



# OIL ANALYSIS REPORT

|                 |        |
|-----------------|--------|
| WEAR            | NORMAL |
| CONTAMINATION   | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id  
**2ROXBOROUGH**  
 Component  
**Diesel Engine**  
 Fluid  
**MOBIL DELVAC 1200 SP15W40 (--- GAL)**

## RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0910661</b>   | WC0817452   | WC0555526   |
| Sample Date    |     | Client Info |           | <b>08 May 2024</b> | 16 Jan 2024 | 11 Nov 2021 |
| Machine Age    | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR

All component wear rates are normal.

|              |        |               |      |              |     |     |
|--------------|--------|---------------|------|--------------|-----|-----|
| Iron         | ppm    | ASTM D5185(m) | >100 | <b>1</b>     | 1   | 2   |
| Chromium     | ppm    | ASTM D5185(m) | >20  | <b>0</b>     | 0   | 0   |
| Nickel       | ppm    | ASTM D5185(m) | >4   | <b>0</b>     | <1  | 0   |
| Titanium     | ppm    | ASTM D5185(m) |      | <b>0</b>     | 0   | 0   |
| Silver       | ppm    | ASTM D5185(m) | >3   | <b>0</b>     | 0   | 0   |
| Aluminum     | ppm    | ASTM D5185(m) | >20  | <b>&lt;1</b> | 1   | <1  |
| Lead         | ppm    | ASTM D5185(m) | >40  | <b>0</b>     | <1  | <1  |
| Copper       | ppm    | ASTM D5185(m) | >330 | <b>&lt;1</b> | <1  | <1  |
| Tin          | ppm    | ASTM D5185(m) | >15  | <b>0</b>     | 0   | 0   |
| Vanadium     | ppm    | ASTM D5185(m) |      | <b>0</b>     | 0   | 0   |
| White Metal  | scalar | Visual*       | NONE | <b>NONE</b>  | --- | --- |
| Yellow Metal | scalar | Visual*       | NONE | <b>NONE</b>  | --- | --- |

