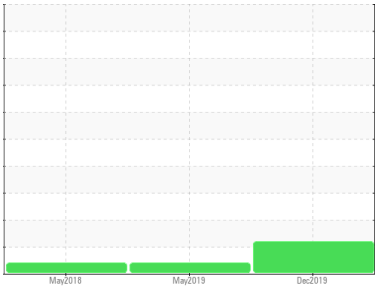
PROBLEM SUMMARY

Sample Rating Trend

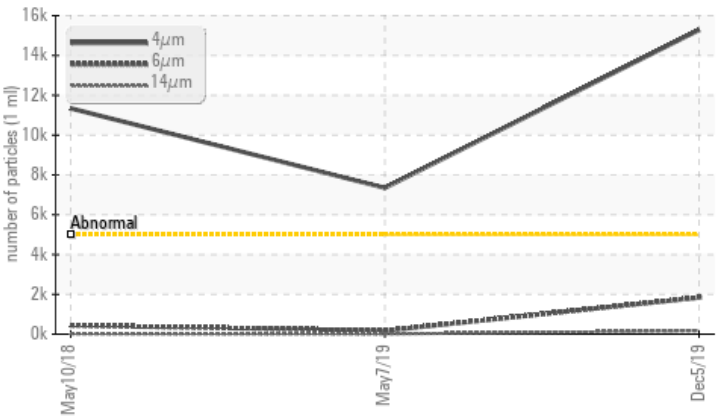


ISO

Machine Id
CAMPHPU2
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX MV 36 (220 LTR)

COMPONENT CONDITION SUMMARY

Particle Trend



RECOMMENDATION

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	ATTENTION	ABNORMAL
Particles >4µm		ASTM D7647	>5000	▲ **15282**	▲ 7347	▲ 11344
Particles >6µm		ASTM D7647	>1300	▲ **1839**	175	436
Particles >14µm		ASTM D7647	>160	▲ **166**	9	13
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/18/15**	▲ 20/15/10	▲ 21/16/11

Customer Id: PET412PET
Sample No.: WC0373486
Lab Number: 02325527
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

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	MISSED	Dec 24 2020	?	We recommend an early resample to monitor this condition.

HISTORICAL DIAGNOSIS

07 May 2019 Diag: Wes Davis

ISO

We recommend you service the filters on this component. Resample at the next service interval to monitor.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

10 May 2018 Diag: Kevin Marson

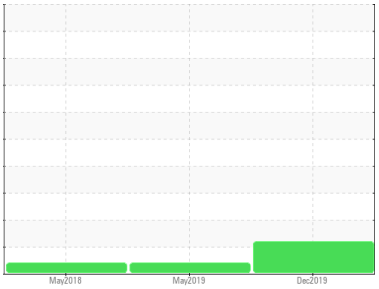
ISO

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. Particles >4µm are abnormal. The AN level is acceptable for this fluid. The condition of the sample is suitable for further service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
CAMPHPU2
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX MV 36 (220 LTR)

DIAGNOSIS

Recommendation
The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
All component wear rates are normal.

Contamination
Particles >4µm are abnormally high. Particles >6µm are notably high. Particles >14µm are notably high.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0373486**	WC119390	WC984132
Sample Date		Client Info		**05 Dec 2019**	07 May 2019	10 May 2018
Machine Age	hrs	Client Info		**189711**	187991	0
Oil Age	hrs	Client Info		**0**	0	132716
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ATTENTION	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**<1**	1	1
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**<1**	0	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**0**	<1	0
Copper	ppm	ASTM D5185(m)	>20	**1**	1	1
Tin	ppm	ASTM D5185(m)	>20	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**<1**	0	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	**<1**	0	<1
Barium	ppm	ASTM D5185(m)	0	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)	0	**<1**	<1	0
Manganese	ppm	ASTM D5185(m)	1	**0**	<1	0
Magnesium	ppm	ASTM D5185(m)	0	**<1**	1	<1
Calcium	ppm	ASTM D5185(m)	135	**61**	65	72
Phosphorus	ppm	ASTM D5185(m)	236	**312**	302	310
Zinc	ppm	ASTM D5185(m)	317	**406**	392	414
Sulfur	ppm	ASTM D5185(m)	561	**711**	711	718
Lithium	ppm	ASTM D5185(m)		**<1**	0	<1

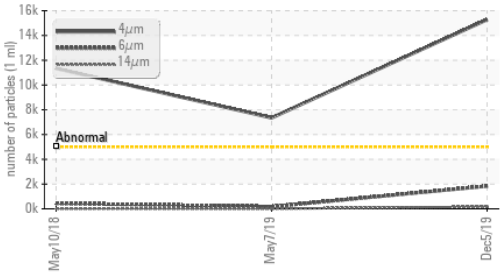
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**0**	<1	<1
Sodium	ppm	ASTM D5185(m)		**0**	0	0
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	<1

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **15282**	▲ 7347	▲ 11344
Particles >6µm		ASTM D7647	>1300	▲ **1839**	175	436
Particles >14µm		ASTM D7647	>160	▲ **166**	9	13
Particles >21µm		ASTM D7647	>40	**43**	3	3
Particles >38µm		ASTM D7647	>10	**1**	0	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/18/15**	▲ 20/15/10	▲ 21/16/11

