



## RECOMMENDED ACTIONS

| Action               | Status | Date | Done By | Description   |
|----------------------|--------|------|---------|---|
| Water Drain-off      | ---    | ---  | ?       | We advise that you follow the water drain-off procedure for this component.   |
| Resample             | ---    | ---  | ?       | We recommend an early resample to monitor this condition.   |
| Alert                | ---    | ---  | ?       | Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. |
| Information Required | ---    | ---  | ?       | NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.  |
| Check Breathers      | ---    | ---  | ?       | The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.  |
| Check Water Access   | ---    | ---  | ?       | We advise that you check for the source of water entry.   |
| Check Seals          | ---    | ---  | ?       | Check seals and/or filters for points of contaminant entry.   |

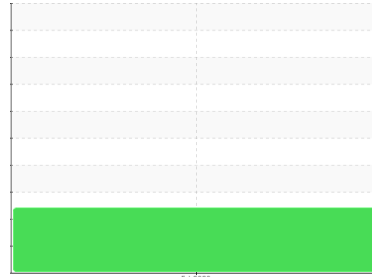
## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend

**WATER**



Machine Id  
**TC02 10 INCH**  
 Component  
**Gearbox**  
 Fluid  
**GEAR OIL ISO 220 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you follow the water drain-off procedure for this component. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL ISO 220. Please confirm. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### ▲ Contamination

Free water present.

### Fluid Condition

The oil viscosity is higher than typical. 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>WC</b>          | ---      | ---      |
| Sample Date   | Client Info     | <b>05 Feb 2023</b> | ---      | ---      |
| Machine Age   | hrs Client Info | <b>0</b>           | ---      | ---      |
| Oil Age       | hrs Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info     | <b>N/A</b>         | ---      | ---      |
| Sample Status |                 | <b>ABNORMAL</b>    | ---      | ---      |

## WEAR METALS

| method    | limit/base             | current      | history1 | history2 |
|-----------|------------------------|--------------|----------|----------|
| PQ        | ASTM D8184*            | <b>0</b>     | ---      | ---      |
| Iron      | ppm ASTM D5185(m) >200 | <b>39</b>    | ---      | ---      |
| Chromium  | ppm ASTM D5185(m) >15  | <b>0</b>     | ---      | ---      |
| Nickel    | ppm ASTM D5185(m) >15  | <b>&lt;1</b> | ---      | ---      |
| Titanium  | ppm ASTM D5185(m)      | <b>0</b>     | ---      | ---      |
| Silver    | ppm ASTM D5185(m)      | <b>0</b>     | ---      | ---      |
| Aluminum  | ppm ASTM D5185(m) >25  | <b>2</b>     | ---      | ---      |
| Lead      | ppm ASTM D5185(m) >100 | <b>1</b>     | ---      | ---      |
| Copper    | ppm ASTM D5185(m) >200 | <b>4</b>     | ---      | ---      |
| Tin       | ppm ASTM D5185(m) >25  | <b>0</b>     | ---      | ---      |
| Antimony  | ppm ASTM D5185(m) >5   | <b>0</b>     | ---      | ---      |
| Vanadium  | ppm ASTM D5185(m)      | <b>0</b>     | ---      | ---      |
| Beryllium | ppm ASTM D5185(m)      | <b>0</b>     | ---      | ---      |
| Cadmium   | ppm ASTM D5185(m)      | <b>0</b>     | ---      | ---      |

## ADDITIVES

| method     | limit/base              | current      | history1 | history2 |
|------------|-------------------------|--------------|----------|----------|
| Boron      | ppm ASTM D5185(m) 50    | <b>2</b>     | ---      | ---      |
| Barium     | ppm ASTM D5185(m) 15    | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm ASTM D5185(m) 15    | <b>20</b>    | ---      | ---      |
| Manganese  | ppm ASTM D5185(m)       | <b>1</b>     | ---      | ---      |
| Magnesium  | ppm ASTM D5185(m) 50    | <b>2</b>     | ---      | ---      |
| Calcium    | ppm ASTM D5185(m) 50    | <b>75</b>    | ---      | ---      |
| Phosphorus | ppm ASTM D5185(m) 350   | <b>315</b>   | ---      | ---      |
| Zinc       | ppm ASTM D5185(m) 100   | <b>51</b>    | ---      | ---      |
| Sulfur     | ppm ASTM D5185(m) 12500 | <b>8005</b>  | ---      | ---      |
| Lithium    | ppm ASTM D5185(m)       | <b>&lt;1</b> | ---      | ---      |

