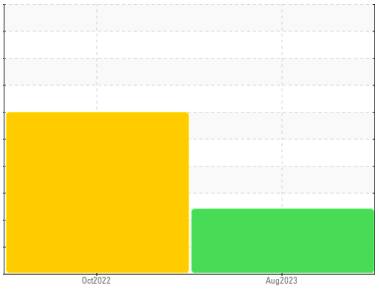
PROBLEM SUMMARY

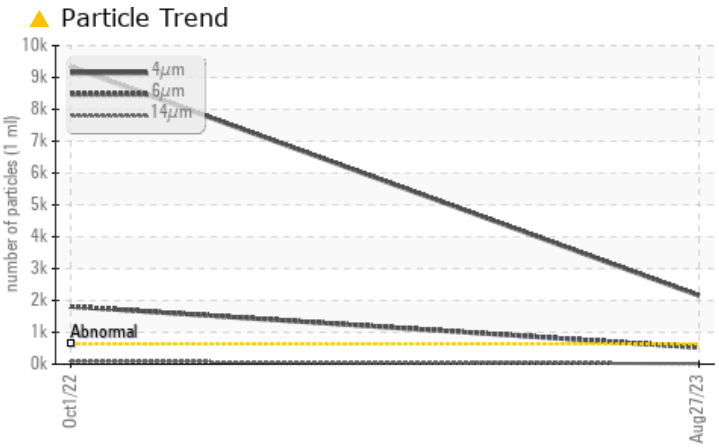
Sample Rating Trend



VISUAL METAL

Machine Id
SAB1 G1 THRUST BEARING
Component
Thrust Bearing
Fluid
PETRO CANADA TURBOFLO XL46 (--- GAL)

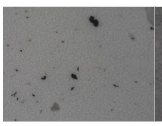
COMPONENT CONDITION SUMMARY



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. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	SEVERE	---
Particles >4µm		ASTM D7647	>640	**2151**	9337	---
Particles >6µm		ASTM D7647	>160	**524**	1809	---
Oil Cleanliness		ISO 4406 (c)	>16/14/11	**18/16/11**	20/18/14	---
White Metal	scalar	Visual*	NONE	**VLITE**	NONE	---
PrtFilter						*no image*

Customer Id: ONTQUE
Sample No.: WC
Lab Number: 02578791
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.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check For Visual Metal	---	---	?	We advise that you check for visible metal particles in the oil.

HISTORICAL DIAGNOSIS

ISO

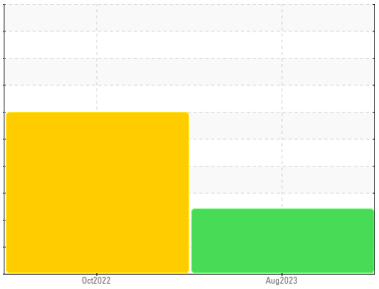
01 Oct 2022 Diag: Kevin Marson

We recommend that you perform vacuum distillation and/or air drying to attempt to remove any residual water and/or entrained gases from this oil that may be contributing to abnormal foaming and/or poor water separability. 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. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.All component wear rates are normal. The direct-reading & analytical ferrographic results are normal indicating no abnormal wear in the system. Particles >6µm are severely high. Particles >4µm are severely high. Oil Cleanliness are severely high. Particles >14µm are abnormally high. Particles >21µm are abnormally high. The water content is negligible. The system cleanliness code is much higher than the acceptable limit for the target ISO 4406 cleanliness code. Foaming Tendency stage I (ASTM D892) result is abnormal indicating a tendency for oil foaming. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



VISUAL METAL

Machine Id
SAB1 G1 THRUST BEARING
Component
Thrust Bearing
Fluid
PETRO CANADA TURBOFLO XL46 (--- GAL)

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. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

Light concentration of visible metal present.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Particle Filter (Magn: 200 x)

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC**	PP	---
Sample Date		Client Info		**27 Aug 2023**	01 Oct 2022	---
Machine Age	hrs	Client Info		**0**	0	---
Oil Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Sample Status				**ABNORMAL**	SEVERE	---

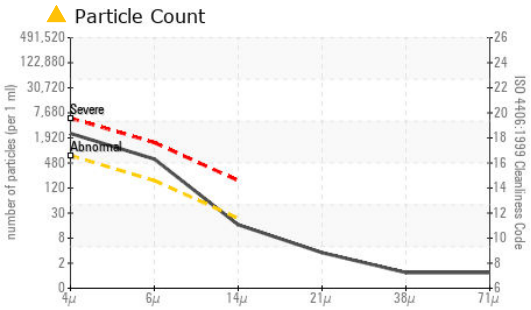
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**0**	0	---
Iron	ppm	ASTM D5185(m)	>85	**<1**	<1	---
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	---
Nickel	ppm	ASTM D5185(m)	>20	**0**	0	---
Titanium	ppm	ASTM D5185(m)		**0**	0	---
Silver	ppm	ASTM D5185(m)		**0**	0	---
Aluminum	ppm	ASTM D5185(m)	>40	**0**	0	---
Lead	ppm	ASTM D5185(m)	>60	**0**	<1	---
Copper	ppm	ASTM D5185(m)	>7	**<1**	0	---
Tin	ppm	ASTM D5185(m)	>40	**0**	0	---
Antimony	ppm	ASTM D5185(m)		**0**	0	---
Vanadium	ppm	ASTM D5185(m)		**0**	0	---
Beryllium	ppm	ASTM D5185(m)		**0**	0	---
Cadmium	ppm	ASTM D5185(m)		**0**	0	---