## CONTAMINATION

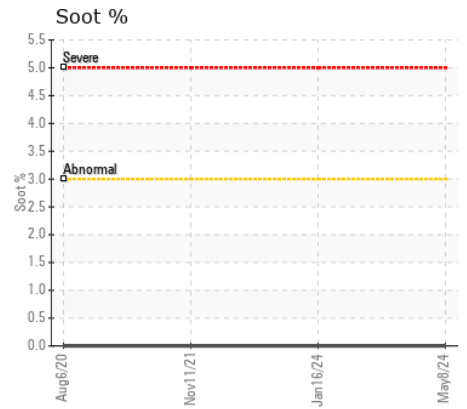
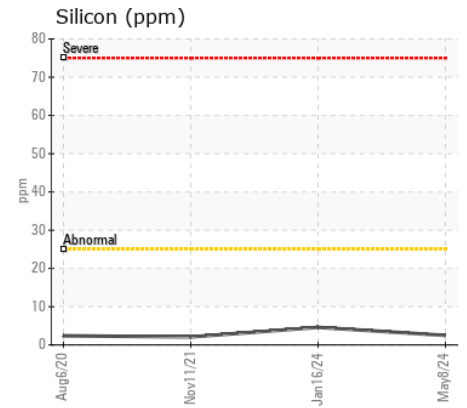
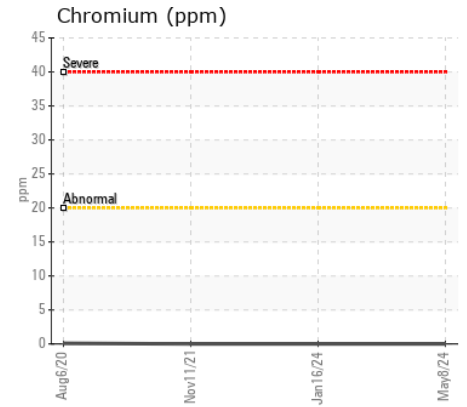
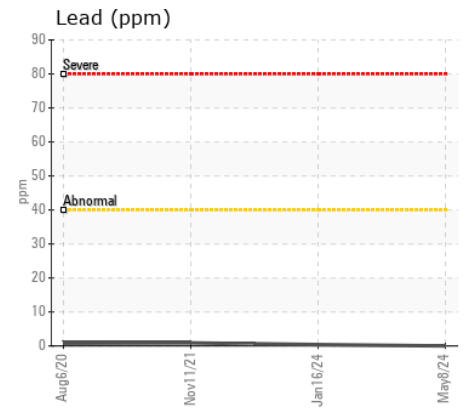
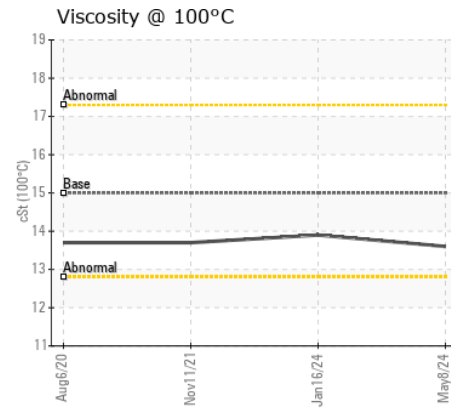
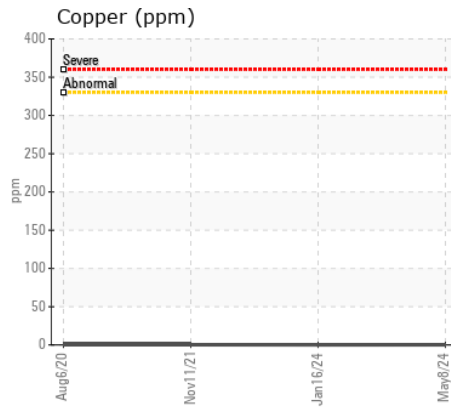
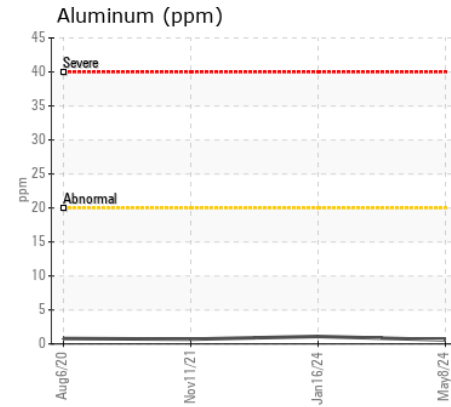
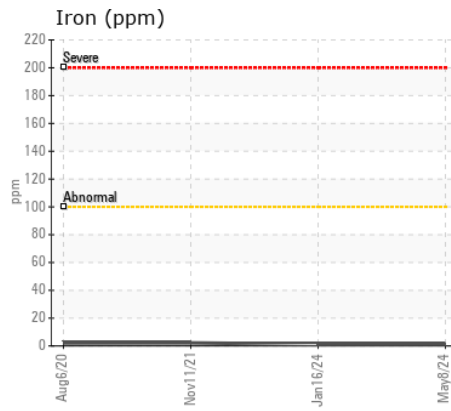
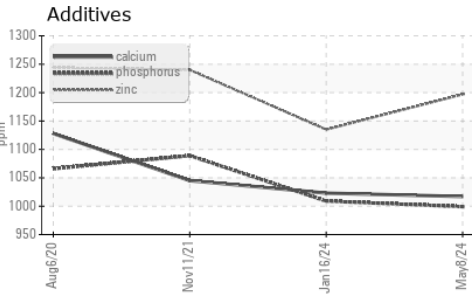
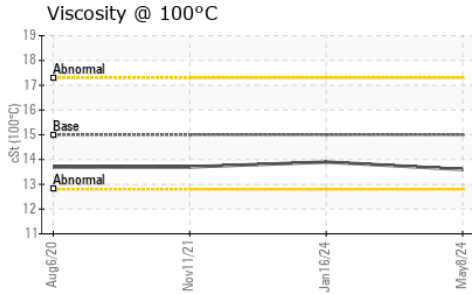
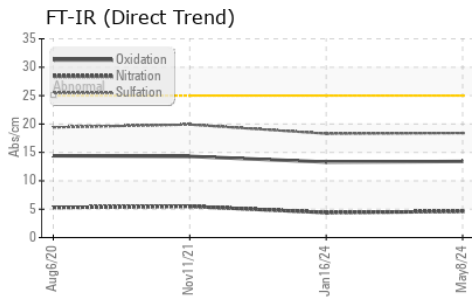
There is no indication of any contamination in the oil.

