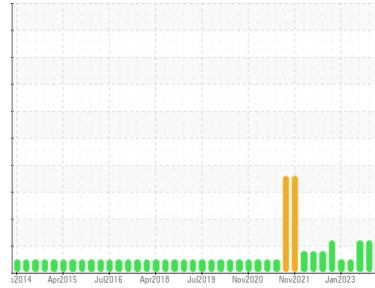




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area  
**SAB2**  
Machine Id  
**SAB2 G11**  
Component  
**Turbine Bearing**  
Fluid  
**ESSO TERESSO ISO 46 (273 LTR)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### 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.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0801601</b>	WC0858058	WC0830358
Sample Date	Client Info		<b>07 Jan 2024</b>	25 Oct 2023	31 Jul 2023
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>ABNORMAL</b>	ATTENTION	ABNORMAL

## 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)	>7	<b>1</b>	1	2
Chromium	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	0	0
Lead	ppm	ASTM D5185(m)	>33	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	<1
Tin	ppm	ASTM D5185(m)	>6	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	0	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)	0	<b>0</b>	<1	0
Barium	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	<1
Calcium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	1
Phosphorus	ppm	ASTM D5185(m)	2.4	<b>0</b>	<1	<1
Zinc	ppm	ASTM D5185(m)	0	<b>4</b>	3	4
Sulfur	ppm	ASTM D5185(m)		<b>736</b>	686	775
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

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

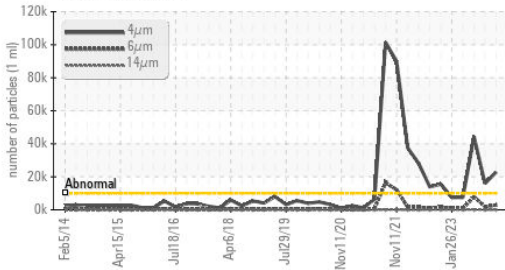
## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	<b>▲ 22797</b>	▲ 15979	▲ 44421
Particles >6µm	ASTM D7647	>1300	<b>▲ 2880</b>	▲ 1897	▲ 7924
Particles >14µm	ASTM D7647	>160	<b>25</b>	17	95
Particles >21µm	ASTM D7647	>40	<b>3</b>	3	12
Particles >38µm	ASTM D7647	>10	<b>0</b>	1	1
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	1
Oil Cleanliness	ISO 4406 (c)	>20/17/14	<b>▲ 22/19/12</b>	▲ 21/18/11	▲ 23/20/14

