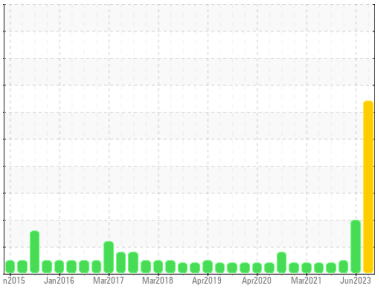
PROBLEM SUMMARY

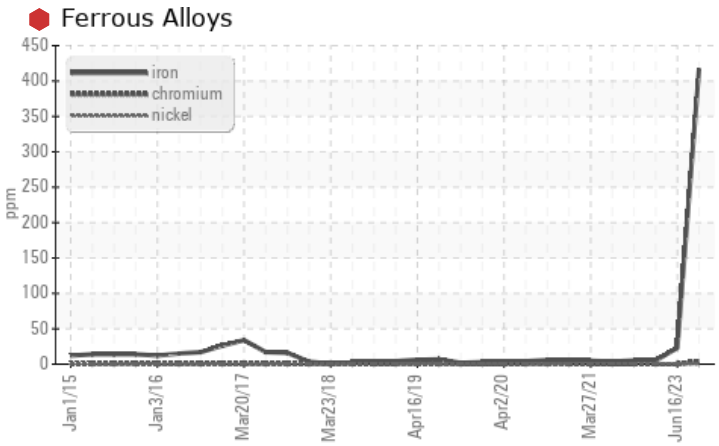
Area
RP-101
Machine Id
B57004 - NORTH DISCHARGE SCREW (S/N 10023277475)
Component
Gearbox
Fluid
PETRO CANADA ENDURATEX EP 320 (--- GAL)

Sample Rating Trend



WEAR

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We recommend you service the filters on this component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185m	>200	**417**	23	5
Debris	scalar	*Visual	NONE	**MODER**	LIGHT	NONE

Customer Id: HORAUS
Sample No.: WC0826197
Lab Number: 05967755
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	We were unable to perform a particle count due to a high concentration of particles present in this sample.

HISTORICAL DIAGNOSIS

16 Jun 2023 Diag: Don Baldridge

ISO

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

13 Jan 2022 Diag: Wes Davis

NORMAL

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. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

27 Sep 2021 Diag: Wes Davis

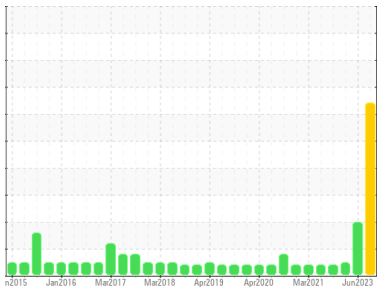
ISO

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



WEAR

Area
RP-101
Machine Id
B57004 - NORTH DISCHARGE SCREW (S/N 10023277475)
Component
Gearbox
Fluid
PETRO CANADA ENDURATEX EP 320 (--- GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Wear
Gear wear is indicated.

Contamination
Moderate concentration of visible dirt/debris present in the oil.

Fluid Condition
The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0826197**	WC0814174	WC0629134
Sample Date		Client Info		**27 Sep 2023**	16 Jun 2023	13 Jan 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	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**417**	23	5
Chromium	ppm	ASTM D5185m	>15	**4**	0	0
Nickel	ppm	ASTM D5185m	>15	**<1**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>25	**0**	0	0
Lead	ppm	ASTM D5185m	>100	**<1**	0	0
Copper	ppm	ASTM D5185m	>200	**<1**	<1	0
Tin	ppm	ASTM D5185m	>25	**0**	0	0
Antimony	ppm	ASTM D5185m	>5	**---**	---	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

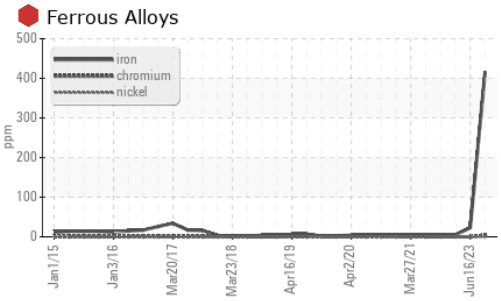
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	55	**30**	33	35
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**<1**	0	0
Manganese	ppm	ASTM D5185m	0	**4**	<1	0
Magnesium	ppm	ASTM D5185m	0	**<1**	0	1
Calcium	ppm	ASTM D5185m	0	**<1**	0	1
Phosphorus	ppm	ASTM D5185m	240	**508**	441	457
Zinc	ppm	ASTM D5185m	1	**3**	0	3
Sulfur	ppm	ASTM D5185m	13700	**7467**	6353	5505

