



PROBLEM SUMMARY

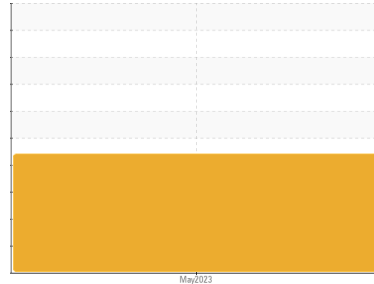
Sample Rating Trend

WEAR

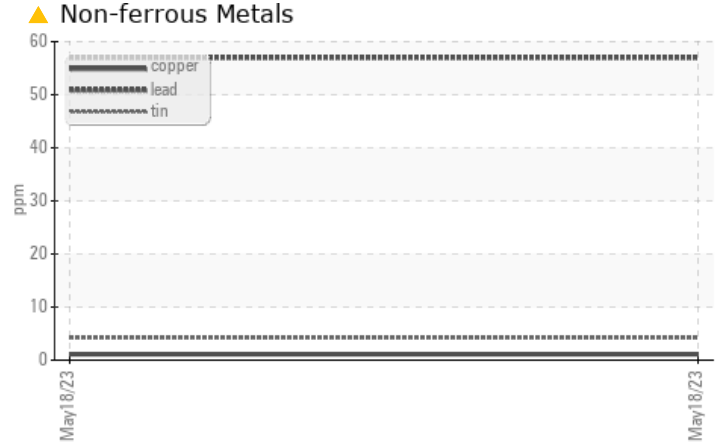
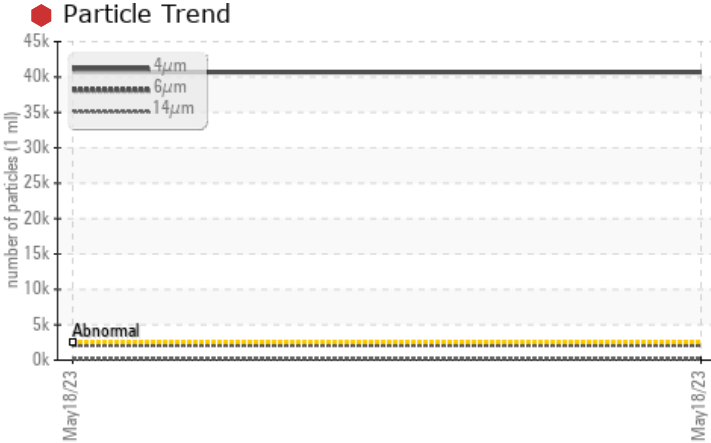


Area
LSGS PLANT
Machine Id
G3 MIDDLE

Component
Turbine
Fluid
PETRO CANADA TURBOFLO R&O 100 (40 LTR)



COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	---	---
Lead	ppm	ASTM D5185(m)	▲ 57	---	---
Antimony	ppm	ASTM D5185(m)	▲ 4	---	---
Particles >4µm		ASTM D7647 >2500	● 40680	---	---
Particles >6µm		ASTM D7647 >640	▲ 2211	---	---
Particles >14µm		ASTM D7647 >80	▲ 200	---	---
Particles >21µm		ASTM D7647 >20	▲ 94	---	---
Particles >38µm		ASTM D7647 >4	▲ 12	---	---
Oil Cleanliness		ISO 4406 (c) >18/16/13	● 23/18/15	---	---

Customer Id: PET412PET
Sample No.: WC0801009
Lab Number: 02560156
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
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To change component or sample information:
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gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
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 Dirt Access	---	---	?	We advise that you check all areas where contaminants can enter the system.
Filter Fluid	---	---	?	We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.

HISTORICAL DIAGNOSIS



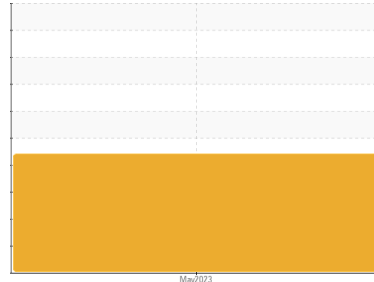
OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



Area
LSGS PLANT
 Machine Id
G3 MIDDLE
 Component
Turbine
 Fluid
PETRO CANADA TURBOFLO R&O 100 (40 LTR)



DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation.

