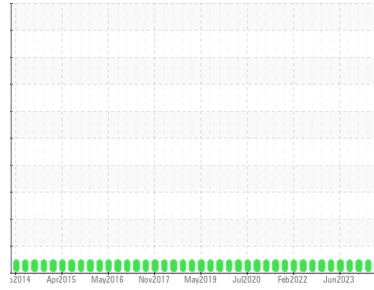




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**SAB2**  
 Machine Id  
**SAB2 G21**  
 Component  
**Turbine Bearing**  
 Fluid  
**ESSO TERESSO ISO 46 (273 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>WC0890863</b>   | WC0801612   | WC0858093   |
| Sample Date   | Client Info |             | <b>27 Mar 2024</b> | 07 Jan 2024 | 25 Oct 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>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) >7  | <b>&lt;1</b> | <1       | <1       |
| Chromium  | ppm    | ASTM D5185(m) >2  | <b>0</b>     | 0        | 0        |
| Nickel    | ppm    | ASTM D5185(m) >2  | <b>0</b>     | <1       | <1       |
| Titanium  | ppm    | ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Silver    | ppm    | ASTM D5185(m)     | <b>0</b>     | 0        | <1       |
| Aluminum  | ppm    | ASTM D5185(m) >2  | <b>0</b>     | <1       | 0        |
| Lead      | ppm    | ASTM D5185(m) >33 | <b>&lt;1</b> | 2        | 2        |
| 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>&lt;1</b> | <1       | <1       |
| Barium     | ppm    | ASTM D5185(m)     | <b>0</b>     | 0        | <1       |
| 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>0</b>     | 0        | 0        |
| Calcium    | ppm    | ASTM D5185(m) 0   | <b>0</b>     | <1       | <1       |
| Phosphorus | ppm    | ASTM D5185(m) 2.4 | <b>1</b>     | <1       | 1        |
| Zinc       | ppm    | ASTM D5185(m) 0   | <b>2</b>     | 2        | 2        |
| Sulfur     | ppm    | ASTM D5185(m)     | <b>1299</b>  | 1404     | 1330     |
| Lithium    | ppm    | ASTM D5185(m)     | <b>&lt;1</b> | <1       | <1       |

## CONTAMINANTS

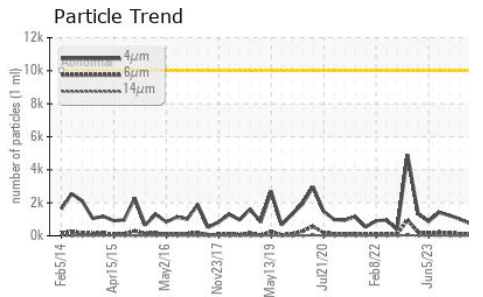
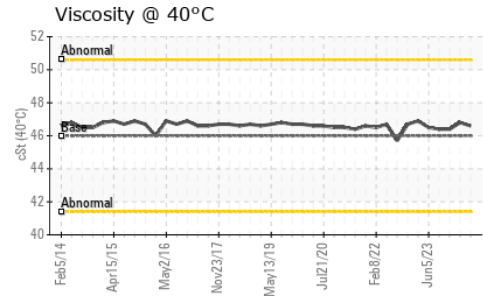
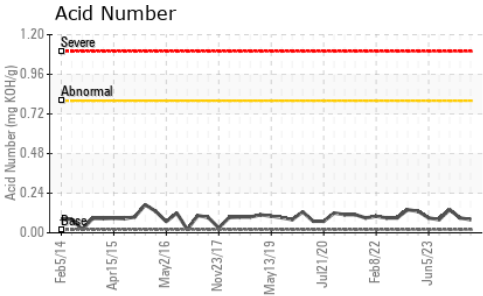
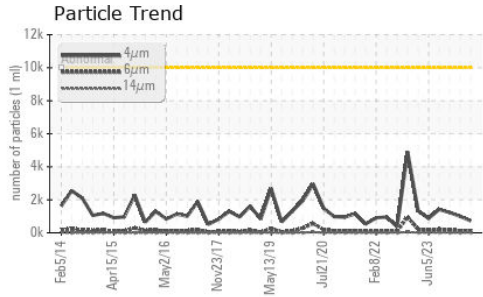
|           | method | limit/base        | current      | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185(m) >20 | <b>8</b>     | 9        | 10       |
| Sodium    | ppm    | ASTM D5185(m)     | <b>0</b>     | 0        | 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>724</b>      | 1000     | 1231     |
| Particles >6µm  | ASTM D7647   | >1300      | <b>125</b>      | 136      | 163      |
| Particles >14µm | ASTM D7647   | >160       | <b>8</b>        | 7        | 6        |
| Particles >21µm | ASTM D7647   | >40        | <b>2</b>        | 5        | 2        |
| Particles >38µm | ASTM D7647   | >10        | <b>1</b>        | 2        | 1        |
| Particles >71µm | ASTM D7647   | >3         | <b>1</b>        | 1        | 1        |
| Oil Cleanliness | ISO 4406 (c) | >20/17/14  | <b>17/14/10</b> | 17/14/10 | 17/15/10 |



