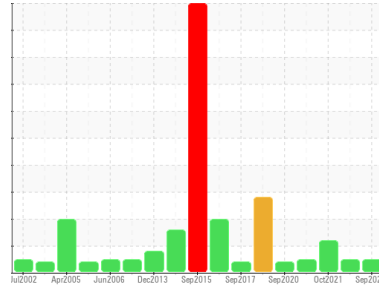




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



## Machine Id **A3 - Turbine (Lower) Guide Bearing**

Component  
**Lower Bearing**

Fluid  
**PETRO CANADA TURBOFLO 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>WC0786893</b>	WC0679962	WC
Sample Date	Client Info	<b>05 Sep 2023</b>	05 Aug 2022	17 Oct 2021
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>NORMAL</b>	NORMAL	ATTENTION

### 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>&lt;1</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>1</b>	7	4
Copper	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m) >20	<b>0</b>	0	<1
Antimony	ppm	ASTM D5185(m)	<b>0</b>	0	<1
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) 0	<b>0</b>	0	<1
Barium	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m) 0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m) 0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	<1	0
Calcium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	0	<1
Phosphorus	ppm	ASTM D5185(m) 110	<b>3</b>	5	4
Zinc	ppm	ASTM D5185(m) 0.0	<b>1</b>	1	2
Sulfur	ppm	ASTM D5185(m)	<b>142</b>	151	145
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>6</b>	10	14
Sodium	ppm	ASTM D5185(m)	<b>0</b>	<1	0
Potassium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	<1	<1

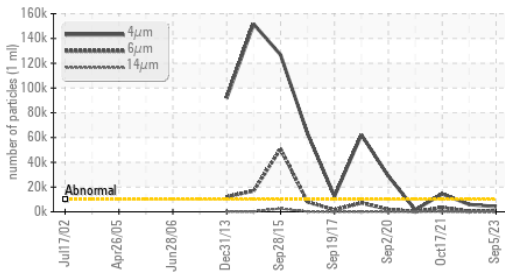
### FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >10000	<b>4133</b>	5944	▲ 14385
Particles >6µm	ASTM D7647 >2500	<b>541</b>	437	▲ 3465
Particles >14µm	ASTM D7647 >160	<b>24</b>	12	▲ 205
Particles >21µm	ASTM D7647 >40	<b>4</b>	3	28
Particles >38µm	ASTM D7647 >10	<b>0</b>	1	0
Particles >71µm	ASTM D7647 >3	<b>0</b>	1	0
Oil Cleanliness	ISO 4406 (c) >20/18/14	<b>19/16/12</b>	20/16/11	▲ 21/19/15

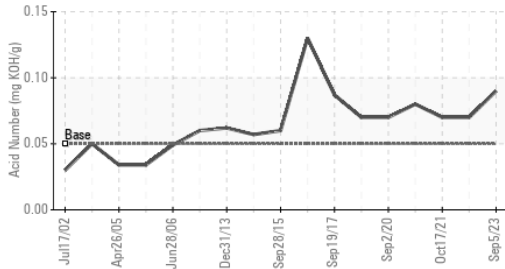


# OIL ANALYSIS REPORT

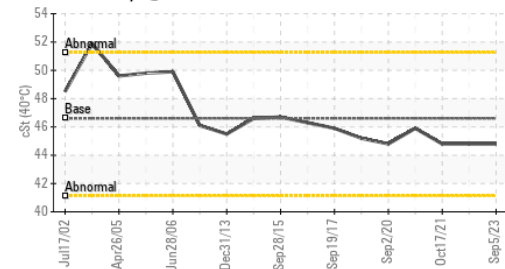
Particle Trend



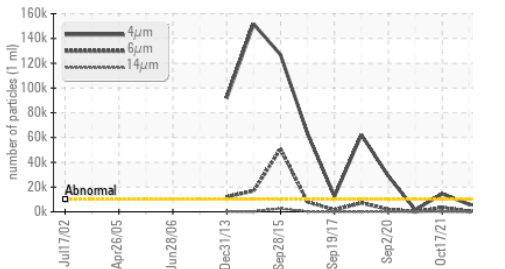
Acid Number



Viscosity @ 40°C



Particle Trend



**FLUID DEGRADATION** method limit/base current history1 history2

Acid Number (AN) mg KOH/g ASTM D974\* 0.05 **0.09** 0.07 0.07

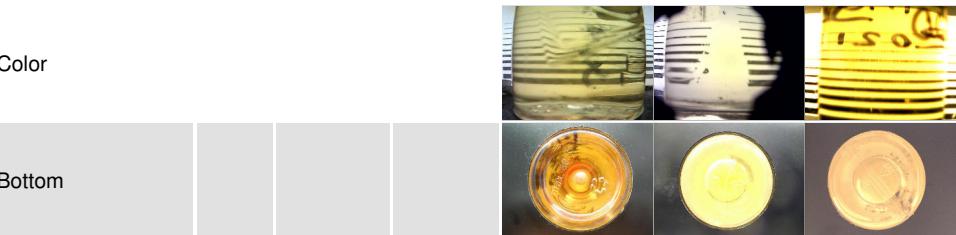
**VISUAL** method limit/base current history1 history2

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	VLITE
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

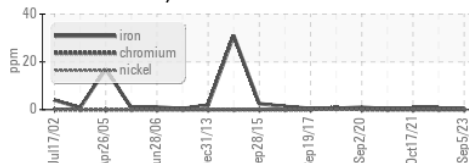
Visc @ 40°C cSt ASTM D7279(m) 46.6 **44.8** 44.8 44.8

**SAMPLE IMAGES** method limit/base current history1 history2

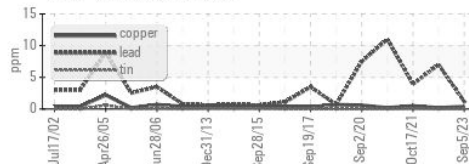


**GRAPHS**

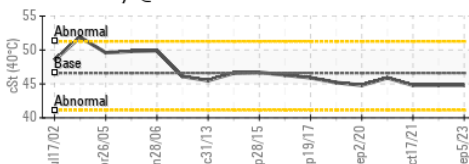
Ferrous Alloys



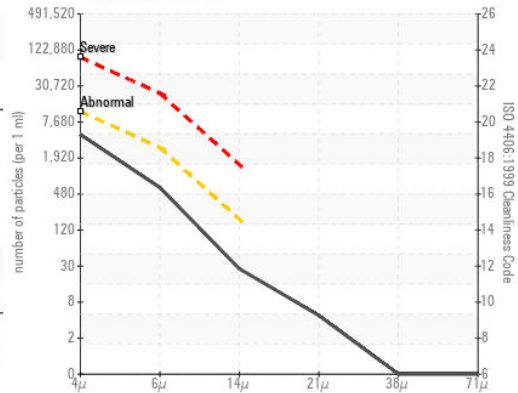
Non-ferrous Metals



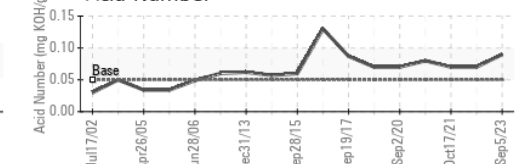
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
 Sample No. : WC0786893 Recieved : 21 Dec 2023  
 Lab Number : 02604651 Diagnosed : 27 Dec 2023  
 Unique Number : 5697736 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.