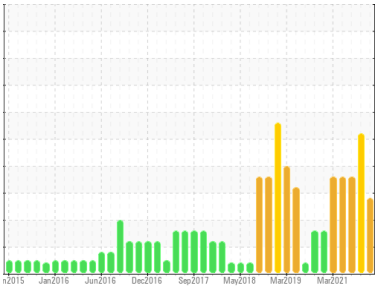
PROBLEM SUMMARY

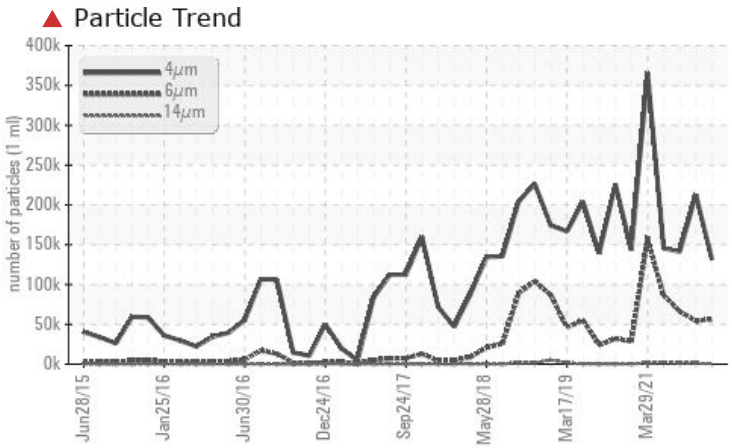
Area
1 White Oil/028 #1HTU/P Pump/201B 1 Stage HTU Charge
Machine Id
28GP201B
Component
Gearbox
Fluid
PETRO CANADA ENDURATEX SYNTHETIC EP 220 (50 LTR)

Sample Rating Trend



ISO

COMPONENT CONDITION SUMMARY



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.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	SEVERE	SEVERE
Particles >6µm		ASTM D7647	>5000	▲ **56329**	▲ 54491	▲ 66251
Oil Cleanliness		ISO 4406 (c)	>--/19/16	▲ **24/23/16**	▲ 25/23/17	▲ 24/23/17

Customer Id: PETMIS
Sample No.: WC0902156
Lab Number: 02621263
Test Package: IND 2

To manage this report scan the QR code

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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
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	Resample in 30-45 days to monitor this situation.
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

17 Feb 2023 Diag: Kevin Marson

ISO

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.All component wear rates are normal. Particles >6µm and oil cleanliness and oil cleanliness are severely high. Particles >14µm are notably high. The water content is negligible. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is above the recommended limit. The oil is no longer serviceable.

view report

06 Jan 2022 Diag: Kevin Marson

ISO

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.All component wear rates are normal. Particles >6µm are severely high. Particles >14µm are notably high. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is above the recommended limit. The oil is no longer serviceable.

view report

29 Apr 2021 Diag: Kevin Marson

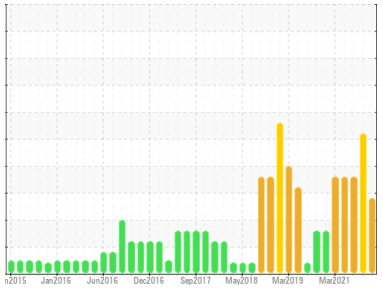
ISO

Check seals and/or filters for points of contaminant entry. We recommend that you drain the oil from the component if this has not already been done. 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.All component wear rates are normal. Particles >6µm are severely high. Particles >14µm are abnormally high. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. The AN level is above the recommended limit. The oil is no longer serviceable.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
1 White Oil/028 #1HTU/P Pump/201B 1 Stage HTU Charge
Machine Id
28GP201B
Component
Gearbox
Fluid
PETRO CANADA ENDURATEX SYNTHETIC EP 220 (50 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.

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

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		**WC0902156**	WC0783255	WC0568052
Sample Date		Client Info		**25 Feb 2024**	17 Feb 2023	06 Jan 2022
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>200	**19**	12	11
Chromium	ppm	ASTM D5185(m)	>15	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>15	**<1**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	**<1**	<1	<1
Lead	ppm	ASTM D5185(m)	>100	**0**	3	1
Copper	ppm	ASTM D5185(m)	>200	**4**	61	23
Tin	ppm	ASTM D5185(m)	>25	**0**	1	<1
Antimony	ppm	ASTM D5185(m)	>5	**0**	<1	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

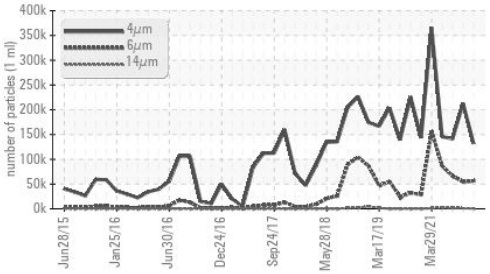
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	33	**27**	30	32
Barium	ppm	ASTM D5185(m)	5	**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	5	**3**	<1	<1
Calcium	ppm	ASTM D5185(m)	5	**8**	0	1
Phosphorus	ppm	ASTM D5185(m)	437	**419**	445	312
Zinc	ppm	ASTM D5185(m)	5	**8**	59	39
Sulfur	ppm	ASTM D5185(m)	5000	**4969**	4889	4614
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	**25**	<1	0
Sodium	ppm	ASTM D5185(m)		**8**	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	1

