



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**PITCH ACTUATOR CYLINDER**  
 Component  
**Gearbox**  
 Fluid  
**PETRO CANADA ENDURATEX EP 220 (--- GAL)**

**RECOMMENDATION**

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PE0001866	---	---
Sample Date		Client Info		29 Mar 2024	---	---
Machine Age	mths	Client Info		2	---	---
Oil Age	mths	Client Info		0	---	---
Filter Age	mths	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		18	---	---
Iron	ppm	ASTM D5185m	>200	10	---	---
Chromium	ppm	ASTM D5185m	>15	<1	---	---
Nickel	ppm	ASTM D5185m	>15	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>25	18	---	---
Lead	ppm	ASTM D5185m	>100	12	---	---
Copper	ppm	ASTM D5185m	>200	125	---	---
Tin	ppm	ASTM D5185m	>25	10	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

**CONTAMINATION**

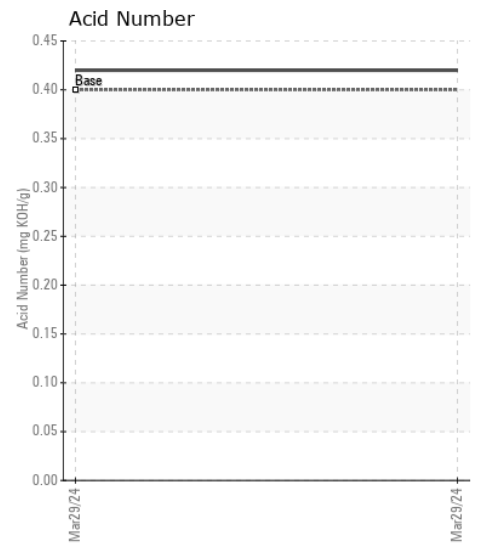
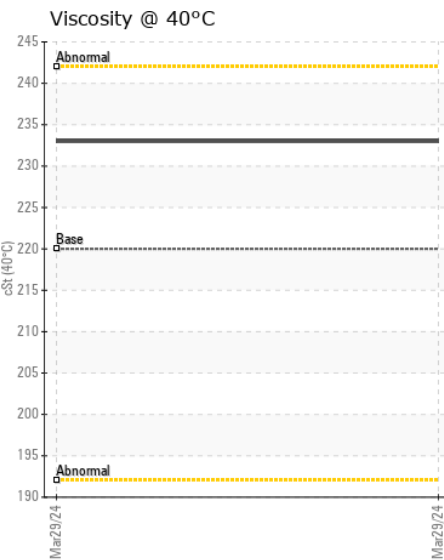
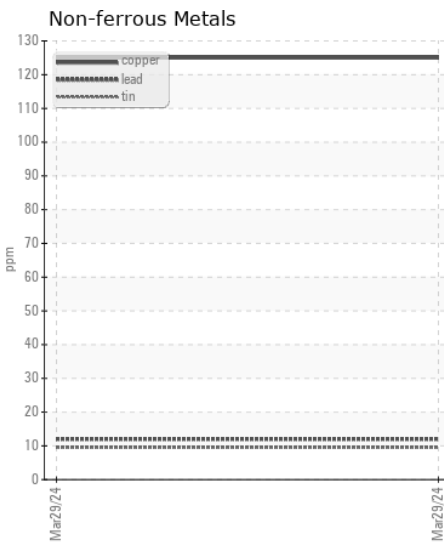
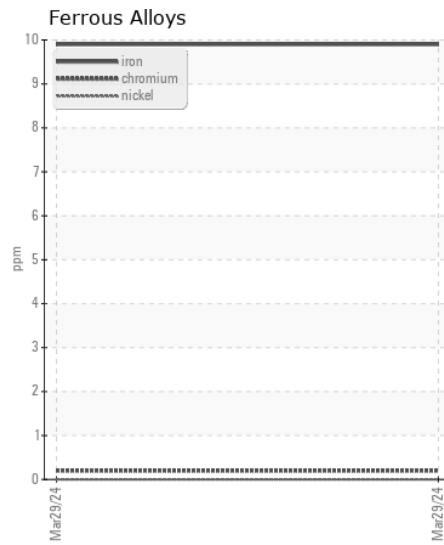
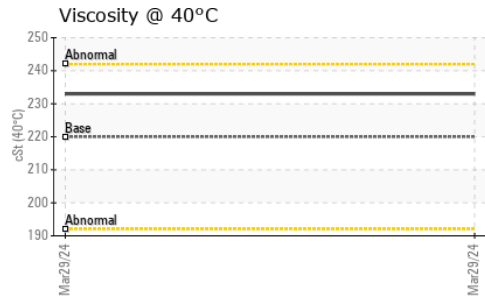
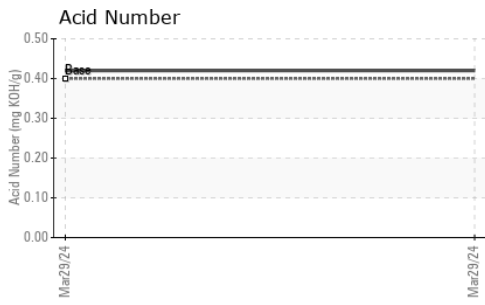
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>50	4	---	---
Potassium	ppm	ASTM D5185m	>20	0	---	---
Water	%	ASTM D6304	>0.2	NEG	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	▲ MODER	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	HAZY	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

**FLUID CONDITION**

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

Sodium	ppm	ASTM D5185m		3	---	---
Boron	ppm	ASTM D5185m	60	65	---	---
Barium	ppm	ASTM D5185m	0	0	---	---
Molybdenum	ppm	ASTM D5185m	0	0	---	---
Manganese	ppm	ASTM D5185m	0	0	---	---
Magnesium	ppm	ASTM D5185m	0	1	---	---
Calcium	ppm	ASTM D5185m	0	2	---	---
Phosphorus	ppm	ASTM D5185m	270	223	---	---
Zinc	ppm	ASTM D5185m	0	5	---	---
Sulfur	ppm	ASTM D5185m	11200	7170	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.40	0.42	---	---
Visc @ 40°C	cSt	ASTM D445	220	233	---	---



Certificate L2367

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

**Sample No.** : PE0001866

**Lab Number** : 06155775

**Unique Number** : 10991198

**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

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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)