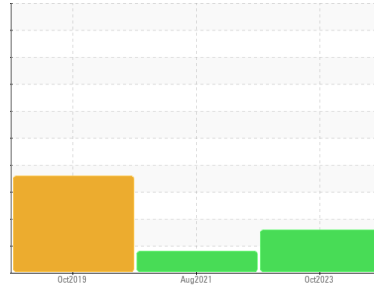


# PROBLEM SUMMARY

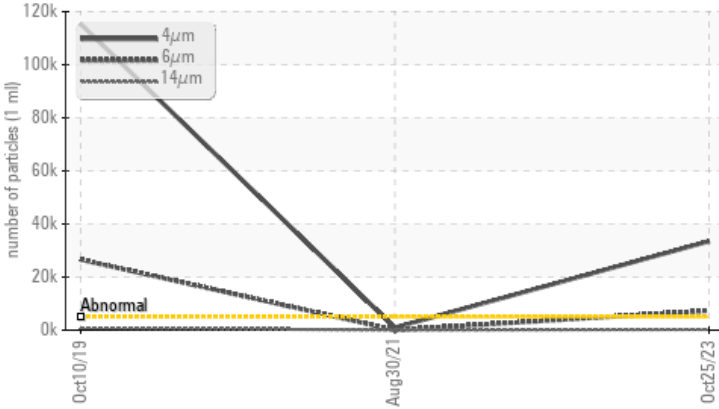
Sample Rating Trend



Machine Id  
**OR646**  
Component  
**Hydraulic System**  
Fluid  
**PETRO CANADA HYDREX MV 46 (--- GAL)**

## COMPONENT CONDITION SUMMARY

▲ Particle Trend



## RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample.

## PROBLEMATIC TEST RESULTS

Sample Status			ABNORMAL	ATTENTION	SEVERE
Particles >4µm	ASTM D7647	>5000	▲ 33505	956	● 115350
Particles >6µm	ASTM D7647	>1300	▲ 7341	43	● 26564
Particles >14µm	ASTM D7647	>160	▲ 246	6	▲ 853
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 22/20/15	17/13/10	● 24/22/17

Customer Id: GFL286  
Sample No.: PC0080940  
Lab Number: 02592086  
Test Package: IND 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 recommend you service the filters on this component.
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. Please specify the component make and model with your next sample.

## HISTORICAL DIAGNOSIS

### ADDITIVES



#### 30 Aug 2021 Diag: Kevin Marson

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA HYDREX MV 46, however, a fluid match indicates that this fluid is ISO 46 Environmental Oil. Please confirm the oil type and grade on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report



### ISO



#### 10 Oct 2019 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. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. All component wear rates are normal. Particles >6µm are severely high. Particles >4µm are severely high. Particles >14µm are abnormally high. Particles >21µm are abnormally high. Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

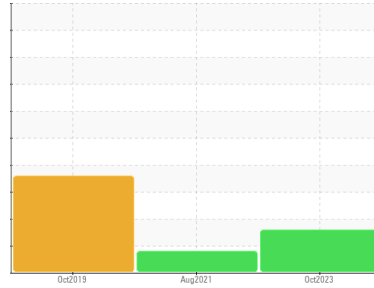




Machine Id  
**OR646**

Component  
**Hydraulic System**

Fluid  
**PETRO CANADA HYDREX MV 46 (--- GAL)**



## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of silt (particulates < 14 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>PC0080940</b>	PC0043712	PC0016276
Sample Date	Client Info	<b>25 Oct 2023</b>	30 Aug 2021	10 Oct 2019
Machine Age	hrs	Client Info	0	4481
Oil Age	hrs	Client Info	0	3220
Oil Changed	Client Info	<b>N/A</b>	Changed	Changed
Sample Status		<b>ABNORMAL</b>	ATTENTION	SEVERE

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m) >20	<b>2</b>	<1	5
Chromium	ppm	ASTM D5185(m) >10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m) >10	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)	<b>&lt;1</b>	0	<1
Aluminum	ppm	ASTM D5185(m) >10	<b>2</b>	<1	2
Lead	ppm	ASTM D5185(m) >10	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m) >75	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m) >10	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	<1	<1
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>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	0	<1
Molybdenum	ppm	ASTM D5185(m) 0	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185(m) 1	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	3
Calcium	ppm	ASTM D5185(m) 50	<b>10</b>	▲ 2	17
Phosphorus	ppm	ASTM D5185(m) 330	<b>562</b>	676	584
Zinc	ppm	ASTM D5185(m) 430	<b>86</b>	▲ 12	43
Sulfur	ppm	ASTM D5185(m) 760	<b>1244</b>	1449	1551
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	3
Sodium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1

