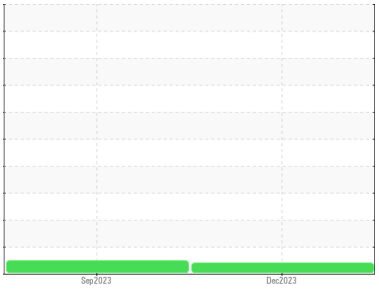
# OIL ANALYSIS REPORT

Machine Id
## EPIROC ST7 SCP209
Component
**Hydraulic System**
Fluid
**SHELL TELLUS S2 MX 46 (--- GAL)**

Sample Rating Trend




**VISCOSITY**

## DIAGNOSIS

**Recommendation**
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.

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

**Contamination**
There is no indication of any contamination in the component(unconfirmed).

**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 condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0886137** | WC0848151 | --- |
| Sample Date | | Client Info | | **24 Dec 2023** | 16 Sep 2023 | --- |
| Machine Age | hrs | Client Info | | **5831** | 5505 | --- |
| Oil Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **Changed** | N/A | --- |
| Sample Status | | | | **ABNORMAL** | NORMAL | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.1 | **NEG** | NEG | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >20 | **3** | 3 | --- |
| Chromium | ppm | ASTM D5185(m) | >10 | **0** | <1 | --- |
| Nickel | ppm | ASTM D5185(m) | >10 | **0** | <1 | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Silver | ppm | ASTM D5185(m) | | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185(m) | >10 | **1** | <1 | --- |
| Lead | ppm | ASTM D5185(m) | >10 | **0** | <1 | --- |
| Copper | ppm | ASTM D5185(m) | >75 | **<1** | <1 | --- |
| Tin | ppm | ASTM D5185(m) | >10 | **0** | 0 | --- |
| Antimony | ppm | ASTM D5185(m) | | **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) | 0 | **5** | 1 | --- |
| Barium | ppm | ASTM D5185(m) | 0 | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185(m) | 0 | **4** | 7 | --- |
| Manganese | ppm | ASTM D5185(m) | 0 | **0** | 0 | --- |
| Magnesium | ppm | ASTM D5185(m) | 70 | **53** | 109 | --- |
| Calcium | ppm | ASTM D5185(m) | 10 | **209** | 177 | --- |
| Phosphorus | ppm | ASTM D5185(m) | 300 | **390** | 455 | --- |
| Zinc | ppm | ASTM D5185(m) | 325 | **470** | 520 | --- |
| Sulfur | ppm | ASTM D5185(m) | 665 | **4961** | 2965 | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >20 | **2** | 1 | --- |
| Sodium | ppm | ASTM D5185(m) | | **<1** | <1 | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **0** | <1 | --- |

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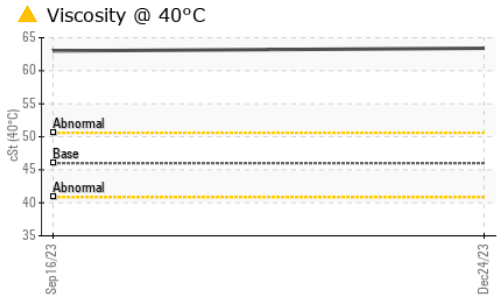
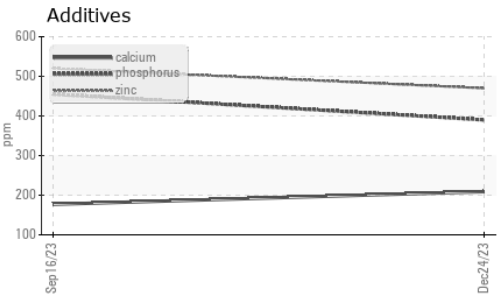
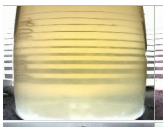
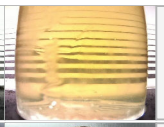


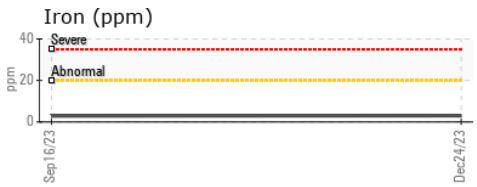



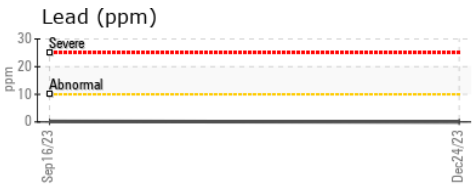

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | Visual* | NONE | **NONE** | NONE | --- |
| Silt | 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* | >0.1 | **NEG** | .2% | --- |
| Free Water | scalar | Visual* | | **NEG** | NEG | --- |

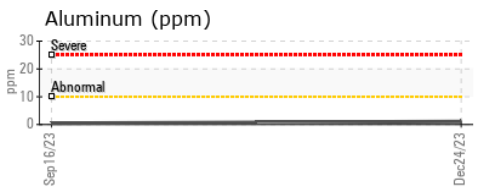
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 46.0 | ▲ **63.4** | 63.0 | --- |

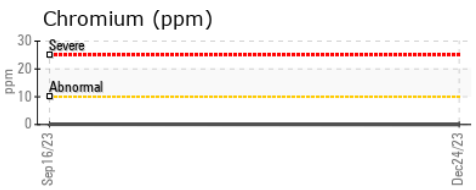
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  |  | *no image* |
| Bottom | | |  |  | *no image* |

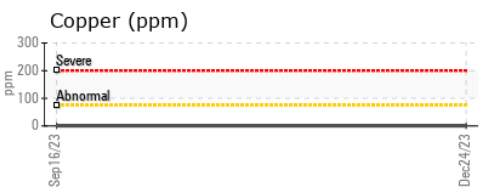
## GRAPHS

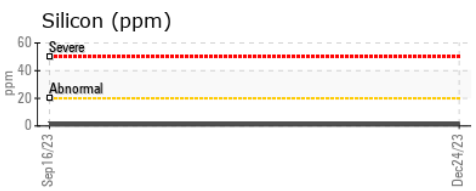


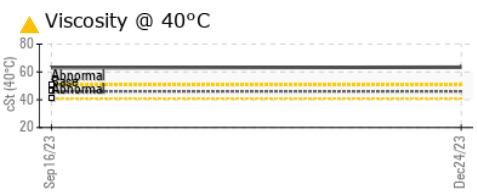



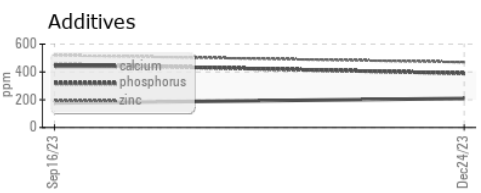




CALA Testing Accreditation No. 1005078
ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC0886137 **Recieved** : 04 Jan 2024
**Lab Number** : 02606585 **Diagnosed** : 04 Jan 2024
**Unique Number** : 5707671 **Diagnostician** : Kevin Marson
**Test Package** : MOB 1

*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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