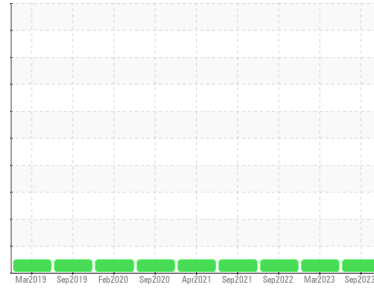




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**SILO 1 DISCHARGE SCREW CONVEYOR 4 GEARBOX (S/N 0-37200-S004)**

Component  
**Gearbox**

Fluid  
**GEAR OIL (PAO) ISO 150 (37 LTR)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION |             | method      | limit/base | current            | history1    | history2    |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number      | Client Info |             |            | <b>WC0851409</b>   | WC0794196   | WC0736562   |
| Sample Date        | Client Info |             |            | <b>10 Sep 2023</b> | 08 Mar 2023 | 08 Sep 2022 |
| 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 |        | >0.2       | <b>NEG</b> | NEG      | NEG      |

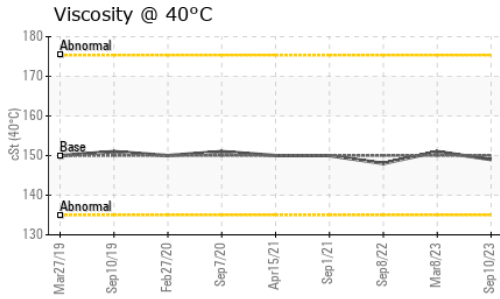
| WEAR METALS |     | method        | limit/base | current      | history1 | history2 |
|-------------|-----|---------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185(m) | >200       | <b>4</b>     | 3        | 4        |
| Chromium    | ppm | ASTM D5185(m) | >15        | <b>0</b>     | 0        | 0        |
| Nickel      | ppm | ASTM D5185(m) | >15        | <b>&lt;1</b> | <1       | 0        |
| Titanium    | ppm | ASTM D5185(m) |            | <b>0</b>     | 0        | 0        |
| Silver      | ppm | ASTM D5185(m) |            | <b>&lt;1</b> | 0        | 0        |
| Aluminum    | ppm | ASTM D5185(m) | >25        | <b>0</b>     | 0        | 0        |
| Lead        | ppm | ASTM D5185(m) | >100       | <b>0</b>     | 0        | 0        |
| Copper      | ppm | ASTM D5185(m) | >200       | <b>&lt;1</b> | 0        | 0        |
| Tin         | ppm | ASTM D5185(m) | >25        | <b>0</b>     | <1       | 0        |
| Antimony    | ppm | ASTM D5185(m) | >5         | <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) | 25         | <b>20</b>    | 23       | 17       |
| Barium     | ppm | ASTM D5185(m) | 12         | <b>&lt;1</b> | 0        | <1       |
| Molybdenum | ppm | ASTM D5185(m) | 5          | <b>0</b>     | 0        | 0        |
| Manganese  | ppm | ASTM D5185(m) |            | <b>0</b>     | 0        | 0        |
| Magnesium  | ppm | ASTM D5185(m) | 25         | <b>0</b>     | 0        | 0        |
| Calcium    | ppm | ASTM D5185(m) | 25         | <b>17</b>    | 13       | 48       |
| Phosphorus | ppm | ASTM D5185(m) | 375        | <b>410</b>   | 456      | 455      |
| Zinc       | ppm | ASTM D5185(m) | 25         | <b>5</b>     | 3        | 18       |
| Sulfur     | ppm | ASTM D5185(m) | 4900       | <b>5239</b>  | 5449     | 5365     |
| Lithium    | ppm | ASTM D5185(m) |            | <b>&lt;1</b> | <1       | <1       |

| CONTAMINANTS |     | method        | limit/base | current      | history1 | history2 |
|--------------|-----|---------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185(m) | >50        | <b>7</b>     | 7        | 7        |
| Sodium       | ppm | ASTM D5185(m) |            | <b>&lt;1</b> | <1       | <1       |
| Potassium    | ppm | ASTM D5185(m) | >20        | <b>0</b>     | 0        | 0        |



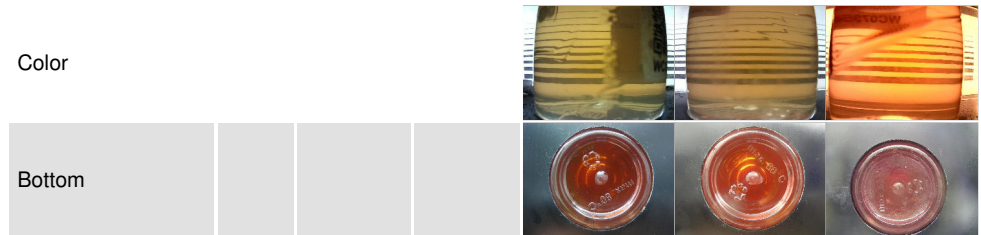
# OIL ANALYSIS REPORT



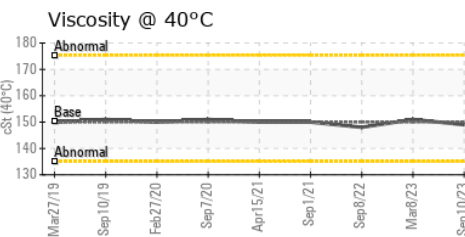
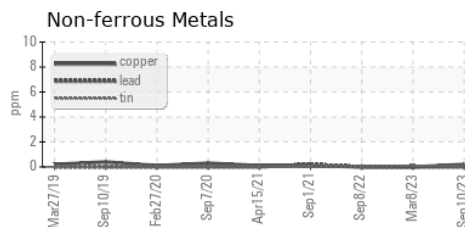
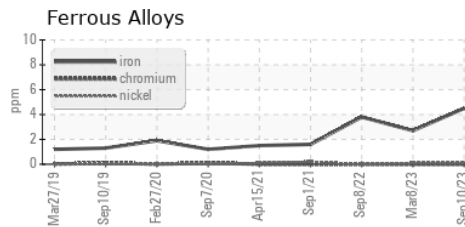
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | Visual*    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | Visual*    | NONE    | NONE     | NONE     |
| 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*    | >0.2    | NEG      | NEG      |
| Free Water       | scalar | Visual*    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base    | current | history1   | history2 |     |
|------------------|--------|---------------|---------|------------|----------|-----|
| Visc @ 40°C      | cSt    | ASTM D7279(m) | 150     | <b>149</b> | 151      | 148 |

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



## GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
 Sample No. : WC0851409  
 Lab Number : **02604232**  
 Unique Number : 5697317  
 Test Package : IND 1

Received : 19 Dec 2023  
 Diagnosed : 19 Dec 2023  
 Diagnostician : Wes Davis

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.

**Ontario Power Generation**  
 ATIKOKAN T.G.S., BOX 1900  
 ATIKOKAN, ON  
 CA P0T 1C0  
 Contact: Dale Anthony  
 dale.anthony@opg.com  
 T:  
 F: (807)597-1198