



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**RHS CARRIAGE ACTUATOR CYLINDER**  
 Component  
**Gearbox**  
 Fluid  
**PETRO CANADA ENDURATEX EP 220 (3 GAL)**

**RECOMMENDATION**

We advise that you check all areas where dirt can enter the system.  
 We recommend you service the filters on this component if applicable.  
 We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PE0001867	---	---
Sample Date		Client Info		29 Mar 2024	---	---
Machine Age	yrs	Client Info		2	---	---
Oil Age	yrs	Client Info		0	---	---
Filter Age	yrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---

**WEAR**

All component wear rates are normal.

PQ		ASTM D8184		67	---	---
Iron	ppm	ASTM D5185m	>200	101	---	---
Chromium	ppm	ASTM D5185m	>15	3	---	---
Nickel	ppm	ASTM D5185m	>15	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>25	2	---	---
Lead	ppm	ASTM D5185m	>100	<1	---	---
Copper	ppm	ASTM D5185m	>200	32	---	---
Tin	ppm	ASTM D5185m	>25	0	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

**CONTAMINATION**

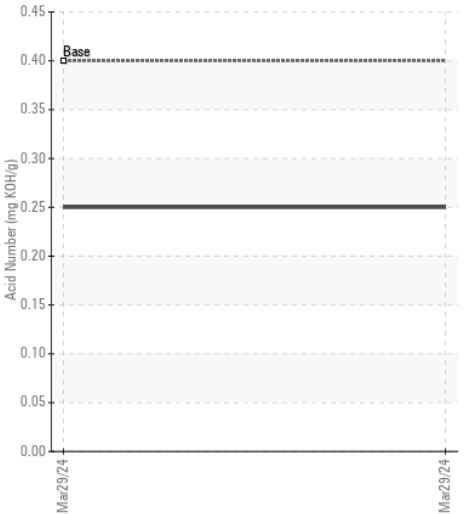
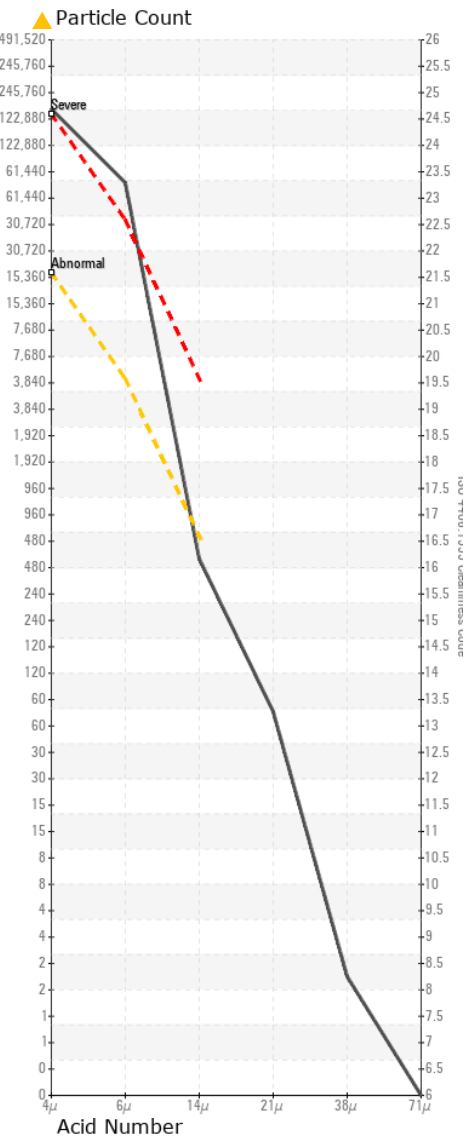
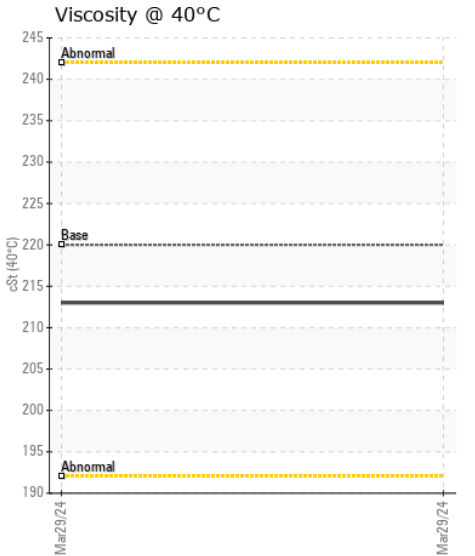
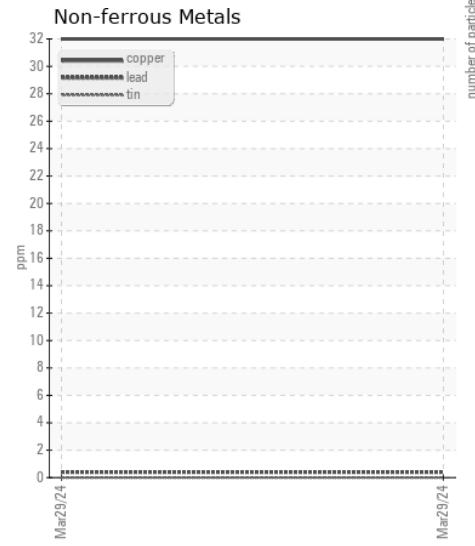
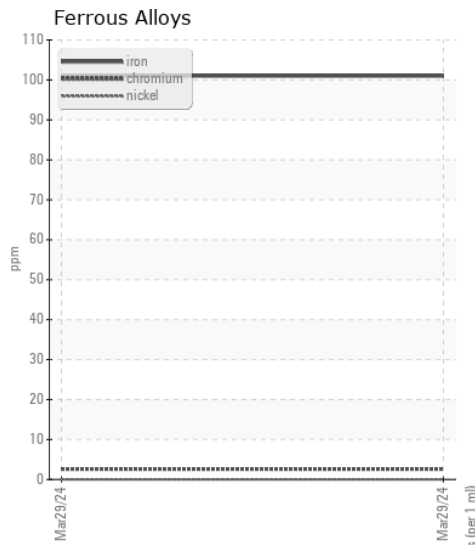
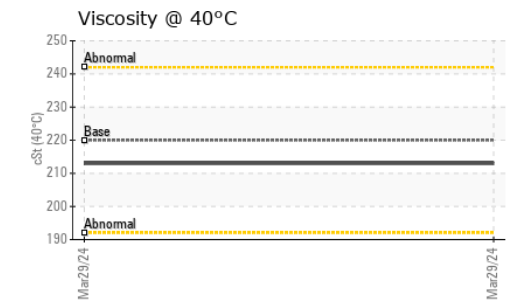
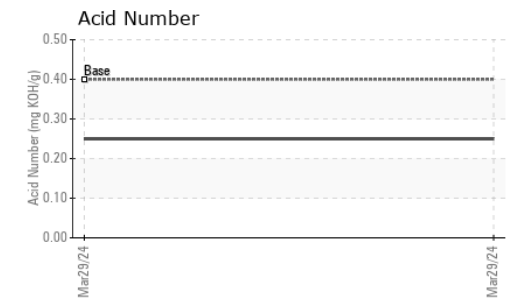
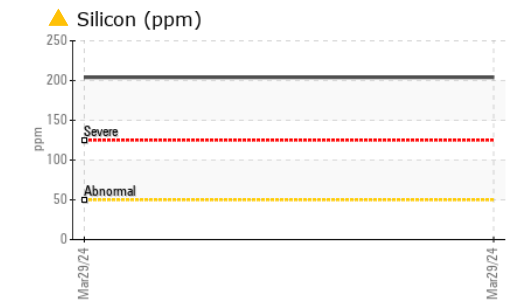
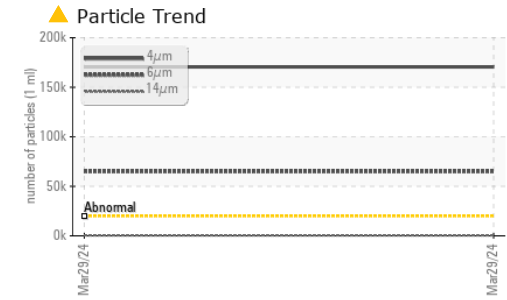
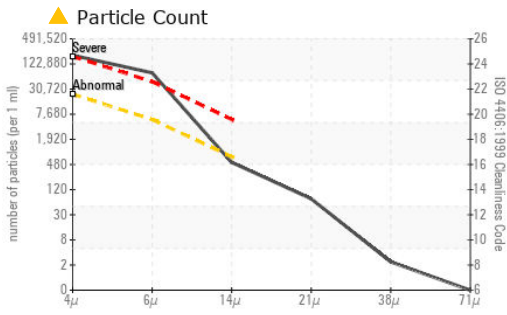
There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material.