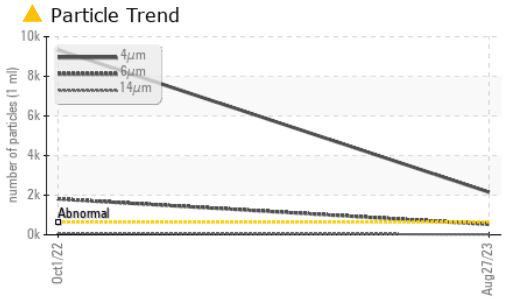
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**0**	<1	---
Barium	ppm	ASTM D5185(m)		**0**	0	---
Molybdenum	ppm	ASTM D5185(m)		**0**	0	---
Manganese	ppm	ASTM D5185(m)		**0**	0	---
Magnesium	ppm	ASTM D5185(m)		**0**	0	---
Calcium	ppm	ASTM D5185(m)		**1**	<1	---
Phosphorus	ppm	ASTM D5185(m)		**2**	1	---
Zinc	ppm	ASTM D5185(m)	0	**2**	1	---
Sulfur	ppm	ASTM D5185(m)		**620**	626	---
Lithium	ppm	ASTM D5185(m)		**<1**	<1	---

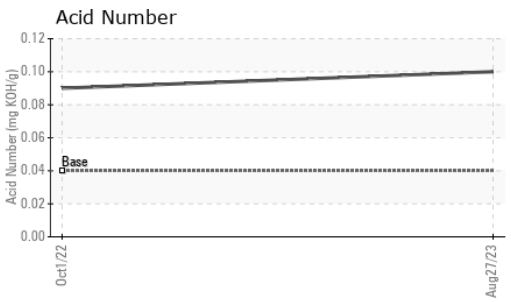
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	**3**	0	---
Sodium	ppm	ASTM D5185(m)		**0**	<1	---
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	---

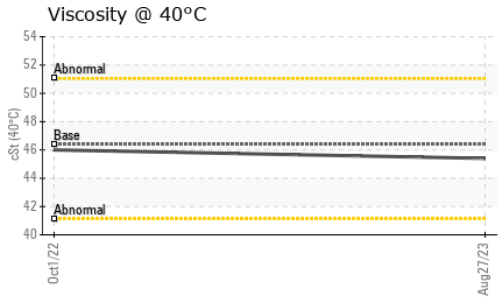
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>640	▲ **2151**	⬢ 9337	---
Particles >6µm	ASTM D7647	>160	▲ **524**	⬢ 1809	---
Particles >14µm	ASTM D7647	>20	**14**	▲ 88	---
Particles >21µm	ASTM D7647	>4	**3**	▲ 16	---
Particles >38µm	ASTM D7647	>3	**1**	1	---
Particles >71µm	ASTM D7647	>3	**1**	0	---
Oil Cleanliness	ISO 4406 (c)	>16/14/11	▲ **18/16/11**	⬢ 20/18/14	---

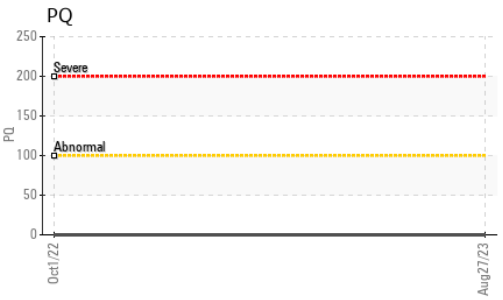
OIL ANALYSIS REPORT







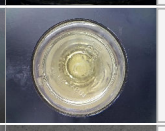
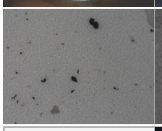
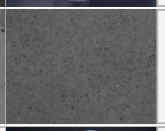




FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.04	**0.10**	0.09	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	▲ **VLITE**	NONE	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	---
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	---
Silt	scalar	Visual*	NONE	**NONE**	NONE	---
Debris	scalar	Visual*	NONE	**NONE**	NONE	---
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	---
Appearance	scalar	Visual*	NORML	**NORML**	NORML	---
Odor	scalar	Visual*	NORML	**NORML**	NORML	---
Emulsified Water	scalar	Visual*	>2	**NEG**	NEG	---
Free Water	scalar	Visual*		**NEG**	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	46.39	**45.4**	46.0	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*
PrtFilter					*no image*
MPC			*no image*		*no image*

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC **Received** : 28 Aug 2023
Lab Number : 02578791 **Diagnosed** : 30 Aug 2023
Unique Number : 5631851 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: BottomAnalysis, FilterPatch, PQ, PrtCount, PrtFilter, TAN Man)

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.

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