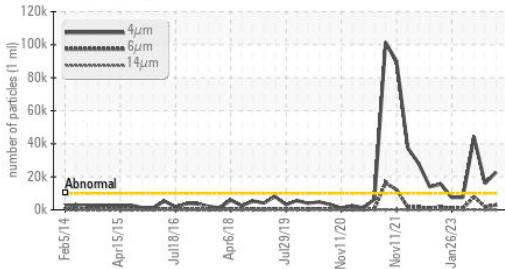


# OIL ANALYSIS REPORT

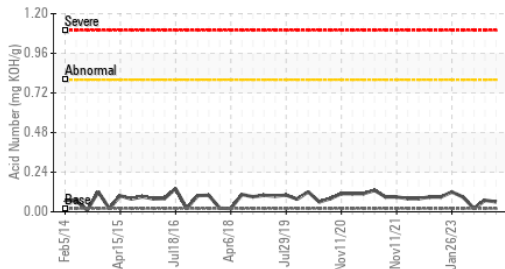
### Particle Trend



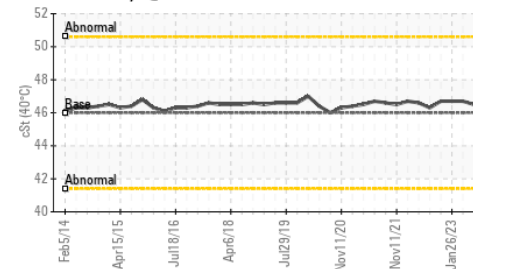
### Particle Trend



### Acid Number



### Viscosity @ 40°C



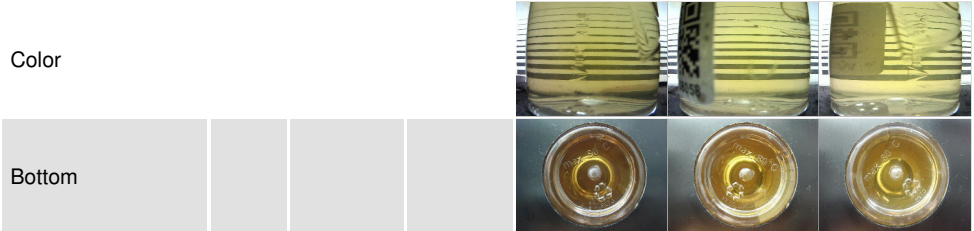
### FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN) mg KOH/g	ASTM D974*	0.02	<b>0.06</b>	0.07	0.02	
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

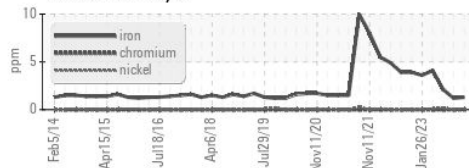
method	limit/base	current	history1	history2	
Visc @ 40°C cSt	ASTM D7279(m)	46	<b>46.4</b>	46.5	46.5

### SAMPLE IMAGES

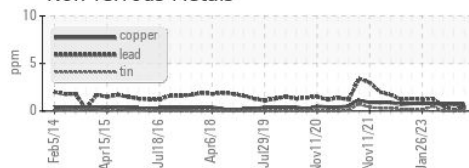


### GRAPHS

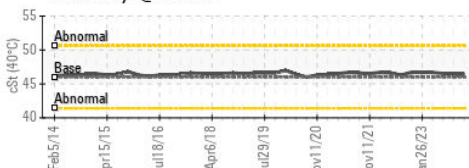
#### Ferrous Alloys



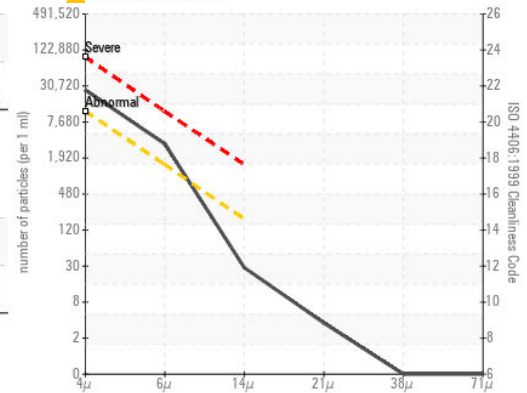
#### Non-ferrous Metals



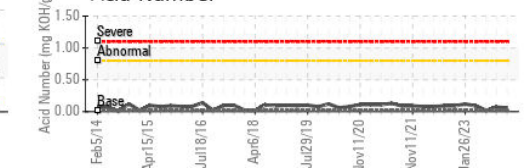
#### Viscosity @ 40°C



#### Particle Count



#### Acid Number



ISO 17025:2017  
Accredited  
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
 Sample No. : WC0801601      Received : 08 Jan 2024  
 Lab Number : **02607122**      Diagnosed : 09 Jan 2024  
 Unique Number : 5708208      Diagnostician : Kevin Marson  
 Test Package : IND 2 ( Additional Tests: TAN Man )

**Ontario Power Generation**  
 NIAGARA PLANT GROUP, 14000 NIAGARA PKWY  
 NIAGARA ON THE LAKE, ON  
 CA L0S 1J0  
 Contact: Alex Courtemanche  
 alex.courtemanche@opg.com  
 T: (905)357-0322  
 F: (905)357-6558

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.