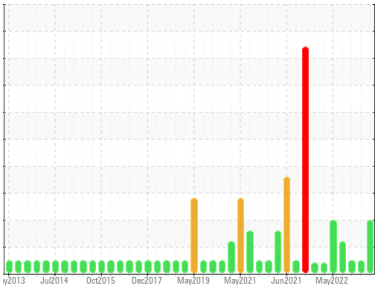
PROBLEM SUMMARY

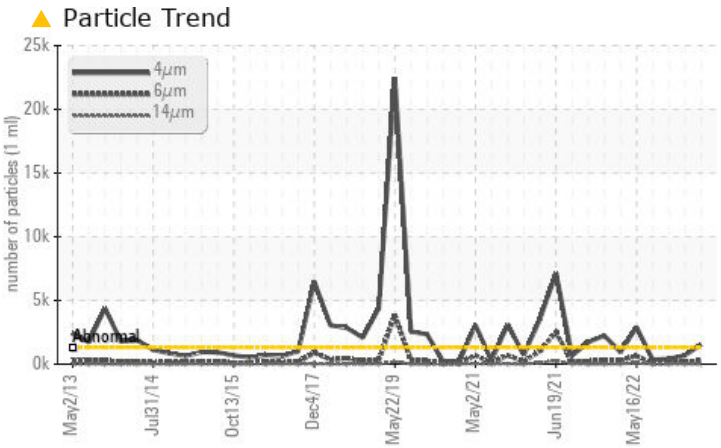
Area
SAB1
Machine Id
SAB1 G5
Component
Thrust Bearing
Fluid
PETRO CANADA TURBOFLO XL46 (1182 LTR)

Sample Rating Trend



VISUAL METAL

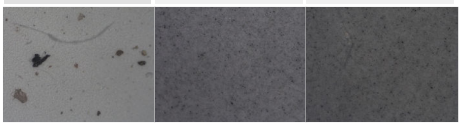
COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for visible metal particles in the oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	NORMAL	NORMAL
Particles >4µm		ASTM D7647	>1300	▲ **1529**	689	412
Oil Cleanliness		ISO 4406 (c)	>17/15/12	▲ **18/15/10**	17/15/11	16/14/11
White Metal	scalar	Visual*	NONE	▲ **LIGHT**	NONE	NONE
PrtFilter						

Customer Id: ONTQUE
Sample No.: WC0828620
Lab Number: 02578778
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Filter	---	---	?	We recommend you service the filters on this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check For Visual Metal	---	---	?	We advise that you check for visible metal particles in the oil.

HISTORICAL DIAGNOSIS

27 Mar 2023 Diag: Kevin Marson

NORMAL

Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using IND 3 test kits, this testkit includes Analytical Ferrography which provides a detailed morphological analysis of wear particles present in the fluid.Component wear rates appear to be normal (unconfirmed). 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

21 Nov 2022 Diag: Kevin Marson

NORMAL

Resample at the next service interval to monitor.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 2022 Diag: Kevin Marson

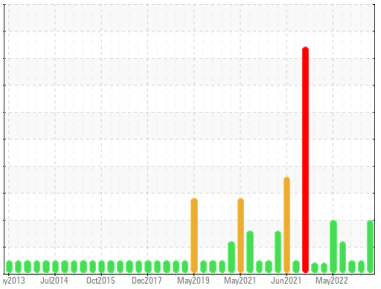
VISUAL METAL

We advise that you check for visible metal particles in the oil. We recommend an early resample to monitor this condition.Light concentration of visible metal present. 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

OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL

Area
SAB1
Machine Id
SAB1 G5
Component
Thrust Bearing
Fluid
PETRO CANADA TURBOFLO XL46 (1182 LTR)

DIAGNOSIS

Recommendation
We advise that you check for visible metal particles in the oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear
Light concentration of visible metal present.

Contamination
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

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

Particle Filter (Magn: 200 x)

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0828620**	WC0642872	WC0587299
Sample Date		Client Info		**27 Aug 2023**	27 Mar 2023	21 Nov 2022
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>85	**<1**	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**<1**	0	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>40	**<1**	0	0
Lead	ppm	ASTM D5185(m)	>60	**<1**	<1	<1
Copper	ppm	ASTM D5185(m)	>7	**<1**	<1	<1
Tin	ppm	ASTM D5185(m)	>40	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	<1	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	<1	<1
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**0**	0	0
Calcium	ppm	ASTM D5185(m)		**<1**	0	0
Phosphorus	ppm	ASTM D5185(m)		**2**	1	1
Zinc	ppm	ASTM D5185(m)	0	**2**	1	1
Sulfur	ppm	ASTM D5185(m)		**657**	651	613
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

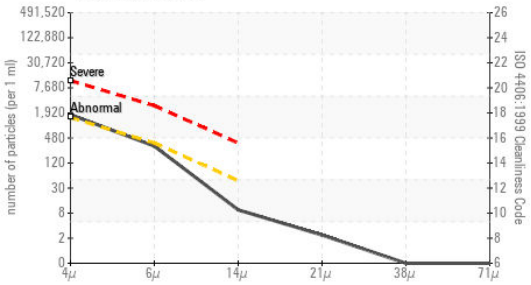
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**5**	5	5
Sodium	ppm	ASTM D5185(m)		**0**	0	<1
Potassium	ppm	ASTM D5185(m)	>20	**<1**	0	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>1300	▲ **1529**	689	412
Particles >6µm		ASTM D7647	>320	**270**	168	111
Particles >14µm		ASTM D7647	>40	**8**	13	11
Particles >21µm		ASTM D7647	>10	**2**	3	4
Particles >38µm		ASTM D7647	>3	**0**	0	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>17/15/12	▲ **18/15/10**	17/15/11	16/14/11

