



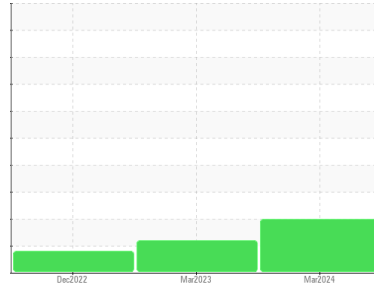
PROBLEM SUMMARY

Sample Rating Trend

ISO

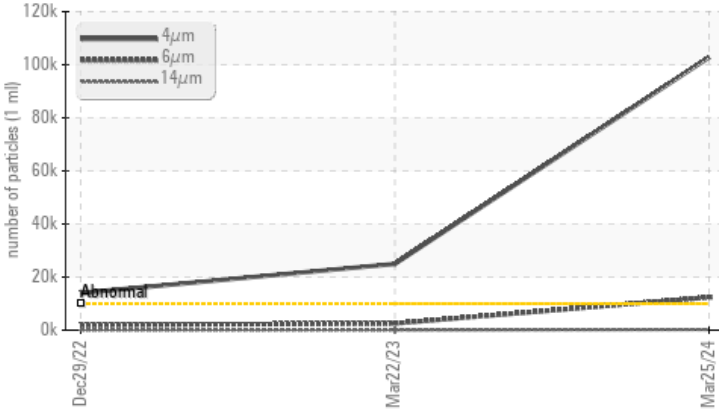


Area
RP-101
 Machine Id
B57004
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX EP 320 (--- GAL)



COMPONENT CONDITION SUMMARY

▲ Particle Trend



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	ABNORMAL	ATTENTION
Particles >4µm	ASTM D7647	>10000	▲ 102786	▲ 24949	● 13994
Particles >6µm	ASTM D7647	>2500	▲ 12367	● 2545	● 1871
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 24/21/15	▲ 22/19/13	● 21/18/14

Customer Id: HORAUS
 Sample No.: WC0908040
 Lab Number: 06134865
 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:
 Customer Service +1 1-800-237-1369
customerservice@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

22 Mar 2023 Diag: Wes Davis

ISO



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. All component wear rates are normal. Oil Cleanliness are abnormally high. Particles >4µm are abnormally high. Particles >6µm are notably high. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code. 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



29 Dec 2022 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





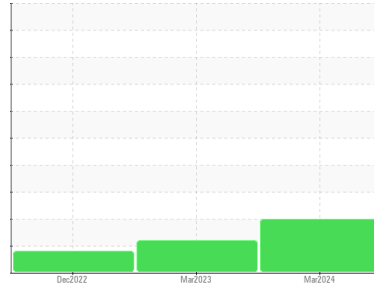
OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area
RP-101
 Machine Id
B57004
 Component
Gearbox
 Fluid
PETRO CANADA ENDURATEX EP 320 (--- GAL)



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

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		WC0908040	WC0736032	WC0755435
Sample Date	Client Info		25 Mar 2024	22 Mar 2023	29 Dec 2022
Machine Age	mths	Client Info	0	0	0
Oil Age	mths	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	ABNORMAL	ATTENTION

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 D5185m >200	28	8	21
Chromium	ppm	ASTM D5185m >15	0	0	0
Nickel	ppm	ASTM D5185m >15	<1	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	<1	0
Lead	ppm	ASTM D5185m >100	0	0	0
Copper	ppm	ASTM D5185m >200	0	0	0
Tin	ppm	ASTM D5185m >25	0	0	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 55	26	26	24
Barium	ppm	ASTM D5185m 0	0	0	0
Molybdenum	ppm	ASTM D5185m 0	0	0	0
Manganese	ppm	ASTM D5185m 0	<1	<1	<1
Magnesium	ppm	ASTM D5185m 0	0	0	0
Calcium	ppm	ASTM D5185m 0	0	<1	0
Phosphorus	ppm	ASTM D5185m 240	451	390	437
Zinc	ppm	ASTM D5185m 1	8	3	5
Sulfur	ppm	ASTM D5185m 13700	6991	5519	6274

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<1	1	<1
Sodium	ppm	ASTM D5185m	1	0	<1
Potassium	ppm	ASTM D5185m >20	3	1	0

