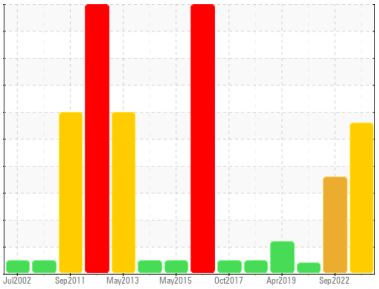
PROBLEM SUMMARY

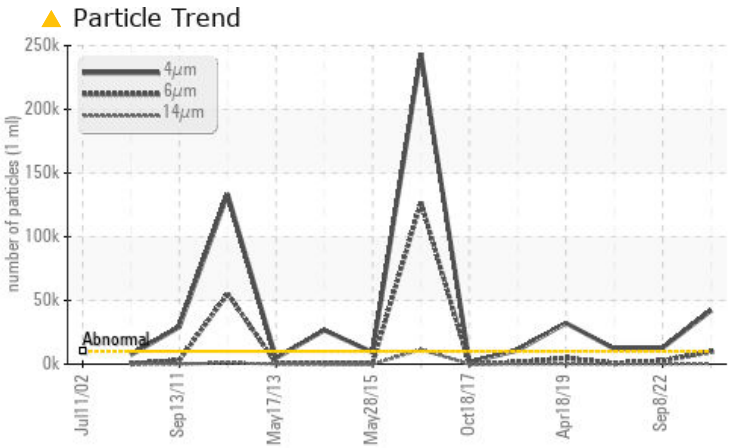
Sample Rating Trend



WATER

Machine Id
A5 - Turbine (Lower) Guide Bearing
Component
Lower Bearing
Fluid
PETRO CANADA TURBOFLO R&O 46 (350 LTR)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. We advise that you check for visible metal particles in the oil. 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. We advise that you follow the water drain-off procedure for this component. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ATTENTION
Particles >4µm		ASTM D7647	>10000	▲ **42022**	▲ 12813	▲ 12063
Particles >6µm		ASTM D7647	>2500	▲ **9642**	▲ 2673	836
Particles >14µm		ASTM D7647	>160	▲ **444**	▲ 187	18
Particles >21µm		ASTM D7647	>40	▲ **83**	▲ 62	4
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **23/20/16**	▲ 21/19/15	▲ 21/17/11
White Metal	scalar	Visual*	NONE	▲ **LIGHT**	NONE	NONE
Appearance	scalar	Visual*	NORML	▲ **WGOIL**	NORML	NORML
Free Water	scalar	Visual*		▲ **1%**	▲ 5%	NEG
PrtFilter					*no image*	*no image*

Customer Id: CHUCHU
Sample No.: WC0792130
Lab Number: 02579989
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 advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid.
Water Drain-off	---	---	?	We advise that you follow the water drain-off procedure for this component.
Resample	---	---	?	We recommend an early resample to monitor this condition.
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 Water Access	---	---	?	We advise that you check for the source of water entry.
Check For Visual Metal	---	---	?	We advise that you check for visible metal particles in the oil.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.
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

08 Sep 2022 Diag: Kevin Marson

WATER

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. 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. We advise that you follow the water drain-off procedure for this component. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. Free water present. 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

07 Jul 2020 Diag: Kevin Marson

ISO

We recommend you service the filters on this component. Resample at the next service interval to monitor.All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

18 Apr 2019 Diag: Wes Davis

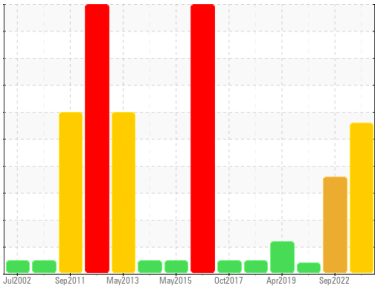
ISO

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. Particles >4µm are abnormally high. Particles >6µm are notably high. Particles >14µm are notably high. 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



WATER

Machine Id
A5 - Turbine (Lower) Guide Bearing
Component
Lower Bearing
Fluid
PETRO CANADA TURBOFLO R&O 46 (350 LTR)

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. We advise that you check for visible metal particles in the oil. 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. We advise that you follow the water drain-off procedure for this component. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Wear

Light concentration of visible metal present. Bearing wear is indicated.

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. Free water present.

