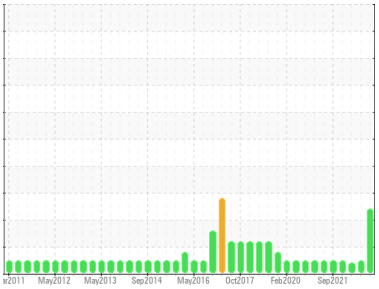
# PROBLEM SUMMARY

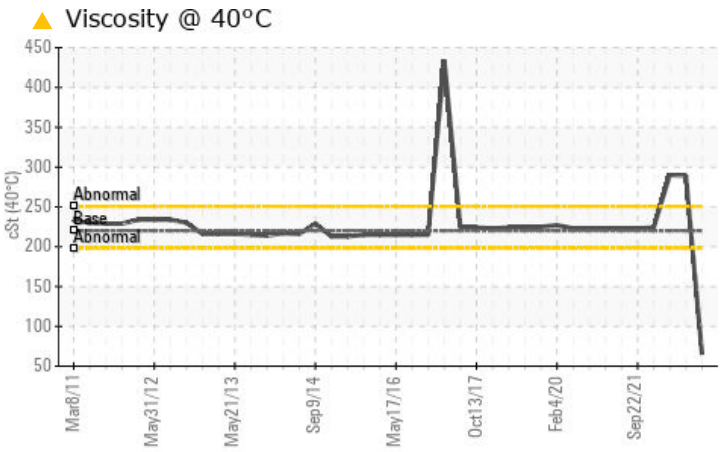
Sample Rating Trend

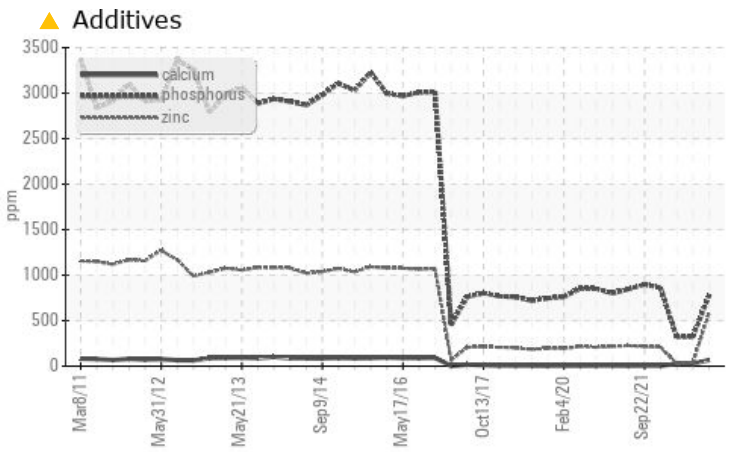


**VISCOSITY**

Area
**GC01**
Machine Id
**GC01 8 Inch Extruder GB**
Component
**Gearbox**
Fluid
**SHELL OMALA S2 G 220 (180 Kg)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

Due to this condition we recommend the following action... We advise an early resample to confirm this situation. NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | ABNORMAL | NORMAL | ABNORMAL |
|---|---|---|---|---|---|---|
| Magnesium | ppm | ASTM D5185(m) | 0 | ▲ **31** | 1 | 1 |
| Calcium | ppm | ASTM D5185(m) | 0 | ▲ **67** | 26 | 26 |
| Phosphorus | ppm | ASTM D5185(m) | 215 | ▲ **772** | 319 | 320 |
| Zinc | ppm | ASTM D5185(m) | 0 | ▲ **581** | 35 | 25 |
| Sulfur | ppm | ASTM D5185(m) | 7039 | ▲ **2287** | 8191 | 8253 |
| Visc @ 40°C | cSt | ASTM D7279(m) | 220 | ▲ **65.1** | 289 | ▲ 290 |


**Customer Id:** GOONAP
**Sample No.:** WC22128049
**Lab Number:** 02553775
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
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Kevin.Marson@wearcheck.com

*To change component or sample information:*
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

## RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Resample | --- | --- | ? | We advise an early resample to confirm this situation. |
| Alert | --- | --- | ? | NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit. |