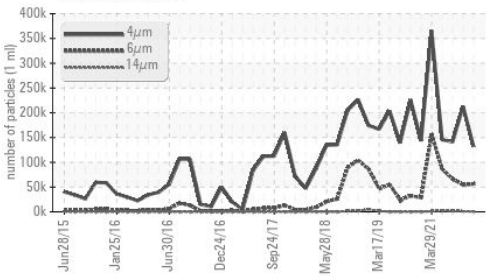
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**131509**	212872	141229
Particles >6µm		ASTM D7647	>5000	▲ **56329**	▲ 54491	▲ 66251
Particles >14µm		ASTM D7647	>640	**484**	● 1175	● 1192
Particles >21µm		ASTM D7647	>160	**31**	181	34
Particles >38µm		ASTM D7647	>40	**2**	4	0
Particles >71µm		ASTM D7647	>10	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>--/19/16	▲ **24/23/16**	▲ 25/23/17	▲ 24/23/17

OIL ANALYSIS REPORT

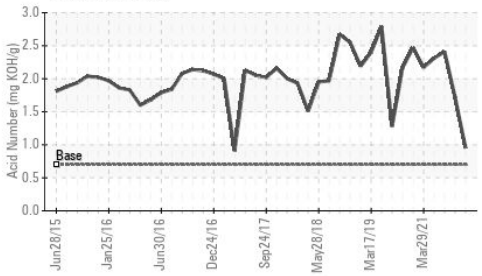
Particle Trend



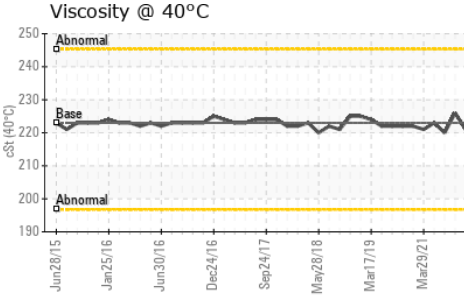
Particle Trend



Acid Number



Viscosity @ 40°C

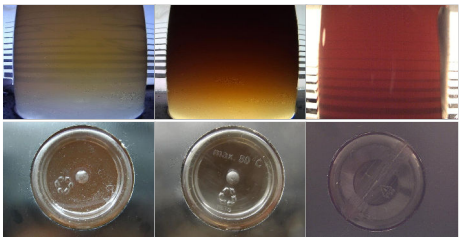


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.7	**0.95**	▲ 1.72	▲ 2.41

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	LIGHT
Debris	scalar	Visual*	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	▲ WGOIL	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

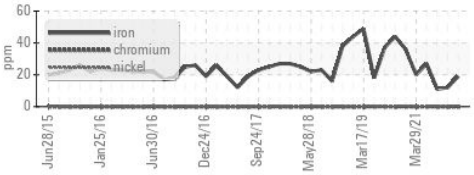
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	223	**221**	226	220

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

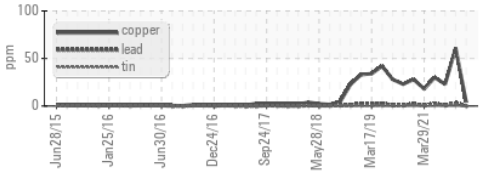


GRAPHS

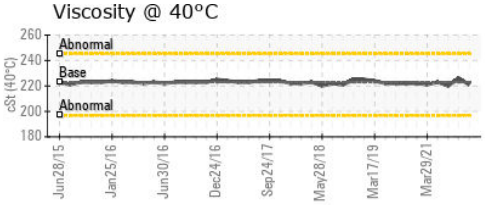
Ferrous Alloys



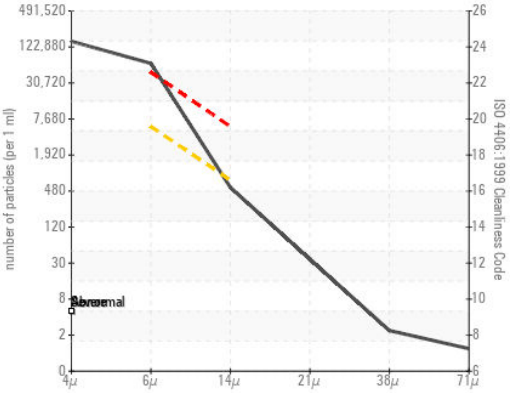
Non-ferrous Metals



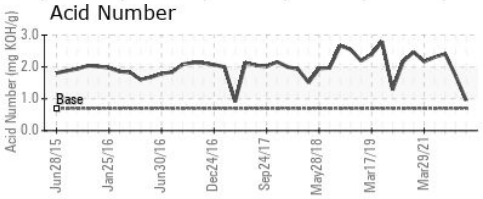
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0902156 **Received** : 11 Mar 2024
Lab Number : 02621263 **Tested** : 12 Mar 2024
Unique Number : 5746382 **Diagnosed** : 12 Mar 2024 - 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.

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