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		**WC0792130**	WC0308140	WC985266
Sample Date		Client Info		**09 May 2023**	08 Sep 2022	07 Jul 2020
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**	ABNORMAL	ATTENTION

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**1**	<1	<1
Chromium	ppm	ASTM D5185(m)	>20	**0**	0	0
Nickel	ppm	ASTM D5185(m)	>20	**0**	<1	0
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	0
Aluminum	ppm	ASTM D5185(m)	>20	**<1**	<1	0
Lead	ppm	ASTM D5185(m)	>20	**6**	4	4
Copper	ppm	ASTM D5185(m)	>20	**<1**	0	<1
Tin	ppm	ASTM D5185(m)	>20	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	<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

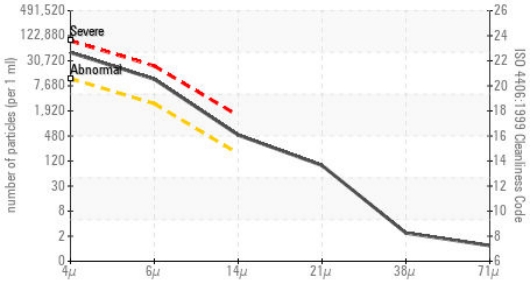
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**0**	<1	<1
Barium	ppm	ASTM D5185(m)		**0**	0	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**<1**	0	<1
Calcium	ppm	ASTM D5185(m)	0	**<1**	0	<1
Phosphorus	ppm	ASTM D5185(m)	3	**2**	2	2
Zinc	ppm	ASTM D5185(m)	0	**2**	<1	<1
Sulfur	ppm	ASTM D5185(m)		**92**	86	85
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**<1**	3	<1
Sodium	ppm	ASTM D5185(m)		**<1**	0	0
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<1	<1
Water	%	ASTM D6304*	>2	**0.006**	---	---
ppm Water	ppm	ASTM D6304*		**60.9**	---	---

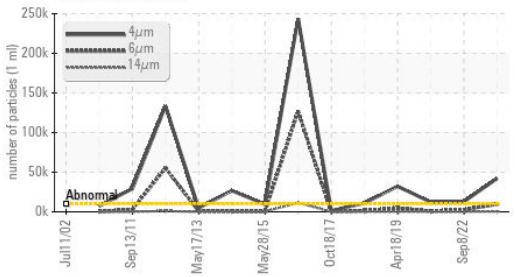
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **42022**	▲ 12813	▲ 12063
Particles >6µm		ASTM D7647	>2500	▲ **9642**	▲ 2673	836
Particles >14µm		ASTM D7647	>160	▲ **444**	▲ 187	18
Particles >21µm		ASTM D7647	>40	▲ **83**	▲ 62	4
Particles >38µm		ASTM D7647	>10	**2**	4	0
Particles >71µm		ASTM D7647	>3	**1**	0	0
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **23/20/16**	▲ 21/19/15	▲ 21/17/11

OIL ANALYSIS REPORT

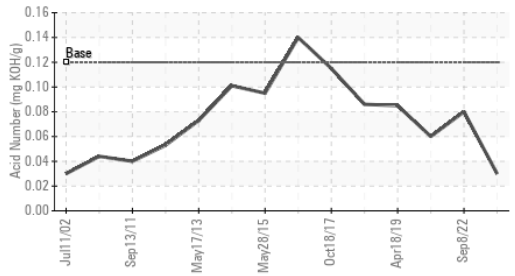
Particle Count



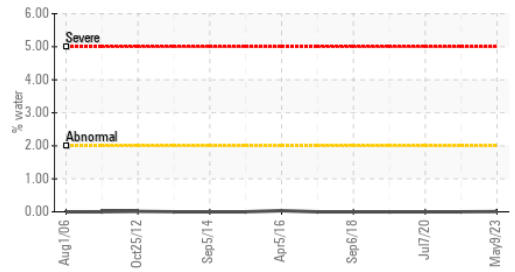
Particle Trend



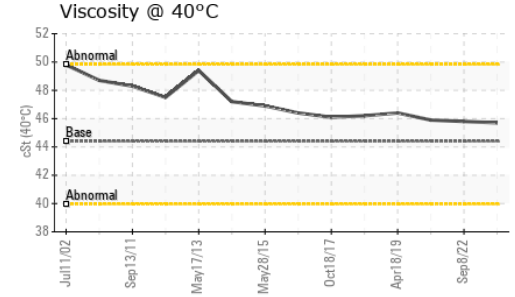
Acid Number



Water



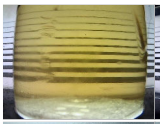
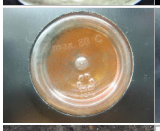
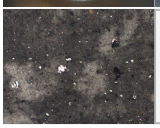
Viscosity @ 40°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.12	**0.03**	0.08	0.06

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**	VLITE	NONE
Silt	scalar	Visual*	NONE	**VLITE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Appearance	scalar	Visual*	NORML	▲ **WGOIL**	NORML	NORML
Odor	scalar	Visual*	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	Visual*	>2	**.2%**	.2%	NEG
Free Water	scalar	Visual*		▲ **1%**	▲ 5%	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	44.4	**45.7**	45.8	45.9

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

ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0792130 **Received** : 01 Sep 2023
Lab Number : 02579989 **Diagnosed** : 08 Sep 2023
Unique Number : 5633049 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: BottomAnalysis, FILTERPATCH, KF, 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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