## HISTORICAL DIAGNOSIS

**05 Feb 2023 Diag: Kevin Marson**

NORMAL

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. 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.

view report

**27 Oct 2022 Diag: Kevin Marson**

VISCOSITY

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. 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.

view report

**05 Nov 2021 Diag: Kevin Marson**

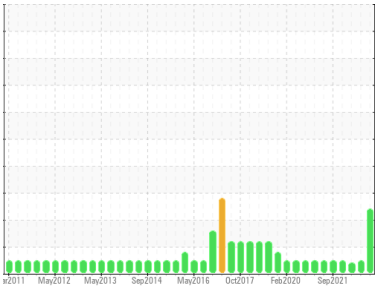
NORMAL

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

# OIL ANALYSIS REPORT

Sample Rating Trend



**VISCOSITY**

Area
**GC01**
Machine Id
## GC01 8 Inch Extruder GB
Component
**Gearbox**
Fluid
**SHELL OMALA S2 G 220 (180 Kg)**

## DIAGNOSIS

**Recommendation**

Due to this condition we recommend the following action... We advise an early resample to confirm this situation. NOTE: The current sample results do not match this units historical trend, indicating the sample may not be from this component/unit.

**Wear**

All component wear rates are normal.

**Contamination**

There is no indication of any contamination in the oil.

**Fluid Condition**

Viscosity of sample indicates oil is within ISO 68 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC22128049** | WC0754400 | WC0664089 |
| Sample Date | | Client Info | | **25 Apr 2023** | 05 Feb 2023 | 27 Oct 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 | | | | **ABNORMAL** | NORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184* | | **0** | 6 | 0 |
| Iron | ppm | ASTM D5185(m) | >200 | **37** | 41 | 28 |
| Chromium | ppm | ASTM D5185(m) | >15 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >15 | **2** | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | **<1** | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >25 | **10** | <1 | <1 |
| Lead | ppm | ASTM D5185(m) | >100 | **17** | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | >200 | **127** | 2 | 1 |
| Tin | ppm | ASTM D5185(m) | >25 | **<1** | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) | >5 | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | **<1** | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | **<1** | 0 | 0 |

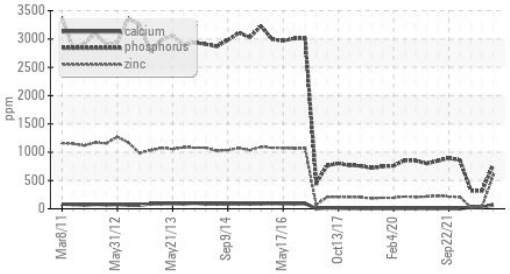
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 4.4 | **1** | 4 | 0 |
| Barium | ppm | ASTM D5185(m) | 0.0 | **<1** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | **0** | 34 | 13 |
| Manganese | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 0 | ▲ **31** | 1 | 1 |
| Calcium | ppm | ASTM D5185(m) | 0 | ▲ **67** | 26 | 26 |
| Phosphorus | ppm | ASTM D5185(m) | 215 | ▲ **772** | 319 | 320 |
| Zinc | ppm | ASTM D5185(m) | 0 | ▲ **581** | 35 | 25 |
| Sulfur | ppm | ASTM D5185(m) | 7039 | ▲ **2287** | 8191 | 8253 |
| Lithium | ppm | ASTM D5185(m) | | **<1** | 15 | 2 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >50 | **23** | 9 | 8 |
| Sodium | ppm | ASTM D5185(m) | | **6** | 1 | 1 |
| Potassium | ppm | ASTM D5185(m) | >20 | **1** | 4 | <1 |

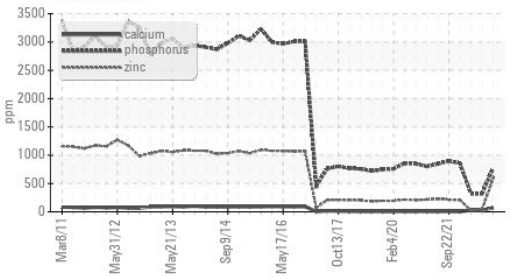
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | | **0.99** | 0.52 | 0.41 |