Wear

Lead ppm levels are abnormal. Antimony ppm levels are noted.

Contamination

There is a high amount of particulates (2 to 100 microns in size) present in the oil. The water content is negligible.

Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

method	limit/base	current	history 1	history 2
Sample Number	Client Info	WC0801009	---	---
Sample Date	Client Info	18 May 2023	---	---
Machine Age	yrs Client Info	120	---	---
Oil Age	yrs Client Info	2	---	---
Oil Changed	Client Info	Not Chngd	---	---
Sample Status		SEVERE	---	---

WEAR METALS

method	limit/base	current	history 1	history 2
Iron ppm	ASTM D5185(m) >15	1	---	---
Chromium ppm	ASTM D5185(m) >4	0	---	---
Nickel ppm	ASTM D5185(m) >2	0	---	---
Titanium ppm	ASTM D5185(m)	0	---	---
Silver ppm	ASTM D5185(m)	0	---	---
Aluminum ppm	ASTM D5185(m) >10	<1	---	---
Lead ppm	ASTM D5185(m)	▲ 57	---	---
Copper ppm	ASTM D5185(m) >5	1	---	---
Tin ppm	ASTM D5185(m) >5	4	---	---
Antimony ppm	ASTM D5185(m)	▲ 4	---	---
Vanadium ppm	ASTM D5185(m)	0	---	---
Beryllium ppm	ASTM D5185(m)	0	---	---
Cadmium ppm	ASTM D5185(m)	0	---	---

ADDITIVES

method	limit/base	current	history 1	history 2
Boron ppm	ASTM D5185(m)	0	---	---
Barium ppm	ASTM D5185(m)	0	---	---
Molybdenum ppm	ASTM D5185(m)	0	---	---
Manganese ppm	ASTM D5185(m)	0	---	---
Magnesium ppm	ASTM D5185(m)	0	---	---
Calcium ppm	ASTM D5185(m) 0	0	---	---
Phosphorus ppm	ASTM D5185(m) 4	4	---	---
Zinc ppm	ASTM D5185(m) 0	2	---	---
Sulfur ppm	ASTM D5185(m)	142	---	---
Lithium ppm	ASTM D5185(m)	<1	---	---

CONTAMINANTS

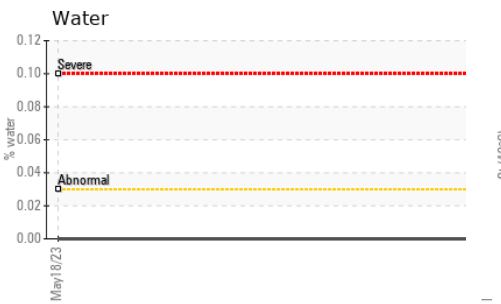
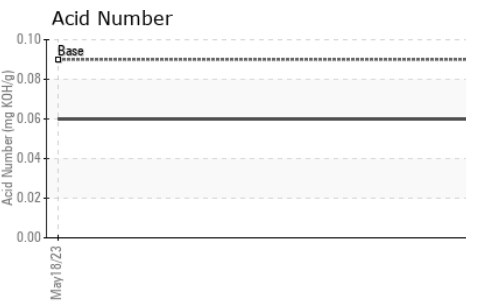
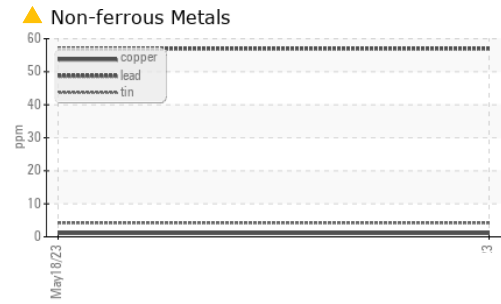
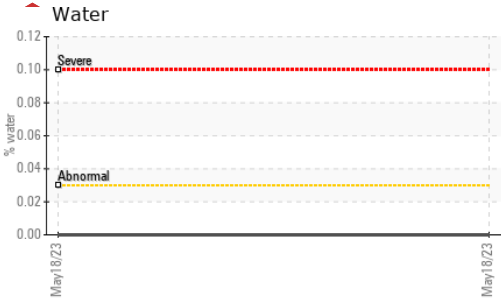
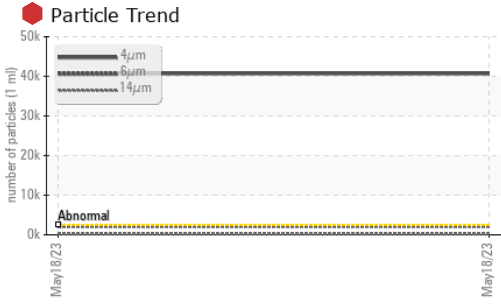
method	limit/base	current	history 1	history 2
Silicon ppm	ASTM D5185(m) >15	0	---	---
Sodium ppm	ASTM D5185(m)	0	---	---
Potassium ppm	ASTM D5185(m) >20	0	---	---
Water %	ASTM D6304* >0.03	0.00	---	---
ppm Water	ASTM D6304* >300	0.00	---	---

