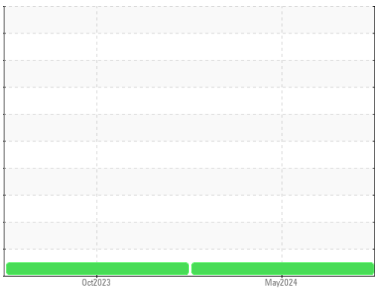
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## 23-CD-1 TIPPLE EXIT
Component
**Gearbox**
Fluid
**SHELL OMALA S2 GX 220 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

**Wear**
All component wear rates are normal.

**Contamination**
There is no indication of any contamination in the oil.

**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 | | **WC0820684** | WC0837960 | --- |
| Sample Date | | Client Info | | **02 May 2024** | 31 Oct 2023 | --- |
| Machine Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **Not Changd** | N/A | --- |
| Sample Status | | | | **NORMAL** | NORMAL | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.2 | **NEG** | NEG | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184* | | **0** | 0 | --- |
| Iron | ppm | ASTM D5185(m) | >200 | **56** | 50 | --- |
| Chromium | ppm | ASTM D5185(m) | >15 | **0** | <1 | --- |
| Nickel | ppm | ASTM D5185(m) | >15 | **<1** | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185(m) | >25 | **<1** | 1 | --- |
| Lead | ppm | ASTM D5185(m) | >100 | **0** | <1 | --- |
| Copper | ppm | ASTM D5185(m) | >200 | **<1** | <1 | --- |
| Tin | ppm | ASTM D5185(m) | >25 | **0** | 0 | --- |
| Antimony | ppm | ASTM D5185(m) | >5 | **0** | 0 | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 6.2 | **12** | 11 | --- |
| Barium | ppm | ASTM D5185(m) | 0.0 | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | 0 | **0** | 0 | --- |
| Manganese | ppm | ASTM D5185(m) | | **<1** | <1 | --- |
| Magnesium | ppm | ASTM D5185(m) | 0 | **3** | 2 | --- |
| Calcium | ppm | ASTM D5185(m) | 0.0 | **15** | 13 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 290 | **276** | 269 | --- |
| Zinc | ppm | ASTM D5185(m) | 3.8 | **2** | 2 | --- |
| Sulfur | ppm | ASTM D5185(m) | 8167 | **9903** | 10359 | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >50 | **8** | 7 | --- |
| Sodium | ppm | ASTM D5185(m) | | **<1** | 1 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | <1 | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | | **0.51** | 0.74 | --- |

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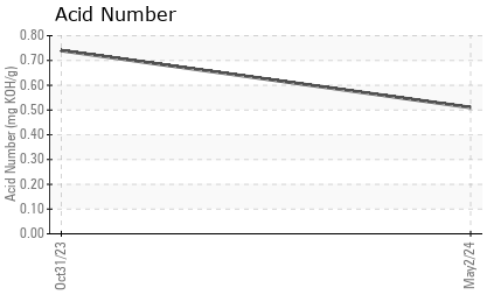
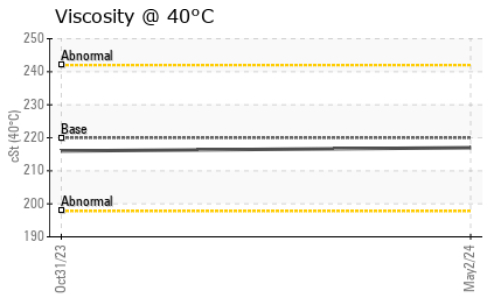
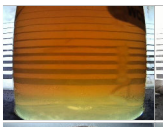
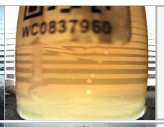


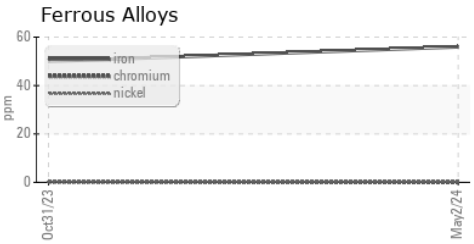


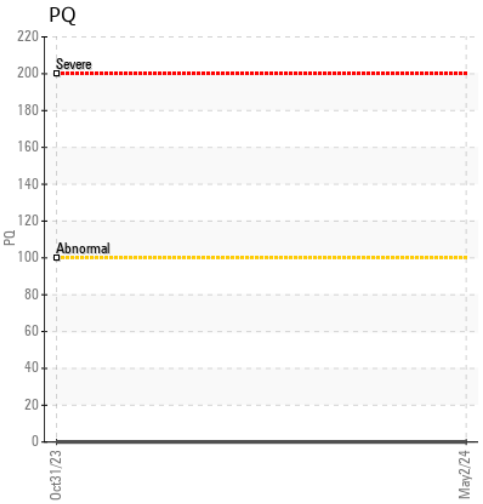
| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Silt | 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 | --- |

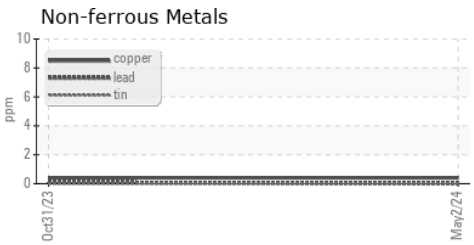
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 220 | **217** | 216 | --- |

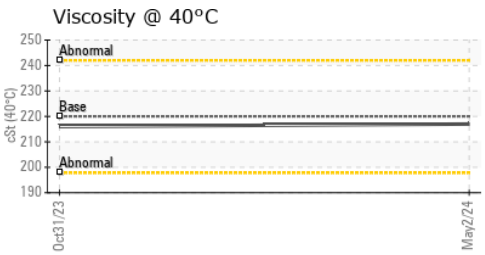
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  |  | *no image* |
| Bottom | | |  |  | *no image* |

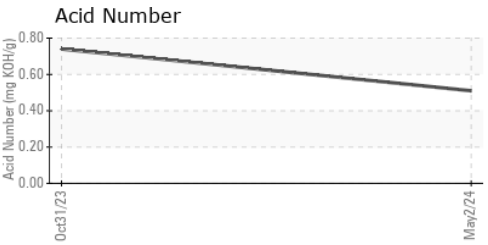
## GRAPHS




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC0820684
**Lab Number** : 02640855
**Unique Number** : 5798394
**Test Package** : IND 2

**Received** : 10 Jun 2024
**Tested** : 11 Jun 2024
**Diagnosed** : 11 Jun 2024 - 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.*

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