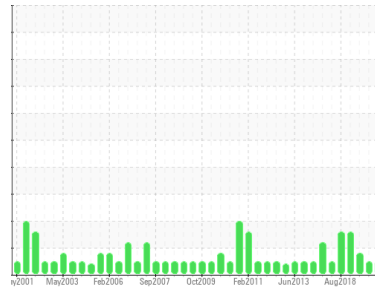




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**CAT - UNIT 1 GOVERNOR (S/N 304351)**

Component  
**Hydraulic System**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.  
NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### 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>WC0762257</b>	WC969423	WC934773
Sample Date	Client Info		<b>11 Jul 2023</b>	02 Nov 2021	19 Feb 2019
Machine Age	hrs	Client Info	<b>107946</b>	0	0
Oil Age	hrs	Client Info	<b>107946</b>	0	0
Oil Changed		Client Info	<b>N/A</b>	N/A	Not Changd
Sample Status			<b>NORMAL</b>	NORMAL	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Chromium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	0
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>0</b>	0	0
Lead	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	0
Tin	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
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	<1

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0
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	<1
Magnesium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Calcium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Phosphorus	ppm	ASTM D5185(m)	3	<b>4</b>	3	4
Zinc	ppm	ASTM D5185(m)	0	<b>3</b>	2	2
Sulfur	ppm	ASTM D5185(m)		<b>92</b>	61	48
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	0

## CONTAMINANTS

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

## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>240</b>	1333	▲ 11148
Particles >6µm	ASTM D7647	>1300	<b>101</b>	564	▲ 1344
Particles >14µm	ASTM D7647	>160	<b>14</b>	94	115
Particles >21µm	ASTM D7647	>40	<b>4</b>	29	44
Particles >38µm	ASTM D7647	>10	<b>1</b>	2	2
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>15/14/11</b>	18/16/14	▲ 21/18/14

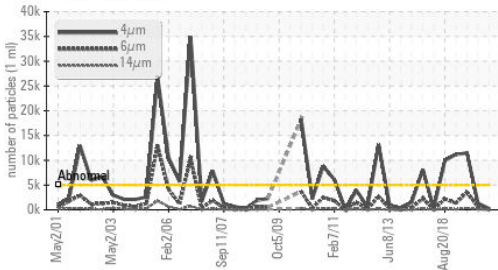
## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D974*	0.12	<b>0.08</b>	0.10	0.103

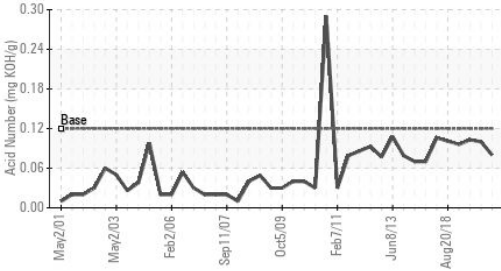


# OIL ANALYSIS REPORT

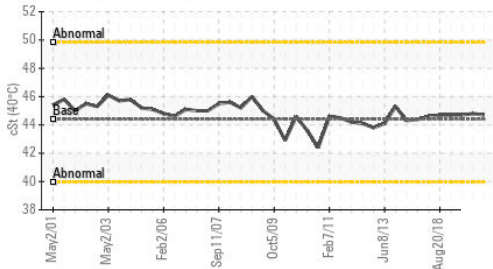
Particle Trend



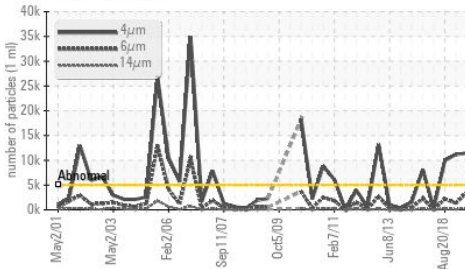
Acid Number



Viscosity @ 40°C



Particle Trend



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	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*	>0.05	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

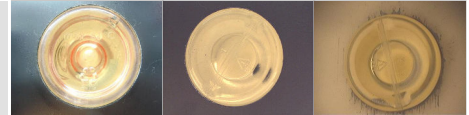
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	44.4	44.7	44.8

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color

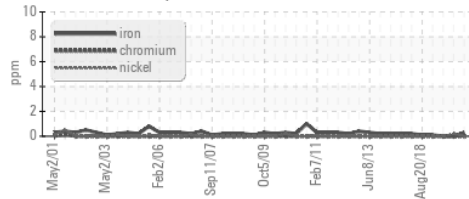


Bottom

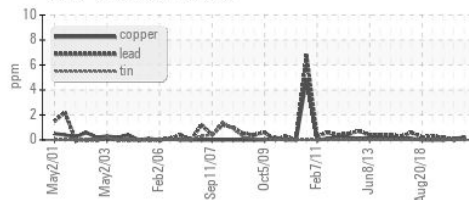


## GRAPHS

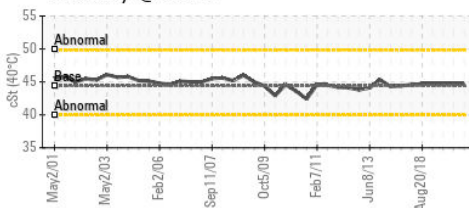
Ferrous Alloys



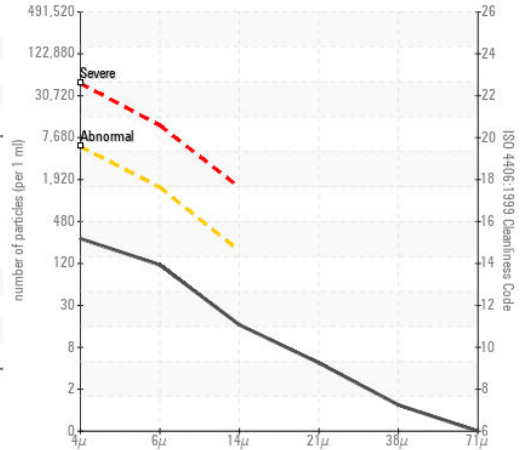
Non-ferrous Metals



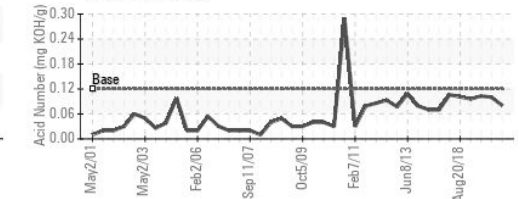
Viscosity @ 40°C



Particle Count



Acid Number



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 NEWFOUNDLAND & LABRADOR HYDRO  
**Sample No.** : WC0762257 **Received** : 24 Aug 2023  
**Lab Number** : 02578110 **Diagnosed** : 25 Aug 2023  
**Unique Number** : 5631170 **Diagnostician** : Wes Davis  
**Test Package** : IND 2 ( Additional Tests: TAN Man )

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MILLTOWN, BAY D'ESPOIR, NL  
CA A0H 1W0

Contact: Matthew Lambert  
matthewlambert@nlh.nl.ca

T: (709)882-3126  
F: (709)882-3161

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.