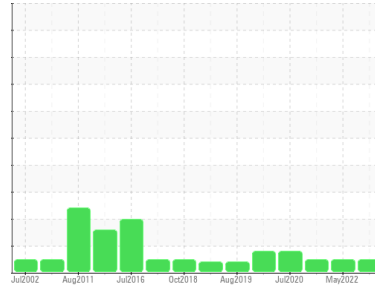




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



## Machine Id **A1 - Turbine (Lower) Guide Bearing**

Component  
**Lower Bearing**

Fluid  
**PETRO CANADA TURBOFLO R&O 46 (350 LTR)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

#### Fluid Condition

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

### SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0792140</b>	WC0312102	WC0312095
Sample Date	Client Info		<b>09 Aug 2023</b>	17 May 2022	10 Oct 2021
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

### CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>2	<b>NEG</b>	NEG	NEG

### WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Chromium	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m) >20	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m) >20	<b>6</b>	6	5
Copper	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185(m) >20	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	<b>0</b>	0	<1
Barium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	0
Calcium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	0	<1
Phosphorus	ppm	ASTM D5185(m) 3	<b>1</b>	2	1
Zinc	ppm	ASTM D5185(m) 0	<b>2</b>	1	1
Sulfur	ppm	ASTM D5185(m)	<b>79</b>	83	72
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	<1	<1

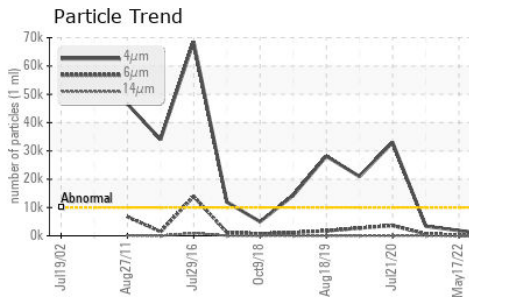
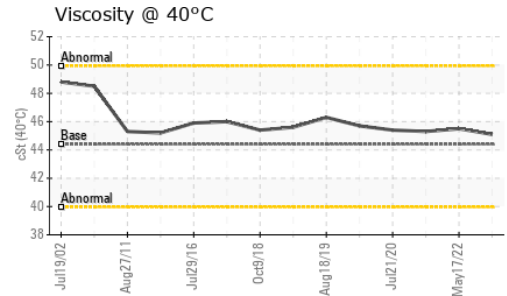
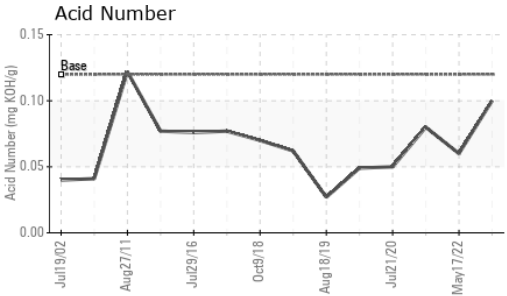
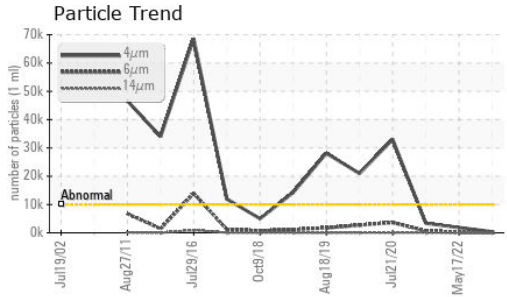
### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >15	<b>5</b>	6	6
Sodium	ppm	ASTM D5185(m)	<b>0</b>	0	0
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1

### FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>372</b>	1853	3388
Particles >6µm	ASTM D7647	>2500	<b>71</b>	141	694
Particles >14µm	ASTM D7647	>160	<b>5</b>	5	38
Particles >21µm	ASTM D7647	>40	<b>2</b>	1	7
Particles >38µm	ASTM D7647	>10	<b>1</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>1</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>20/18/14	<b>16/13/10</b>	18/14/10	19/17/12

# OIL ANALYSIS REPORT

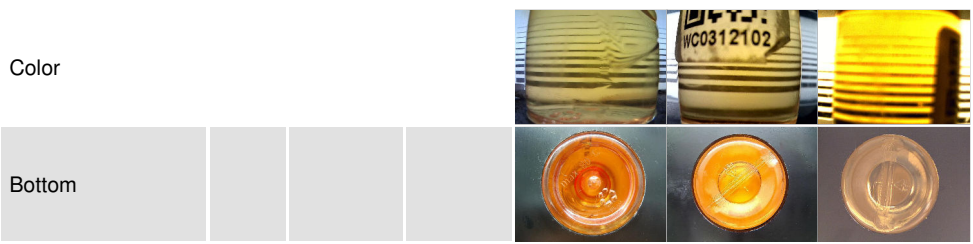


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.12	<b>0.10</b>	0.06	0.08

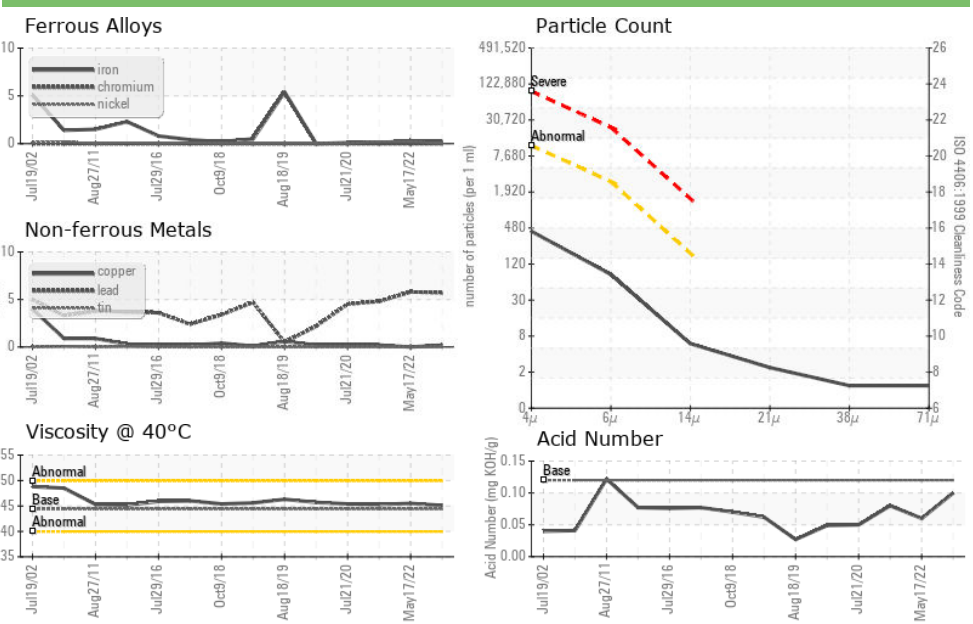
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	44.4	<b>45.1</b>	45.5	45.3

### SAMPLE IMAGES



### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0792140 **Received** : 21 Dec 2023  
**Lab Number** : 02604654 **Diagnosed** : 27 Dec 2023  
**Unique Number** : 5697739 **Diagnostician** : Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: TAN Man )

**Nalcor Energy - Churchill Falls**  
 PO Box 310  
 Churchill Falls, NL  
 CA A0R 1A0  
 Contact: Robert Noel  
 robertnoel@nlh.nl.ca  
 T: (709)925-8294  
 F: (709)925-8220

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.