

## **OIL ANALYSIS REPORT**

Sample Rating Trend

**WEAR** 

### TERTIARY MILL DISCHARGE Component

Bearing Fluid GEAR OIL ISO 220 (--- GAL)

#### DIAGNOSIS

#### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

#### A Wear

Tin ppm levels are abnormal. Antimony ppm levels are noted. Bearing wear is indicated.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

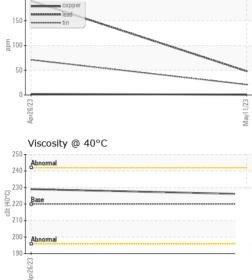
| SAMPLE INFORM  | <b>IATION</b> | method        | limit/base        | current                              | history1    | history2 |
|--|---------------|---------------|-------------------|--------------------------------------|-------------|----------|
| Sample Number  |               | Client Info   |                   | WC0798655                            | WC0798651   |          |
| Sample Date  |               | Client Info   |                   | 11 May 2023                          | 26 Apr 2023 |          |
| Machine Age  | hrs           | Client Info   |                   | 0                                    | 0           |          |
| Oil Age  | hrs           | Client Info   |                   | 0                                    | 0           |          |
| Oil Changed  |               | Client Info   |                   | N/A                                  | N/A         |          |
| Sample Status  |               |               |                   | ABNORMAL                             | SEVERE      |          |
| WEAR METALS  |               | method        | limit/base        | current                              | history1    | history2 |
| Iron   | ppm           | ASTM D5185(m) | >200              | 9                                    | 33          |          |
| Chromium   | ppm           | ASTM D5185(m) | >5                | 0                                    | 0           |          |
| Nickel   | ppm           | ASTM D5185(m) | >5                | 0                                    | <1          |          |
| Titanium   | ppm           | ASTM D5185(m) | >5                | <1                                   | <1          |          |
| Silver   | ppm           | ASTM D5185(m) |                   | <1                                   | 0           |          |
| Aluminum   | ppm           | ASTM D5185(m) | >25               | 2                                    | 6           |          |
| Lead   | ppm           | ASTM D5185(m) | >50               | 48                                   | 190         |          |
| Copper   | ppm           | ASTM D5185(m) |                   | <1                                   | 2           |          |
| Tin  | ppm           | ASTM D5185(m) | >100              | <ul><li>&lt;1</li><li>▲ 21</li></ul> | <b>7</b> 1  |          |
| Antimony   | ppm           | ASTM D5185(m) |                   | ▲ 11                                 | ▲ 43        |          |
| Vanadium   | ppm           | ASTM D5185(m) |                   | 0                                    | 0           |          |
| Beryllium  | ppm           | ASTM D5185(m) |                   | 0                                    | 0           |          |
| Cadmium  |               | ASTM D5185(m) |                   | 0                                    | 0           |          |
|  | ppm           |               | line it de energi |                                      | -           |          |
| ADDITIVES  |               | method        | limit/base        | current                              | history1    | history2 |
| Boron  | ppm           | ASTM D5185(m) | 50                | 2                                    | 4           |          |
| Barium   | ppm           | ASTM D5185(m) | 15                | 0                                    | 0           |          |
| Molybdenum   | ppm           | ASTM D5185(m) | 15                | 0                                    | <1          |          |
| Manganese  | ppm           | ASTM D5185(m) |                   | 0                                    | <1          |          |
| Magnesium  | ppm           | ASTM D5185(m) | 50                | <1                                   | 3           |          |
| Calcium  | ppm           | ASTM D5185(m) | 50                | 2                                    | 17          |          |
| Phosphorus   | ppm           | ASTM D5185(m) | 350               | 260                                  | 298         |          |
| Zinc   | ppm           | ASTM D5185(m) | 100               | 8                                    | 13          |          |
| Sulfur   | ppm           | ASTM D5185(m) | 12500             | 9491                                 | 9579        |          |
| Lithium  | ppm           | ASTM D5185(m) |                   | 2                                    | 6           |          |
| CONTAMINANTS   |               | method        | limit/base        | current                              | history1    | history2 |
| Silicon  | ppm           | ASTM D5185(m) | >25               | 7                                    | 21          |          |
| Sodium   |               | ASTM D5185(m) | 20                | 1                                    | 4           |          |
| Potassium  | ppm           | ASTM D5185(m) | >20               | 2                                    | 5           |          |
|  | ppm           | . ,           |                   |                                      |             |          |
| 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*       | >0.1              | NEG                                  | NEG         |          |
| Free Water   | scalar        | Visual*       |                   | NEG                                  | NEG         |          |
| :12:02) Rev: 1 Contact/Location: Tony Tees - KIR370k |               |               |                   |                                      |             |          |

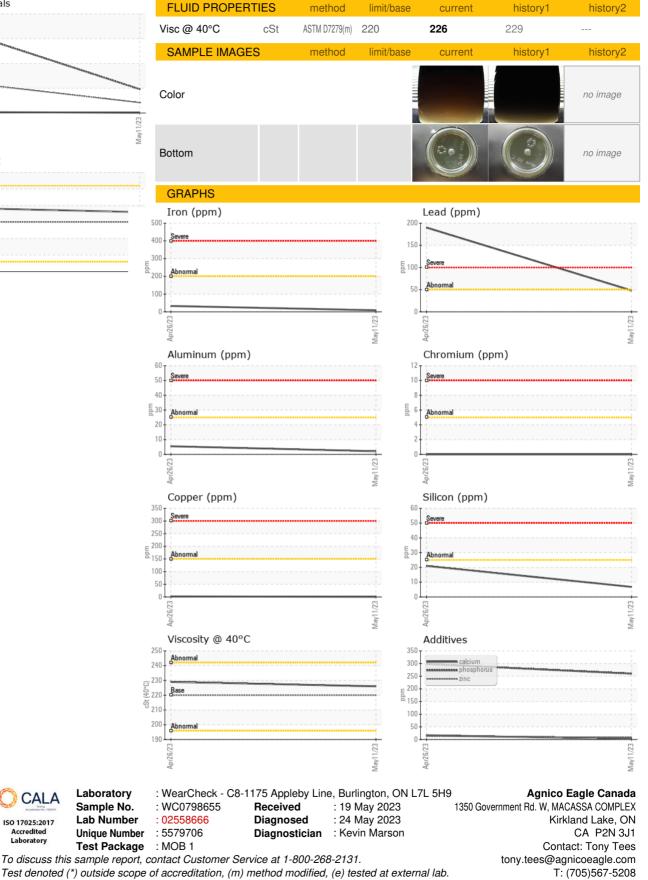
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Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

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