# OIL ANALYSIS REPORT



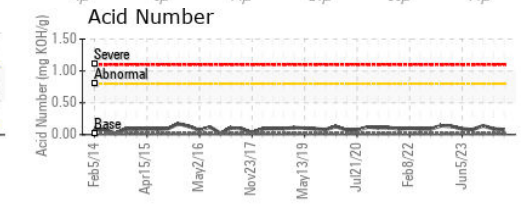
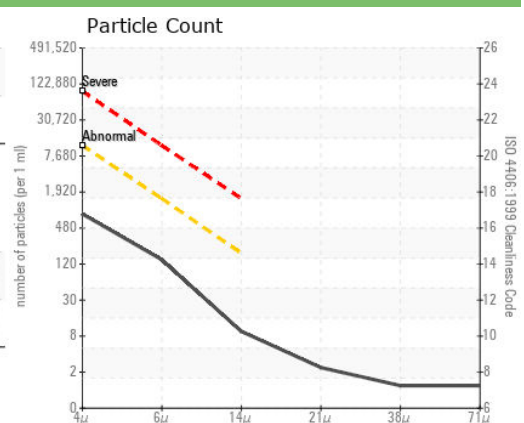
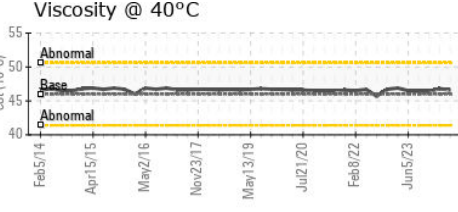
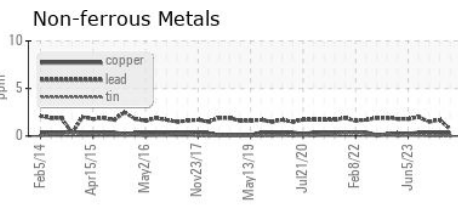
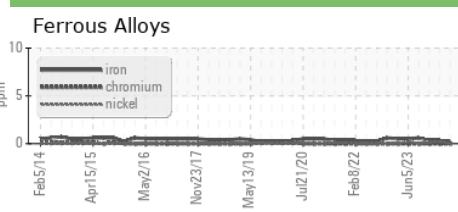
| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D974* | 0.02       | <b>0.08</b> | 0.09     | 0.14     |

| 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>46.6</b> | 46.8     | 46.4     |

| SAMPLE IMAGES |  | method | limit/base | current | history1 | history2 |
|---------------|--|--------|------------|---------|----------|----------|
| Color         |  |        |            |         |          |          |
| Bottom        |  |        |            |         |          |          |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0890863  
**Lab Number** : 02625274  
**Unique Number** : 5750393  
**Test Package** : IND 2 ( Additional Tests: TAN Man )

**Ontario Power Generation**  
 NIAGARA PLANT GROUP, 14000 NIAGARA PKWY  
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 Contact: Alex Courtemanche  
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 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.