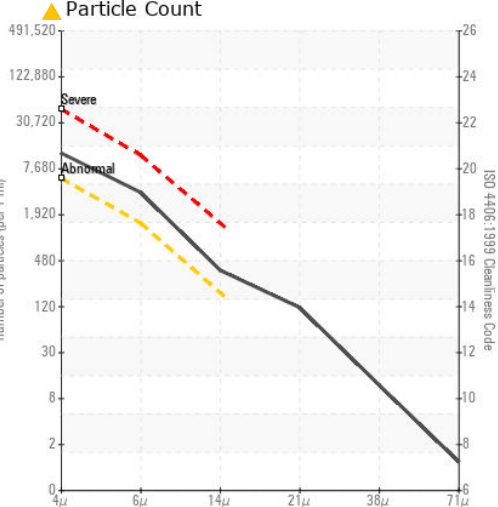
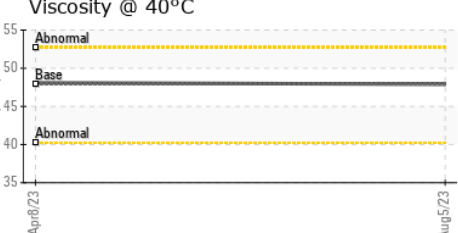
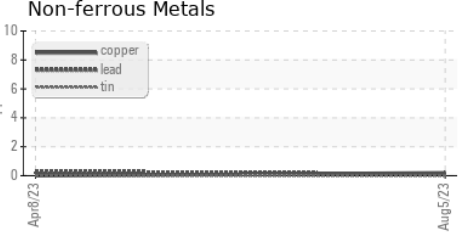
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	---
Emulsified Water	scalar	Visual*	>0.05	NEG	---
Free Water	scalar	Visual*		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	48.1	---

### SAMPLE IMAGES



### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0810837 **Received** : 15 Aug 2023  
**Lab Number** : 02575919 **Diagnosed** : 16 Aug 2023  
**Unique Number** : 5628979 **Diagnostician** : Wes Davis  
**Test Package** : MAR 2

**Canadian Coast Guard**  
 CCGS Vincent Massey, 101 Boul. Champlain  
 Quebec, QC  
 CA G1K 7Y7  
 Contact: Vincent Massey  
 vincentmasseyse@ccgs-ngcc.gc.ca  
 T: (418)573-7423  
 F:

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.