FLUID CLEANLINESS

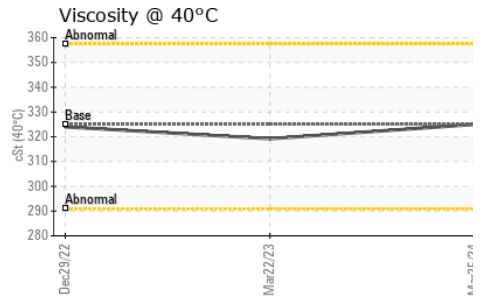
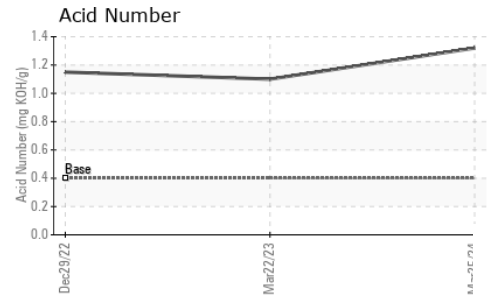
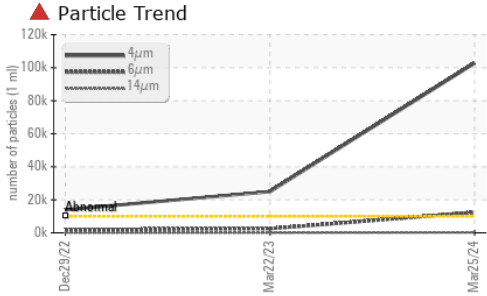
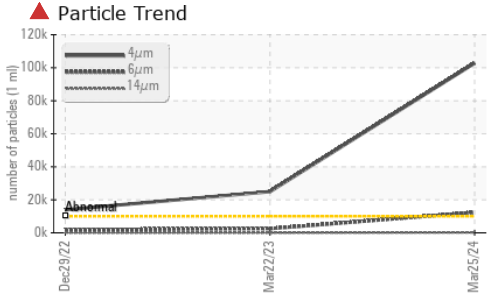
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 102786	▲ 24949	● 13994
Particles >6µm	ASTM D7647	>2500	▲ 12367	● 2545	1871
Particles >14µm	ASTM D7647	>320	223	76	89
Particles >21µm	ASTM D7647	>80	38	13	20
Particles >38µm	ASTM D7647	>20	1	1	0
Particles >71µm	ASTM D7647	>4	0	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 24/21/15	▲ 22/19/13	● 21/18/14

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.4	1.32	1.10	1.15



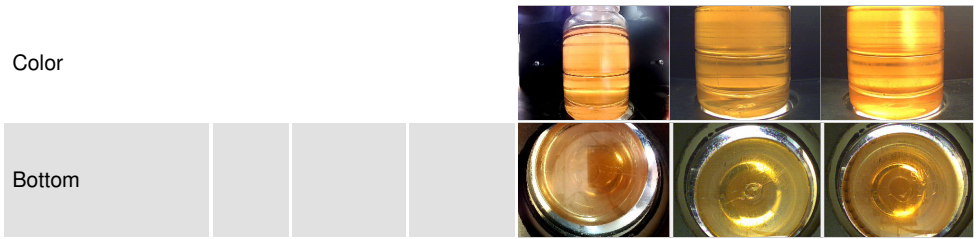
OIL ANALYSIS REPORT



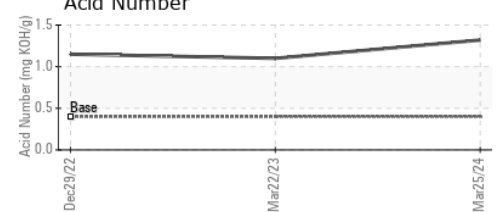
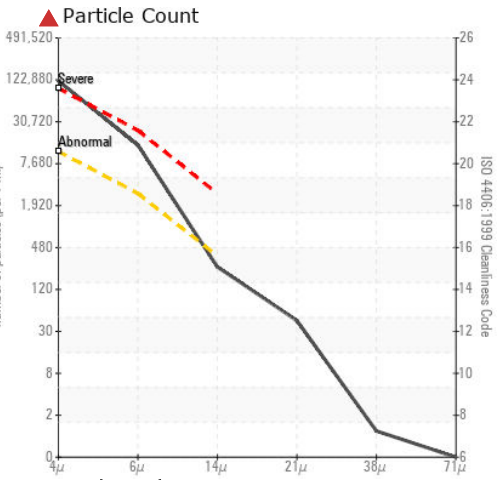
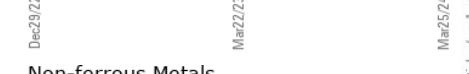
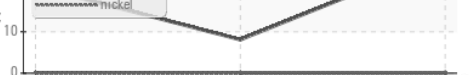
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 325	325	319.2	324

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0908040 **Received** : 01 Apr 2024
Lab Number : **06134865** **Tested** : 02 Apr 2024
Unique Number : 10954330 **Diagnosed** : 02 Apr 2024 - Wes Davis
Test Package : IND 2 (Additional Tests: PrtCount)

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 F: (507)437-9805

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)