|                  |          |               |       |                |       |       |
|------------------|----------|---------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185(m) | >25   | <b>2</b>       | 5     | 2     |
| Potassium        | ppm      | ASTM D5185(m) | >20   | <b>&lt;1</b>   | <1    | <1    |
| Fuel             |          | WC Method     | >5    | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method     | >0.2  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method     |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | ASTM D7844*   | >3    | <b>0</b>       | 0     | 0     |
| Nitration        | Abs/cm   | ASTM D7624*   | >20   | <b>4.6</b>     | 4.4   | 5.5   |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30   | <b>18.4</b>    | 18.3  | 19.9  |
| Silt             | scalar   | Visual*       | NONE  | <b>NONE</b>    | ---   | ---   |
| Debris           | scalar   | Visual*       | NONE  | <b>NONE</b>    | ---   | ---   |
| Sand/Dirt        | scalar   | Visual*       | NONE  | <b>NONE</b>    | ---   | ---   |
| Appearance       | scalar   | Visual*       | NORML | <b>NORML</b>   | ---   | ---   |
| Odor             | scalar   | Visual*       | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar   | Visual*       | >0.2  | <b>NEG</b>     | NEG   | NEG   |

## FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

|              |          |               |      |             |      |      |
|--------------|----------|---------------|------|-------------|------|------|
| Sodium       | ppm      | ASTM D5185(m) |      | <b>1</b>    | 1    | 1    |
| Boron        | ppm      | ASTM D5185(m) |      | <b>2</b>    | 1    | 3    |
| Barium       | ppm      | ASTM D5185(m) |      | <b>0</b>    | 0    | 0    |
| Molybdenum   | ppm      | ASTM D5185(m) |      | <b>58</b>   | 59   | 61   |
| Manganese    | ppm      | ASTM D5185(m) |      | <b>0</b>    | 0    | <1   |
| Magnesium    | ppm      | ASTM D5185(m) |      | <b>958</b>  | 959  | 1046 |
| Calcium      | ppm      | ASTM D5185(m) |      | <b>1017</b> | 1023 | 1045 |
| Phosphorus   | ppm      | ASTM D5185(m) |      | <b>999</b>  | 1009 | 1089 |
| Zinc         | ppm      | ASTM D5185(m) |      | <b>1197</b> | 1135 | 1240 |
| Sulfur       | ppm      | ASTM D5185(m) |      | <b>2768</b> | 2839 | 2804 |
| Oxidation    | Abs/.1mm | ASTM D7414*   | >25  | <b>13.4</b> | 13.3 | 14.3 |
| Visc @ 100°C | cSt      | ASTM D7279(m) | 15.0 | <b>13.6</b> | 13.9 | 13.7 |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0910661  
**Lab Number** : 02643136  
**Unique Number** : 5800675  
**Test Package** : MOB 1 ( Additional Tests: Visual )

**NORTHERN GENERATOR CO. LTD.**  
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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.