Silicon	ppm	ASTM D5185m	>50	▲ 204	---	---
Potassium	ppm	ASTM D5185m	>20	3	---	---
Water	%	ASTM D6304	>0.2	NEG	---	---
Particles >4µm		ASTM D7647	>20000	▲ 170529	---	---
Particles >6µm		ASTM D7647	>5000	▲ 64982	---	---
Particles >14µm		ASTM D7647	>640	474	---	---
Particles >21µm		ASTM D7647	>160	64	---	---
Particles >38µm		ASTM D7647	>40	2	---	---
Particles >71µm		ASTM D7647	>10	0	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 25/23/16	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	LIGHT	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

**FLUID CONDITION**

The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		4	---	---
Boron	ppm	ASTM D5185m	60	45	---	---
Barium	ppm	ASTM D5185m	0	0	---	---
Molybdenum	ppm	ASTM D5185m	0	0	---	---
Manganese	ppm	ASTM D5185m	0	3	---	---
Magnesium	ppm	ASTM D5185m	0	1	---	---
Calcium	ppm	ASTM D5185m	0	6	---	---
Phosphorus	ppm	ASTM D5185m	270	245	---	---
Zinc	ppm	ASTM D5185m	0	22	---	---
Sulfur	ppm	ASTM D5185m	11200	7287	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.40	0.25	---	---
Visc @ 40°C	cSt	ASTM D445	220	213	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : PE0001867

Lab Number : 06155774

Unique Number : 10991197

Test Package : PLANT ( Additional Tests: FT-IR, ICP, KF, KV40, PQ, PrtCount, SCREEN )

Received : 22 Apr 2024

Tested : 24 Apr 2024

Diagnosed : 24 Apr 2024 - Jonathan Hester

FRERES ENGINEERED WOOD PRODUCTS

141 14TH ST

LYONS, OR

US 97358

Contact: GERRITT LAW

glaw@frereswood.com

T:

F:

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)