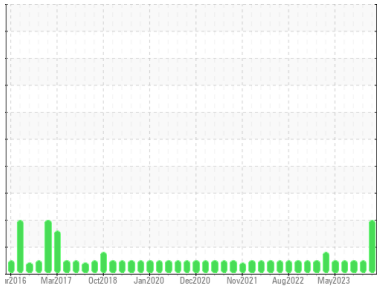
# OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
**DS-206**
Machine Id
**B59764 - HYDRAULIC POWER UNIT DS MFG MEZZ (S/N 42002)**
Component
**Hydraulic System**
Fluid
**PETRO CANADA PURITY FG HYDRAULIC AW 68 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

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

**Contamination**
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

**Fluid Condition**
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0872441** | WC0856014 | WC0838659 |
| Sample Date | | Client Info | | **04 Jan 2024** | 06 Nov 2023 | 10 Sep 2023 |
| Machine Age | mths | Client Info | | **0** | 0 | 0 |
| Oil Age | mths | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **ABNORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.05 | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **0** | 0 | <1 |
| Chromium | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Lead | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >20 | **0** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Calcium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Phosphorus | ppm | ASTM D5185m | | **468** | 453 | 421 |
| Zinc | ppm | ASTM D5185m | | **0** | 0 | 4 |
| Sulfur | ppm | ASTM D5185m | | **489** | 494 | 493 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **4** | 2 | 3 |
| Sodium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | <1 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >10000 | ▲ **18016** | 269 | 399 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **4550** | 77 | 104 |
| Particles >14µm | | ASTM D7647 | >160 | ▲ **329** | 7 | 11 |
| Particles >21µm | | ASTM D7647 | >40 | ▲ **80** | 1 | 5 |
| Particles >38µm | | ASTM D7647 | >10 | **5** | 0 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | **1** | 0 | 1 |
| Oil Cleanliness | | ISO 4406 (c) | >20/17/14 | ▲ **21/19/16** | 15/13/10 | 16/14/11 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.26 | **0.31** | 0.25 | 0.27 |

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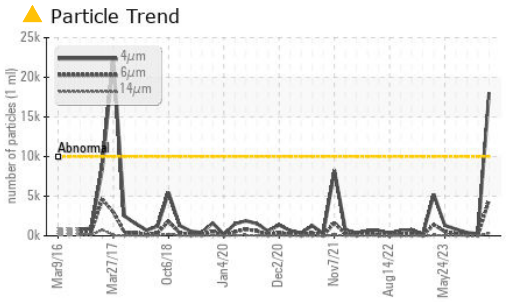
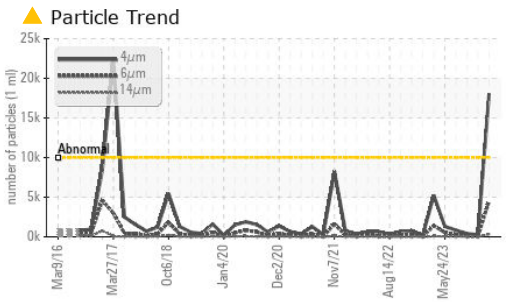
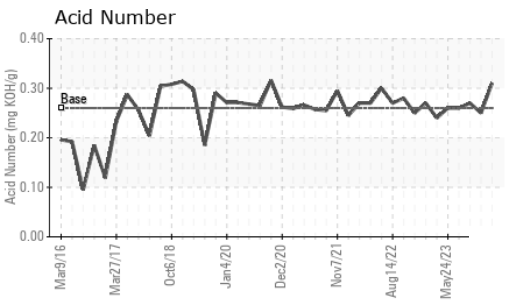
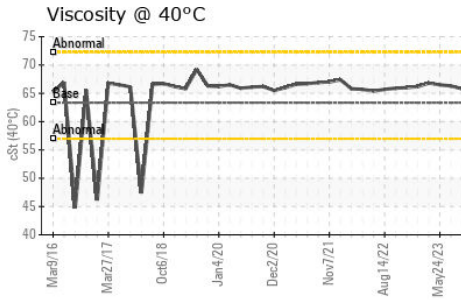


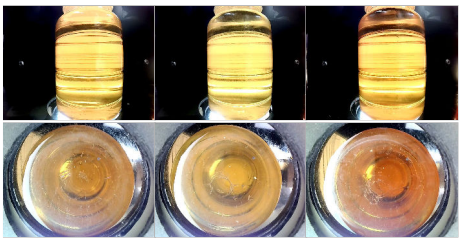



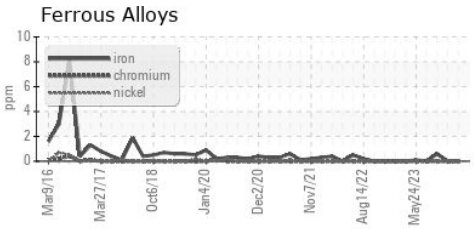

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | >0.05 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

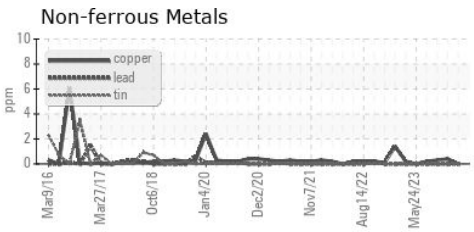
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 63.34 | **66.4** | 67.6 | 65.8 |

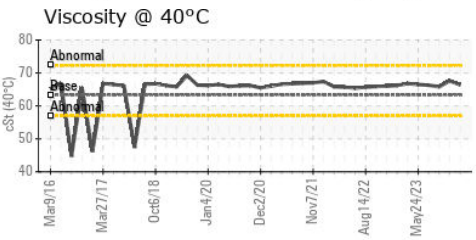
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | | | |
| Bottom | | | | | |

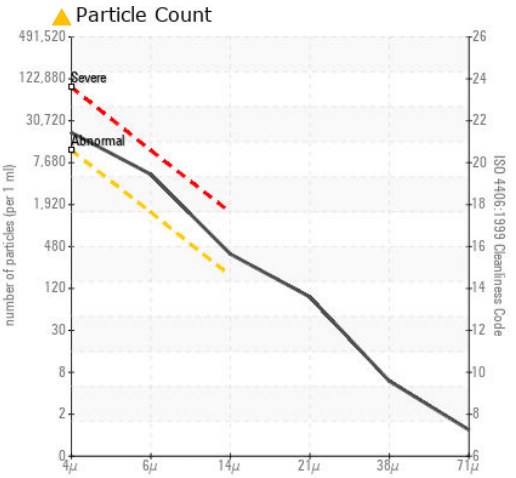


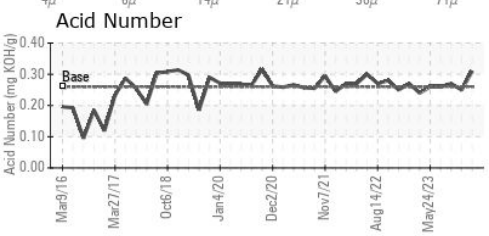
## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0872441 **Recieved** : 10 Jan 2024
**Lab Number** : 06056630 **Diagnosed** : 11 Jan 2024
**Unique Number** : 10822579 **Diagnostician** : Wes Davis
**Test Package** : IND 2

*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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