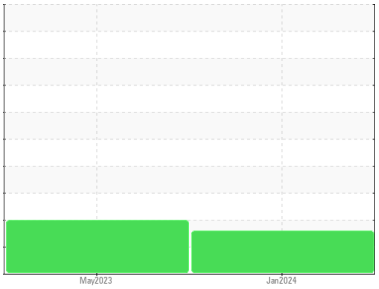
# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Area
## MIX ROOM A [98725396]
Machine Id
## KR-GR-003472 - PUMP - TRANSFER HOPPER MEAT (S/N MIX A - 11535133)
Component
**Gearbox**
Fluid
**PETRO CANADA 220 (--- QTS)**

## DIAGNOSIS

**Recommendation**
No corrective action is recommended at this time. Resample at the next service interval to monitor. ( Customer Sample Comment: 98725396 )

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

**Contamination**
There is a high amount of particulates present in the oil.

**Fluid Condition**
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **PCA0114838** | PCA0073069 | --- |
| Sample Date | | Client Info | | **02 Jan 2024** | 02 May 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** | ABNORMAL | --- |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.2 | **NEG** | NEG | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >200 | **35** | 132 | --- |
| Chromium | ppm | ASTM D5185m | >15 | **<1** | 4 | --- |
| Nickel | ppm | ASTM D5185m | >15 | **0** | 2 | --- |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Silver | ppm | ASTM D5185m | | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >25 | **1** | 1 | --- |
| Lead | ppm | ASTM D5185m | >100 | **0** | 0 | --- |
| Copper | ppm | ASTM D5185m | >200 | **<1** | 0 | --- |
| Tin | ppm | ASTM D5185m | >25 | **<1** | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | --- |
| Barium | ppm | ASTM D5185m | | **11** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | **<1** | 18 | --- |
| Manganese | ppm | ASTM D5185m | | **0** | 2 | --- |
| Magnesium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Calcium | ppm | ASTM D5185m | | **2** | 5 | --- |
| Phosphorus | ppm | ASTM D5185m | | **394** | 647 | --- |
| Zinc | ppm | ASTM D5185m | | **3** | 0 | --- |
| Sulfur | ppm | ASTM D5185m | | **2280** | 1760 | --- |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **2** | 18 | --- |
| Sodium | ppm | ASTM D5185m | | **0** | <1 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 1 | --- |

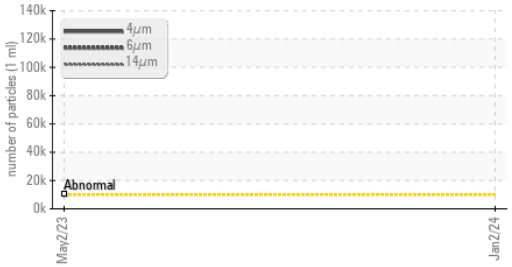
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >10000 | ▲ **124507** | --- | --- |
| Particles >6µm | | ASTM D7647 | >2500 | ▲ **37096** | --- | --- |
| Particles >14µm | | ASTM D7647 | >640 | ▲ **686** | --- | --- |
| Particles >21µm | | ASTM D7647 | >160 | **99** | --- | --- |
| Particles >38µm | | ASTM D7647 | >40 | **1** | --- | --- |
| Particles >71µm | | ASTM D7647 | >10 | **0** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/16 | ▲ **24/22/17** | --- | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.38** | --- | --- |

