

# **PROBLEM SUMMARY**

### Caster/Segment Drives Machine Id B - Strand 2 - 1 Gear Box Roll # 80 Top Component

Gearbox Fluid SHELL OMALA 220 (45 GAL)

COMPONENT CONDITION SUMMARY



No relevant graphs to display

RECOMMENDATION

Technician was unable to draw sample from the machine. Suspect the unit has a very low oil level. We recommend that you check the oil level and top up as required.

| PROBLEMATIC TEST RESULTS |        |         |       |        |        |        |  |
|--------------------------|--------|---------|-------|--------|--------|--------|--|
| Sample Status            |        |         |       | SEVERE | NORMAL | NORMAL |  |
| Appearance               | scalar | Visual* | NORML | NOOIL  | NORML  | NORML  |  |

Customer Id: LEWBOSC Sample No.: WC0898683 Lab Number: 02608070 Test Package: IND 2



To manage this report scan the QR code

*To discuss the diagnosis or test data:* Kevin Marson +1 (289)291-4644 x4644 Kevin.Marson@wearcheck.com

To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 gloria.gonzalez@wearcheck.com There are no recommended actions for this sample.

#### HISTORICAL DIAGNOSIS

#### 30 May 2023 Diag: Bill Quesnel

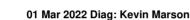


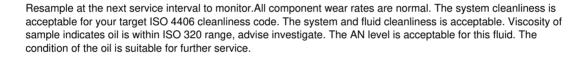
Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. Viscosity of sample indicates oil is within ISO 320 range, advise investigate. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

#### 13 Sep 2022 Diag: Kevin Marson



Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The oil viscosity is higher than typical. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.









view report

#### Report Id: LEWBOSC [WCAMIS] 02608070 (Generated: 01/11/2024 09:40:44) Rev: 1



## **OIL ANALYSIS REPORT**

## Area Caster/Segment Drives Machine Id B - Strand 2 - 1 Gear Box Roll # 80 Top

Gearbox

Fluid SHELL OMALA 220 (45 GAL)

### DIAGNOSIS

#### Recommendation

Technician was unable to draw sample from the machine. Suspect the unit has a very low oil level. We recommend that you check the oil level and top up as required.

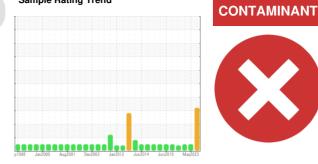
### Wear

{not applicable}

Contamination {not applicable}

Fluid Condition

{not applicable}



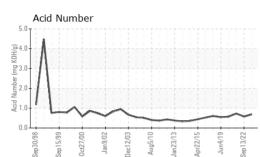
Sample Rating Trend

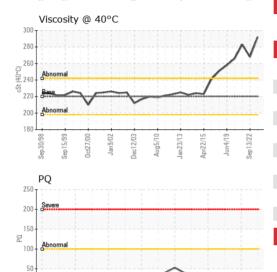
| SAMPLE INFORM | <b>IATION</b> | method        | limit/base | current     | history1    | history2    |
|---------------|---------------|---------------|------------|-------------|-------------|-------------|
| Sample Number |               | Client Info   |            | WC0898683   | WC0824372   | WC0743633   |
| Sample Date   |               | Client Info   |            | 10 Jan 2024 | 30 May 2023 | 13 Sep 2022 |
| Machine Age   | hrs           | Client Info   |            | 0           | 0           | 0           |
| Oil Age       | hrs           | Client Info   |            | 0           | 0           | 0           |
| Oil Changed   |               | Client Info   |            | N/A         | N/A         | N/A         |
| Sample Status |               |               |            | SEVERE      | NORMAL      | NORMAL      |
| CONTAMINATIO  | N             | method        | limit/base | current     | history1    | history2    |
| Water         |               | WC Method     | >5         | NEG         | NEG         | NEG         |
| WEAR METALS   |               | method        | limit/base | current     | history1    | history2    |
| PQ            |               | ASTM D8184*   | >DFLT      |             | 0           | 0           |
| Iron          | ppm           | ASTM D5185(m) | >200       |             | 7           | 11          |
| Chromium      | ppm           | ASTM D5185(m) | >15        |             | 0           | 0           |
| Nickel        | ppm           | ASTM D5185(m) | >15        |             | 0           | <1          |
| Titanium      | ppm           | ASTM D5185(m) |            |             | 0           | 0           |
| Silver        | ppm           | ASTM D5185(m) |            |             | 0           | 0           |
| Aluminum      | ppm           | ASTM D5185(m) | >25        |             | 0           | <1          |
| Lead          | ppm           | ASTM D5185(m) | >100       |             | 0           | 0           |
| Copper        | ppm           | ASTM D5185(m) | >200       |             | 0           | 0           |
| Tin           | ppm           | ASTM D5185(m) | >25        |             | 0           | 0           |
| Antimony      | ppm           | ASTM D5185(m) | >5         |             | 0           | <1          |
| 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) | 4.4        |             | 18          | 16          |
| Barium        | ppm           | ASTM D5185(m) | 0.0        |             | 0           | 0           |
| Molybdenum    | ppm           | ASTM D5185(m) | 0          |             | 0           | 0           |
| Manganese     | ppm           | ASTM D5185(m) |            |             | 0           | <1          |
| Magnesium     | ppm           | ASTM D5185(m) | 0          |             | <1          | <1          |
| Calcium       | ppm           | ASTM D5185(m) | 0          |             | 0           | 2           |
| Phosphorus    | ppm           | ASTM D5185(m) | 215        |             | 358         | 335         |
| Zinc          | ppm           | ASTM D5185(m) | 0          |             | 1           | 1           |
| Sulfur        | ppm           | ASTM D5185(m) | 7039       |             | 9398        | 10502       |
| Lithium       | ppm           | ASTM D5185(m) |            |             | <1          | <1          |
| CONTAMINANTS  |               | method        | limit/base | current     | history1    | history2    |
| Silicon       | ppm           | ASTM D5185(m) | >50        |             | 2           | 1           |
| Sodium        | ppm           | ASTM D5185(m) |            |             | <1          | <1          |
| Potassium     | ppm           | ASTM D5185(m) | >20        |             | 0           | <1          |