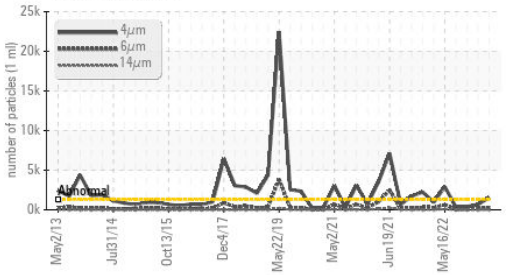
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.04	**0.08**	0.05	0.05

OIL ANALYSIS REPORT

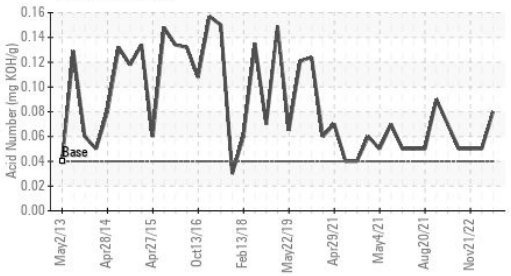
Particle Count



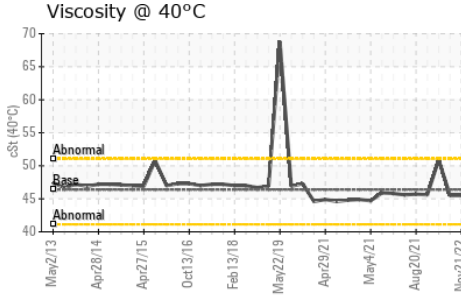
Particle Trend



Acid Number



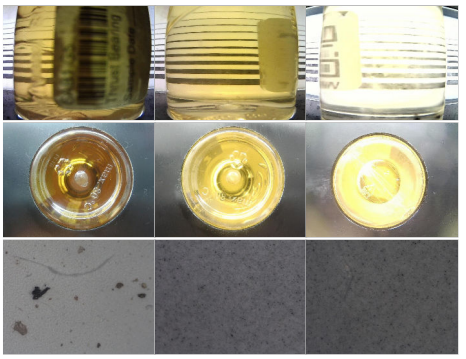
Viscosity @ 40°C



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ **LIGHT**	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	**NONE**	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	**NORML**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>2	**NEG**	NEG	NEG
Free Water	scalar	Visual*		**NEG**	NEG	NEG

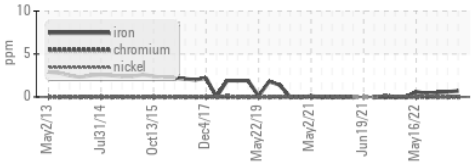
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46.39	**45.4**	45.8	45.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					
PrtFilter					

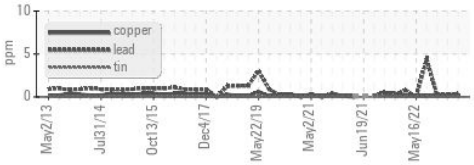


GRAPHS

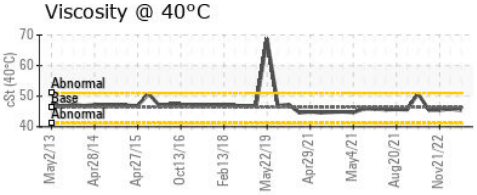
Ferrous Alloys



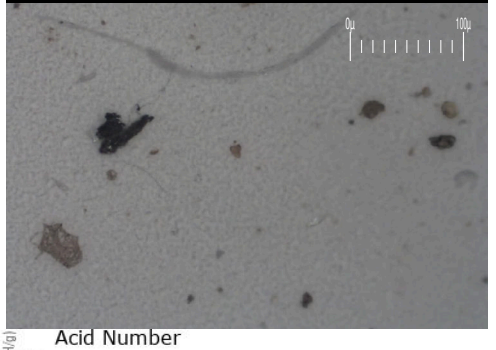
Non-ferrous Metals



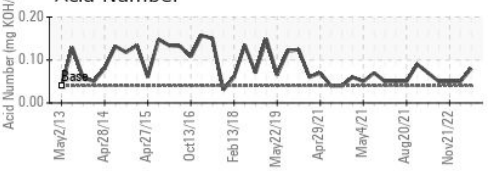
Viscosity @ 40°C



Particle Filter (Magn: 200 x)



Acid Number



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0828620 **Received** : 28 Aug 2023
Lab Number : 02578778 **Diagnosed** : 30 Aug 2023
Unique Number : 5631838 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: BottomAnalysis, FilterPatch, PrtFilter, TAN Man)

Ontario Power Generation
NIAGARA PLANT GROUP,, 14000 NIAGARA PKWY
NIAGARA ON THE LAKE, ON
CA L0S 1J0
Contact: Michael Brochu
mike.brochu@opg.com
T: (905)357-0322
F: (905)374-5466

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.