FLUID CLEANLINESS

method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647 >2500	▲ 40680	---	---
Particles >6µm	ASTM D7647 >640	▲ 2211	---	---
Particles >14µm	ASTM D7647 >80	▲ 200	---	---
Particles >21µm	ASTM D7647 >20	▲ 94	---	---
Particles >38µm	ASTM D7647 >4	▲ 12	---	---
Particles >71µm	ASTM D7647 >3	0	---	---
Oil Cleanliness	ISO 4406 (c) >18/16/13	▲ 23/18/15	---	---



OIL ANALYSIS REPORT



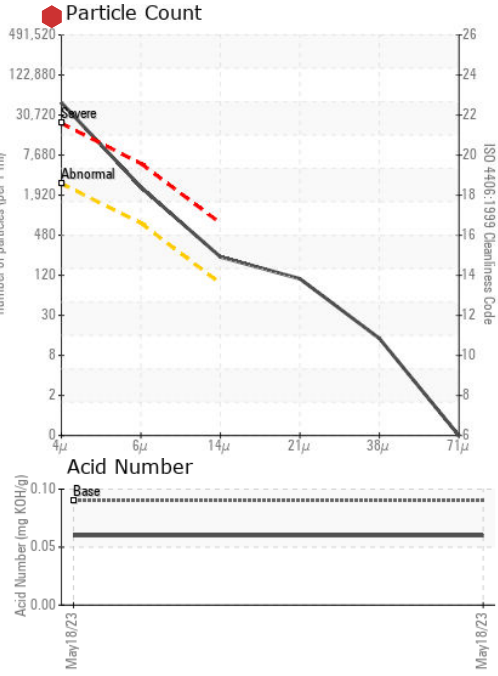
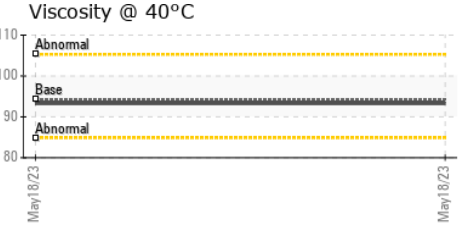
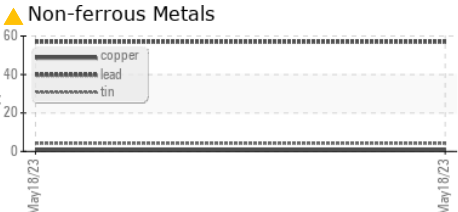
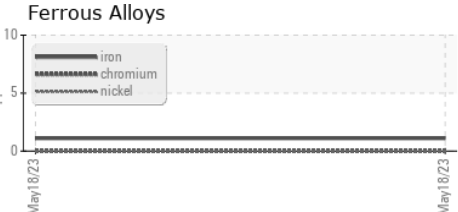
FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.09	0.06	---	---

VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Precipitate	scalar	Visual*	NONE	NONE	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	VLITE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.03	NEG	---	---
Free Water	scalar	Visual*		NEG	---	---

FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D7279(m)	94.3	93.3	---	---

SAMPLE IMAGES		method	limit/base	current	history 1	history 2
Color					no image	no image
Bottom					no image	no image

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0801009 **Received** : 29 May 2023
Lab Number : **02560156** **Diagnosed** : 30 May 2023
Unique Number : 5581196 **Diagnostician** : Kevin Marson
Test Package : IND 2

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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.