# OIL ANALYSIS REPORT

Sample Rating Trend


ISO

Area
**Kruger - 888080**
Machine ID
**PG085-R**
Component
**Unknown Component**
Fluid
**SHELL PMO 220 (--- GAL)**

## DIAGNOSIS

**Recommendation**
The sample submitted is 2 times dirtier than the ISO dirt count recommendation of 19/16/14.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Machine ID | | Client Info | | **4300-926-1 MP3** | --- | --- |
| Department | | Client Info | | **Sales** | --- | --- |
| Sample From | | Client Info | | **Machine** | --- | --- |
| Production Stage | | Client Info | | **Lab Reclaim** | --- | --- |
| Sent to WC | | Client Info | | **04/15/2024** | --- | --- |
| Sample Number | | Client Info | | **E30001870** | --- | --- |
| Sample Date | | Client Info | | **15 Apr 2024** | --- | --- |
| Machine Age | hrs | Client Info | | **0** | --- | --- |
| Oil Age | hrs | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **ATTENTION** | --- | --- |

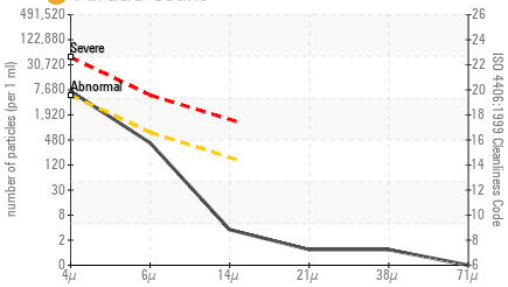
| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | | **5** | --- | --- |
| Chromium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Nickel | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Silver | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Lead | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Copper | ppm | ASTM D5185(m) | | **<1** | --- | --- |
| Tin | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Antimony | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Beryllium | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Cadmium | ppm | ASTM D5185(m) | | **0** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Barium | ppm | ASTM D5185(m) | | **1** | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Manganese | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | | **2** | --- | --- |
| Calcium | ppm | ASTM D5185(m) | | **5** | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | | **26** | --- | --- |
| Zinc | ppm | ASTM D5185(m) | | **7** | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | | **5632** | --- | --- |
| Lithium | ppm | ASTM D5185(m) | | **<1** | --- | --- |

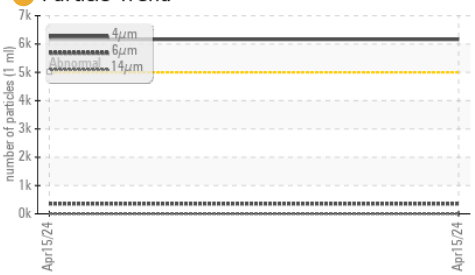
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | | **0** | --- | --- |
| Sodium | ppm | ASTM D5185(m) | | **3** | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | --- | --- |
| Water | % | ASTM D6304* | | **0.001** | --- | --- |
| ppm Water | ppm | ASTM D6304* | | **15** | --- | --- |

# OIL ANALYSIS REPORT

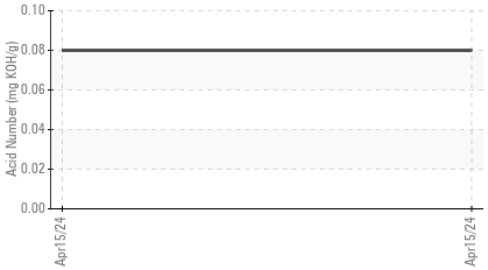
Particle Count



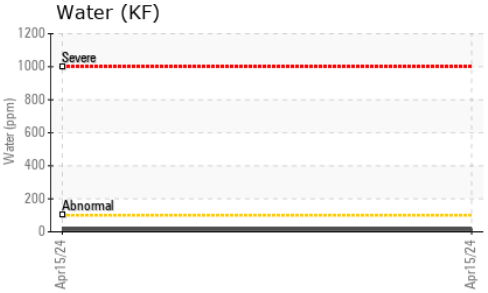

Particle Trend



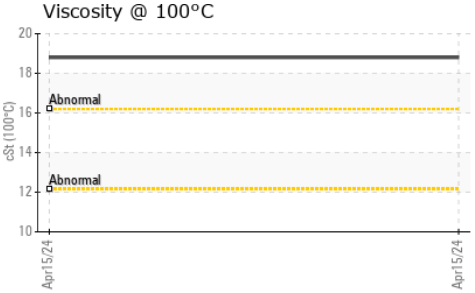

Acid Number




Water (KF)




Viscosity @ 100°C

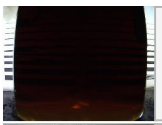



| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | **6163** | --- | --- |
| Particles >6µm | | ASTM D7647 | >640 | **358** | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | **3** | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | **1** | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | **1** | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/16/14 | **20/16/9** | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | | **0.08** | --- | --- |

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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | | **218** | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | | **18.8** | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | | **96** | --- | --- |

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

ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : E30001870 **Received** : 17 Apr 2024
**Lab Number** : 02629596 **Tested** : 18 Apr 2024
**Unique Number** : 5762728 **Diagnosed** : 22 Apr 2024 - Tatiana Sorkina
**Test Package** : IND 2 ( Additional Tests: KF, KV100, PrtCount, VI )

*To discuss this sample report, contact Customer Service at 1-905-372-2251.*
*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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