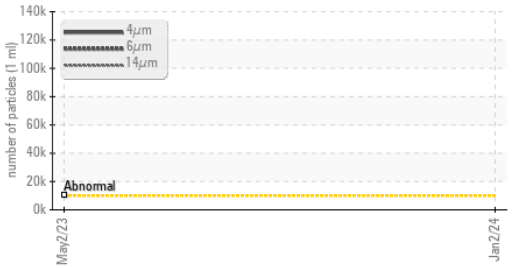
# OIL ANALYSIS REPORT

OIL DIAGNOSTICS

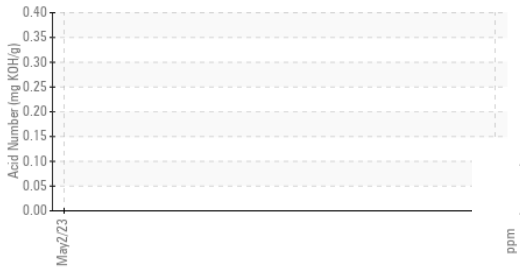
Particle Trend



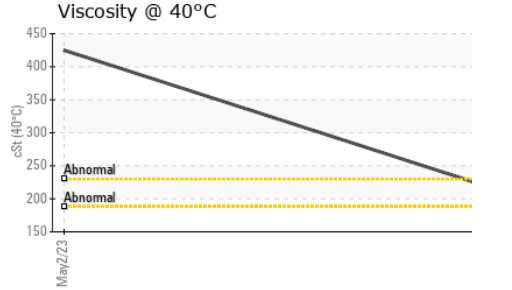

Particle Trend




Acid Number

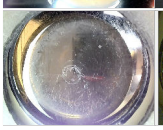



Viscosity @ 40°C



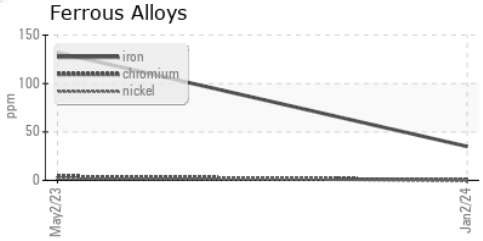

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | MODER | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt | 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 | >0.2 | **NEG** | 0.2% | --- |
| Free Water | scalar | *Visual | | **NEG** | ▲ 1.0 | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | | **215** | ▲ 425 | --- |

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

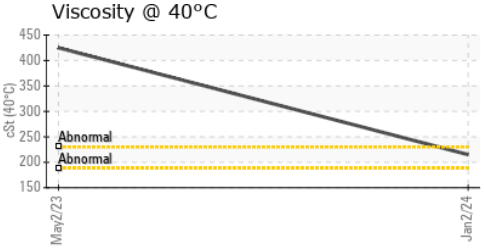
## GRAPHS

Ferrous Alloys

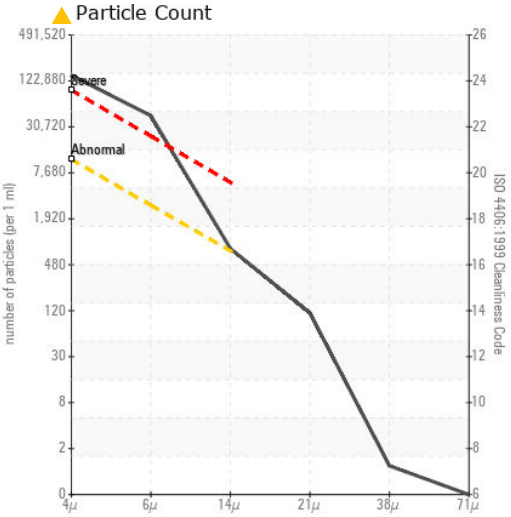



Non-ferrous Metals

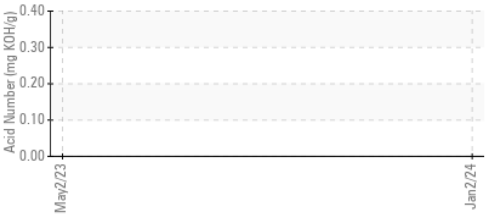

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : PCA0114838 **Recieved** : 05 Jan 2024
**Lab Number** : 06051857 **Diagnosed** : 08 Jan 2024
**Unique Number** : 10817806 **Diagnostician** : Angela Borella
**Test Package** : IND 2 ( Additional Tests: PrtCount )

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*

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Submitted By: Wilberto Pacheco Garcia