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# **OIL ANALYSIS REPORT**





| FLUID CLEANLIN   | IESS     | method        | limit/base | current | history1 | history2 |
|------------------|----------|---------------|------------|---------|----------|----------|
| Particles >4µm   |          | ASTM D7647    |            |         | 114485   | 77215    |
| Particles >6µm   |          | ASTM D7647    | >10240000  |         | 24210    | 18603    |
| Particles >14µm  |          | ASTM D7647    | >10240000  |         | 1409     | 1214     |
| Particles >21µm  |          | ASTM D7647    | >2560000   |         | 333      | 317      |
| Particles >38µm  |          | ASTM D7647    | >640000    |         | 7        | 3        |
| Particles >71µm  |          | ASTM D7647    | >160000    |         | 1        | 0        |
| Oil Cleanliness  |          | ISO 4406 (c)  | >/30/30    |         | 24/22/18 | 23/21/17 |
| FLUID DEGRADA    | TION     | method        | limit/base | current | history1 | history2 |
| Acid Number (AN) | mg KOH/g | ASTM D974*    |            |         | 0.68     | 0.58     |
| VISUAL           |          | method        | limit/base | current | history1 | history2 |
| White Metal      | scalar   | Visual*       | NONE       | NONE    | VLITE    | NONE     |
| Yellow Metal     | scalar   | Visual*       | NONE       | NONE    | NONE     | NONE     |
| Precipitate      | scalar   | Visual*       | NONE       | NONE    | NONE     | NONE     |
| Silt             | scalar   | Visual*       | NONE       | NONE    | NONE     | NONE     |
| Debris           | scalar   | Visual*       | NONE       | NONE    | NONE     | NONE     |
| Sand/Dirt        | scalar   | Visual*       | NONE       | NOOIL   | NONE     | NONE     |
| Appearance       | scalar   | Visual*       | NORML      | NOOIL   | NORML    | NORML    |
| Odor             | scalar   | Visual*       | NORML      | NORML   | NORML    | NORML    |
| Emulsified Water | scalar   | Visual*       | >5         | NEG     | NEG      | NEG      |
| Free Water       | scalar   | Visual*       |            | NEG     | NEG      | NEG      |
| FLUID PROPERT    | IES      | method        | limit/base | current | history1 | history2 |
| Visc @ 40°C      | cSt      | ASTM D7279(m) | 220        |         | 292      | 268      |
| SAMPLE IMAGES    | 5        | method        | limit/base | current | history1 | history2 |
| Color            |          |               |            |         |          |          |
| Bottom           |          |               |            |         |          | (        |

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: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 STELCO - BOSC - Basic Oxygen Slab Caster Laboratory CALA Sample No. : WC0898683 Recieved : 10 Jan 2024 2330 Regional Road #3, Door: BOSC8 Lab Number : 02608070 Diagnosed : 11 Jan 2024 NANTICOKE, ON ISO 17025:2017 Accredited Laboratory Unique Number : 5709156 Diagnostician : Kevin Marson CA N0A 1L0 Test Package : IND 2 (Additional Tests: PQ, PrtCount) Contact: Tom Walden To discuss this sample report, contact Customer Service at 1-800-268-2131. Thomas.Walden@stelco.com Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (519)587-4541 Validity of results and interpretation are based on the sample and information as supplied. F: (519)587-7702