# OIL ANALYSIS REPORT

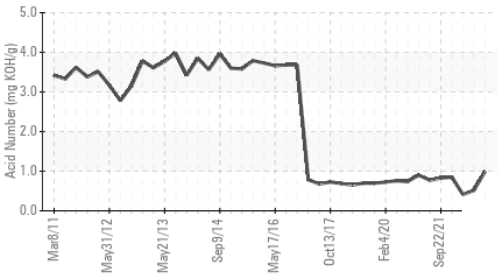
Additives



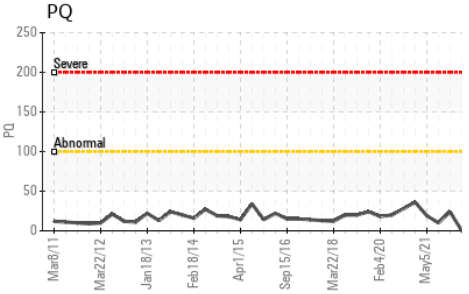

Additives




Acid Number




PQ



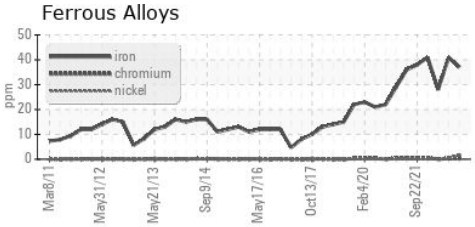

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | **NONE** | NONE | NONE |
|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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 220 | ▲ **65.1** | 289 | ▲ 290 |

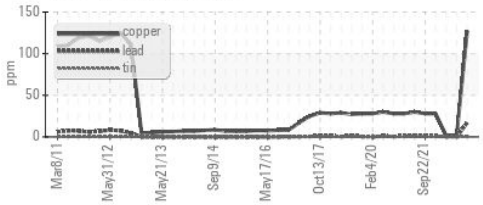
| SAMPLE IMAGES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Color | | | |  | | |
| Bottom | | | |  | | |

GRAPHS

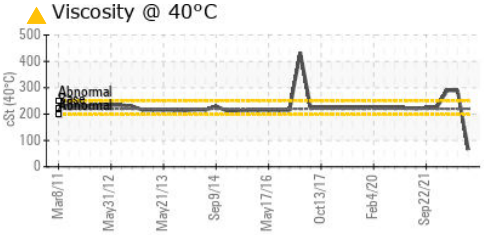
Ferrous Alloys



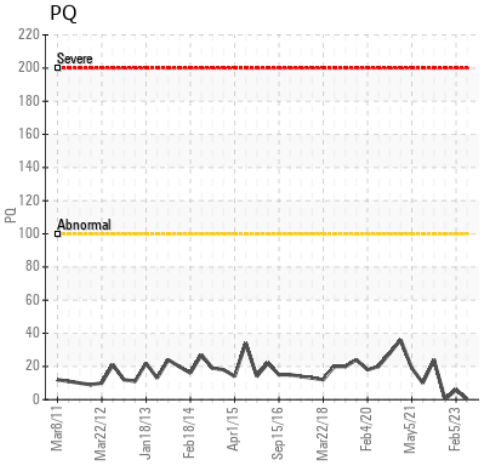

Non-ferrous Metals



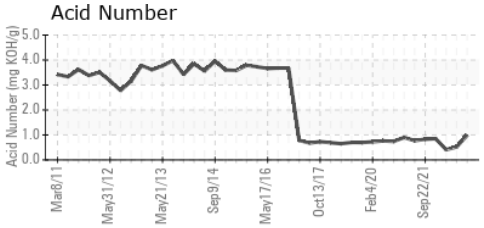

Viscosity @ 40°C




PQ




Acid Number




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC22128049 **Received** : 26 Apr 2023
**Lab Number** : 02553775 **Diagnosed** : 27 Apr 2023
**Unique Number** : 5566790 **Diagnostician** : Kevin Marson
**Test Package** : IND 2 ( Additional Tests: TAN Man )

*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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