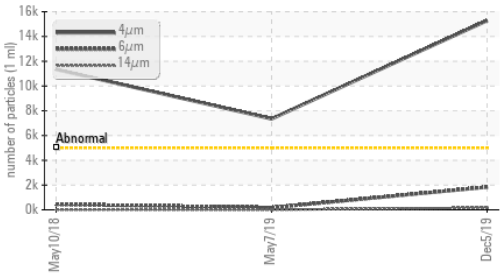
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.40	**0.395**	0.279	0.42

OIL ANALYSIS REPORT

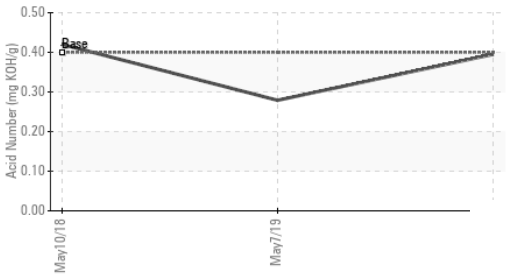
Particle Trend



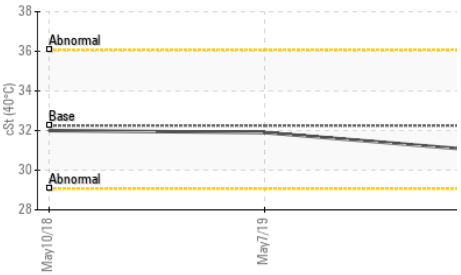
Particle Trend



Acid Number

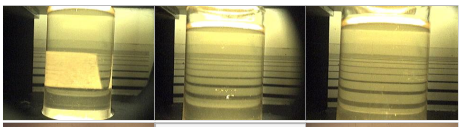
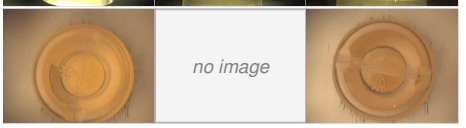


Viscosity @ 40°C



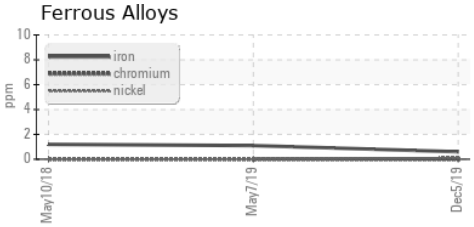
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.05	**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)	32.25	**31.0**	31.9	32.0

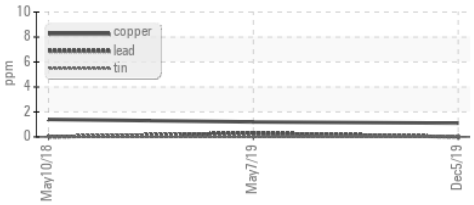
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom				*no image*	

GRAPHS

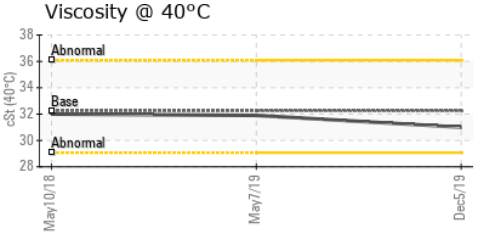
Ferrous Alloys



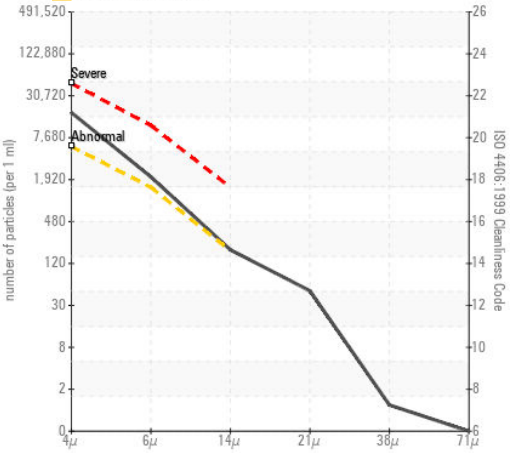
Non-ferrous Metals



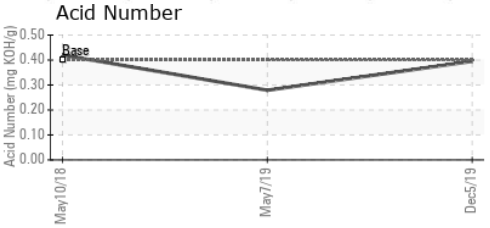
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0373486 **Received** : 06 Dec 2019
Lab Number : 02325527 **Diagnosed** : 09 Dec 2019
Unique Number : 4968825 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: TAN Man)

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.

PETERBOROUGH UTILITIES INC
1867 ASHBURNHAM DRIVE
PETERBOROUGH, ON
CA K9L 1P8
Contact: Nelson Ross
nross@pui.ca
T: (705)760-6119
F: (705)748-3138