## CONTAMINANTS

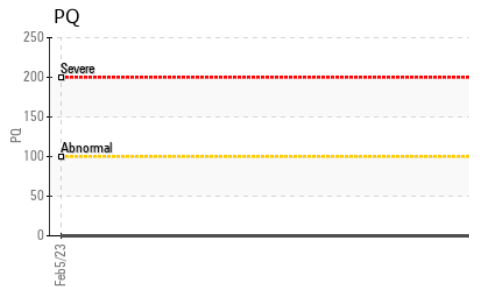
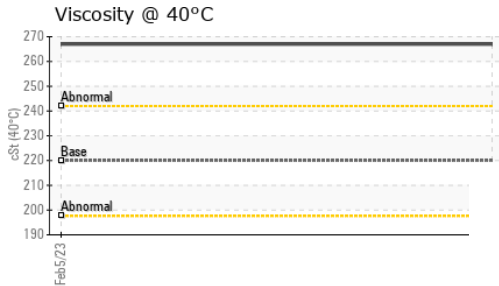
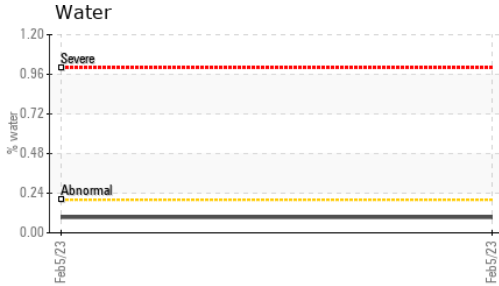
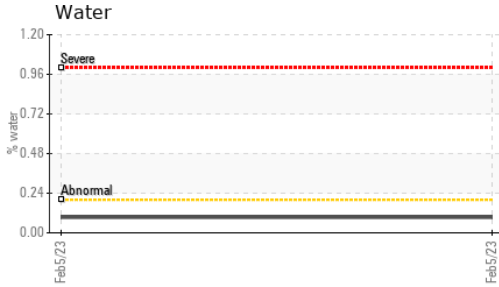
| method    | limit/base            | current      | history1 | history2 |
|-----------|-----------------------|--------------|----------|----------|
| Silicon   | ppm ASTM D5185(m) >50 | <b>3</b>     | ---      | ---      |
| Sodium    | ppm ASTM D5185(m)     | <b>1</b>     | ---      | ---      |
| Potassium | ppm ASTM D5185(m) >20 | <b>0</b>     | ---      | ---      |
| Water     | % ASTM D6304* >0.2    | <b>0.094</b> | ---      | ---      |
| ppm Water | ppm ASTM D6304* >2000 | <b>943.2</b> | ---      | ---      |

## FLUID DEGRADATION

| method           | limit/base               | current     | history1 | history2 |
|------------------|--------------------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g ASTM D974* 0.85 | <b>0.27</b> | ---      | ---      |



# OIL ANALYSIS REPORT



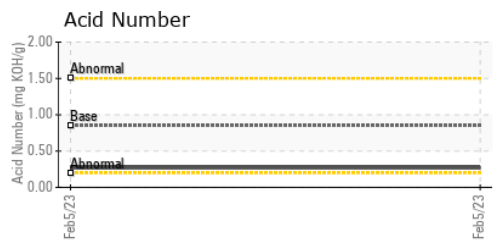
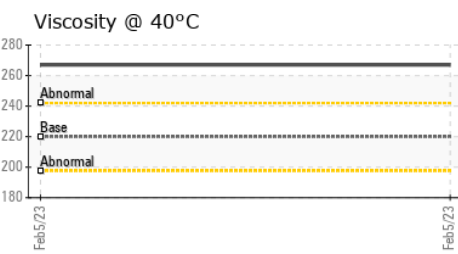
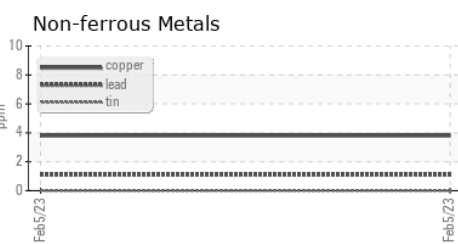
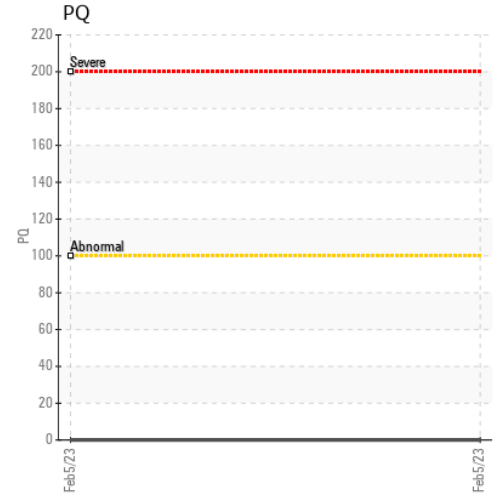
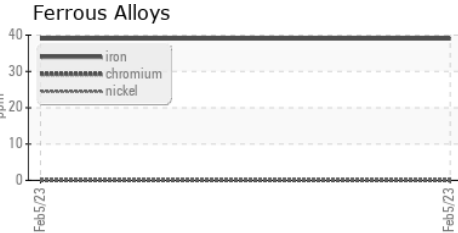
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | Visual*    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | Visual*    | NONE    | NONE     | ---      |
| Precipitate      | scalar | Visual*    | NONE    | NONE     | ---      |
| Silt             | scalar | Visual*    | NONE    | NONE     | ---      |
| Debris           | scalar | Visual*    | NONE    | NONE     | ---      |
| Sand/Dirt        | scalar | Visual*    | NONE    | NONE     | ---      |
| Appearance       | scalar | Visual*    | NORML   | ▲ HAZY   | ---      |
| Odor             | scalar | Visual*    | NORML   | NORML    | ---      |
| Emulsified Water | scalar | Visual*    | >0.2    | .2%      | ---      |
| Free Water       | scalar | Visual*    |         | ▲ 1%     | ---      |

| FLUID PROPERTIES | method | limit/base    | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D7279(m) | 220     | 267      | ---      |

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

|        |  |          |          |
|--------|--|----------|----------|
| Color  |  | no image | no image |
| Bottom |  | no image | no image |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC **Received** : 06 Feb 2023  
**Lab Number** : 02537670 **Diagnosed** : 09 Feb 2023  
**Unique Number** : 5526670 **Diagnostician** : Kevin Marson  
**Test Package** : IND 2 ( Additional Tests: KF, TAN Man )

**Goodyear Napanee**  
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 F: (613)354-9377

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.