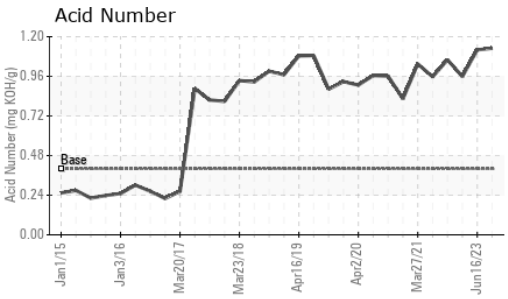
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**3**	<1	<1
Sodium	ppm	ASTM D5185m		**2**	1	0
Potassium	ppm	ASTM D5185m	>20	**<1**	0	0

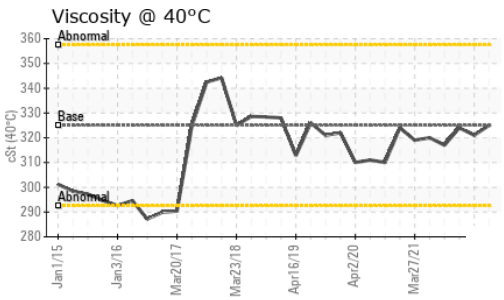
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**---**	130429	8608
Particles >6µm		ASTM D7647	>2500	**---**	24788	983
Particles >14µm		ASTM D7647	>320	**---**	691	39
Particles >21µm		ASTM D7647	>80	**---**	161	6
Particles >38µm		ASTM D7647	>20	**---**	10	1
Particles >71µm		ASTM D7647	>4	**---**	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/15	**---**	24/22/17	20/17/12

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.4	**1.13**	1.12	0.959

OIL ANALYSIS REPORT

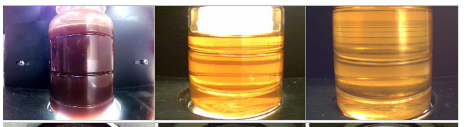
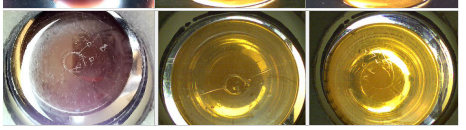




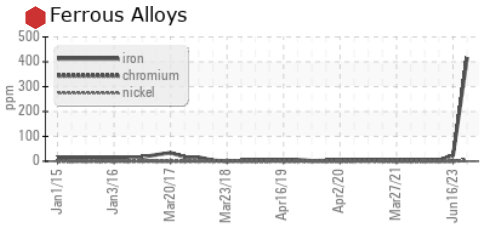


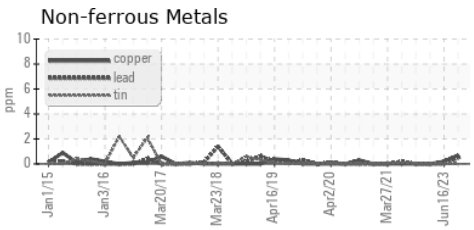
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	▲ **MODER**	LIGHT	NONE
Sand/Dirt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

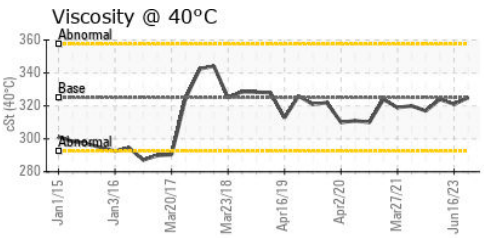
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	325	**325**	321	324

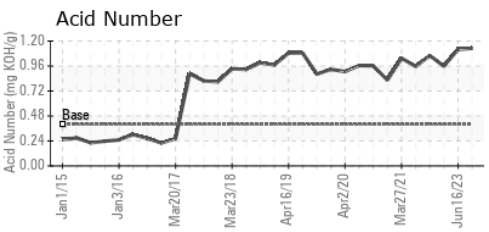
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS









Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0826197 **Received** : 03 Oct 2023
Lab Number : 05967755 **Diagnosed** : 05 Oct 2023
Unique Number : 10674306 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: PrtCount)

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)

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