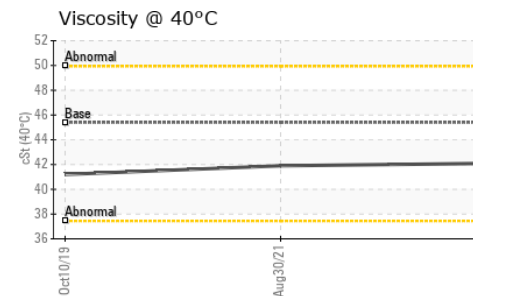
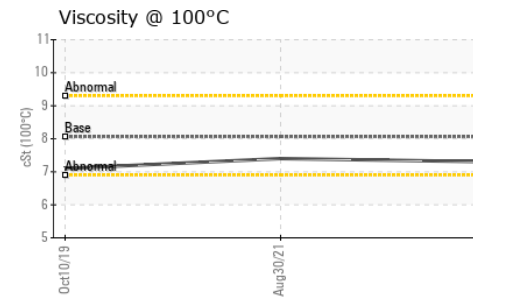
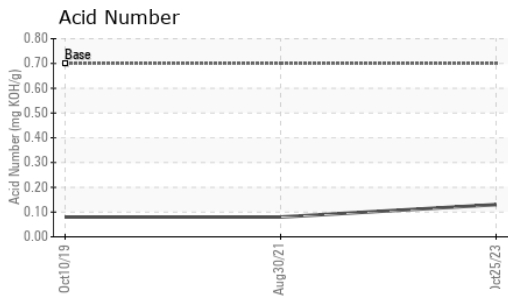
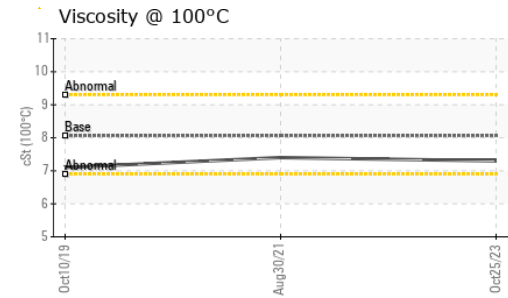
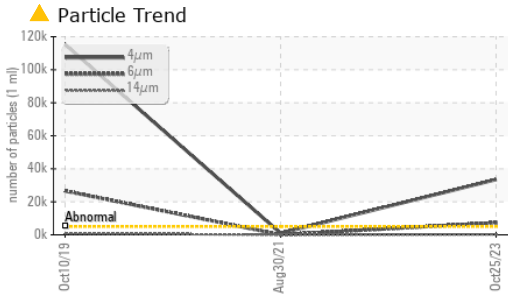
## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ <b>33505</b>	956	● 115350
Particles >6µm	ASTM D7647 >1300	▲ <b>7341</b>	43	● 26564
Particles >14µm	ASTM D7647 >160	▲ <b>246</b>	6	▲ 853
Particles >21µm	ASTM D7647 >40	<b>33</b>	2	▲ 182
Particles >38µm	ASTM D7647 >10	<b>1</b>	0	1
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ <b>22/20/15</b>	17/13/10	● 24/22/17

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974* 0.70	<b>0.13</b>	0.08	0.080

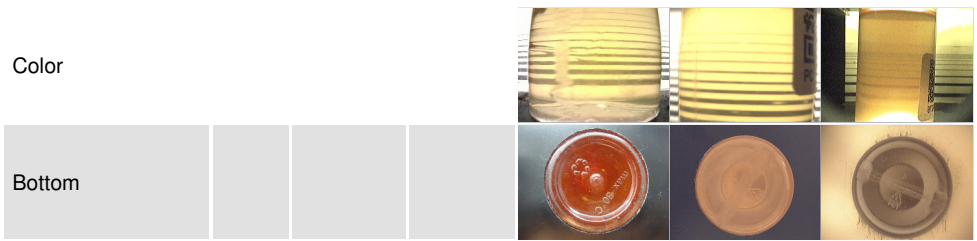
# OIL ANALYSIS REPORT



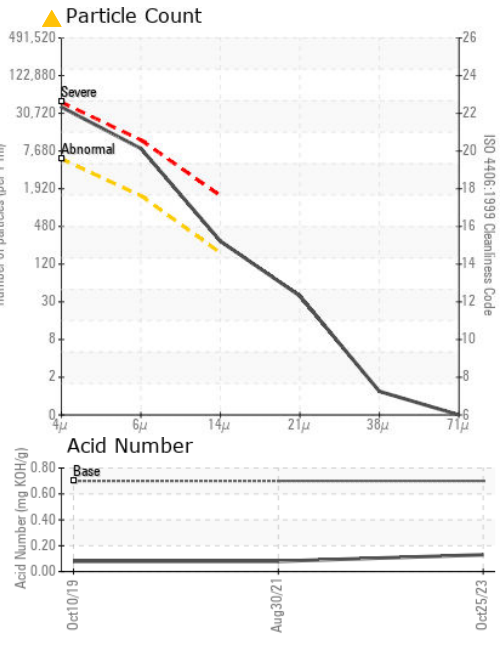
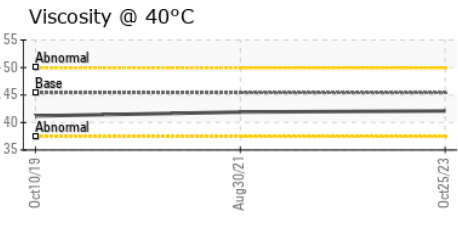
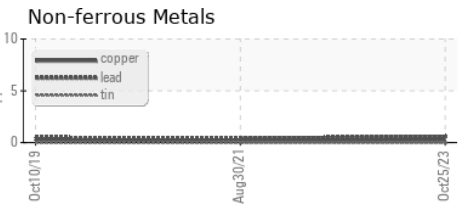
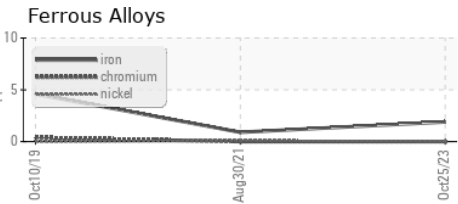
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	45.4	42.1	41.9
Visc @ 100°C	cSt	ASTM D7279(m)	8.06	7.3	7.4
Viscosity Index (VI)	Scale	ASTM D2270*	151	137	142

## SAMPLE IMAGES



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Green Infrastructure and Partners Inc (GIPI) - 286 - Shoring & Foundations  
**Sample No.** : PC0080940 **Received** : 26 Oct 2023  
**Lab Number** : 02592086 **Diagnosed** : 27 Oct 2023  
**Unique Number** : 5669165 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: KV100, VI )

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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