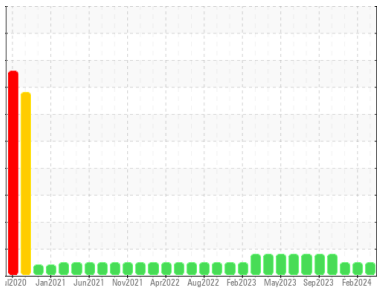
# OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Machine Id
## Extrusion Press
Component
### Hydraulic System
Fluid
### PETRO CANADA HYDREX AW 68 (3000 GAL)

## DIAGNOSIS

**Recommendation**
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 Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.

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

**Contamination**
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

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

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0920607** | WC0803886 | WC0803894 |
| Sample Date | | Client Info | | **29 Mar 2024** | 29 Feb 2024 | 31 Jan 2024 |
| Machine Age | hrs | Client Info | | **1000** | 1000 | 1000 |
| Oil Age | hrs | Client Info | | **1000** | 1000 | 1000 |
| Oil Changed | | Client Info | | **Filtered** | Filtered | Filtered |
| Sample Status | | | | **NORMAL** | 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 D5185(m) | >20 | **<1** | <1 | 1 |
| Chromium | ppm | ASTM D5185(m) | >20 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >20 | **0** | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >20 | **0** | <1 | <1 |
| Lead | ppm | ASTM D5185(m) | >20 | **1** | 2 | 2 |
| Copper | ppm | ASTM D5185(m) | >20 | **8** | 8 | 9 |
| Tin | ppm | ASTM D5185(m) | >20 | **0** | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |

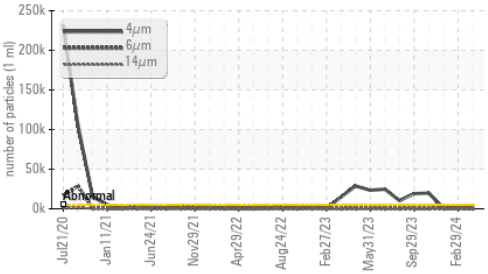
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | 0 | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185(m) | 0 | **<1** | 0 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | 0 | **0** | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 0 | **1** | <1 | <1 |
| Calcium | ppm | ASTM D5185(m) | 50 | **33** | 34 | 34 |
| Phosphorus | ppm | ASTM D5185(m) | 330 | **299** | 305 | 304 |
| Zinc | ppm | ASTM D5185(m) | 430 | **370** | 355 | 360 |
| Sulfur | ppm | ASTM D5185(m) | 760 | **687** | 723 | 738 |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >15 | **4** | 5 | 5 |
| Sodium | ppm | ASTM D5185(m) | | **1** | 1 | 1 |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | <1 | <1 |

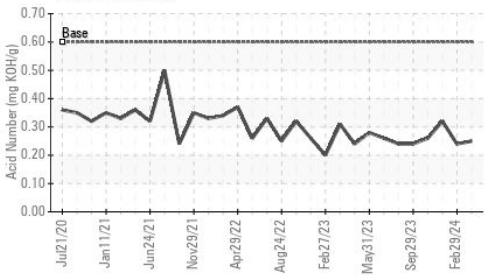
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | **383** | 1107 | 736 |
| Particles >6µm | | ASTM D7647 | >1300 | **94** | 155 | 119 |
| Particles >14µm | | ASTM D7647 | >160 | **9** | 12 | 14 |
| Particles >21µm | | ASTM D7647 | >40 | **4** | 4 | 5 |
| Particles >38µm | | ASTM D7647 | >10 | **1** | 2 | 2 |
| Particles >71µm | | ASTM D7647 | >3 | **1** | 1 | 1 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | **16/14/10** | 17/14/11 | 17/14/11 |

# OIL ANALYSIS REPORT

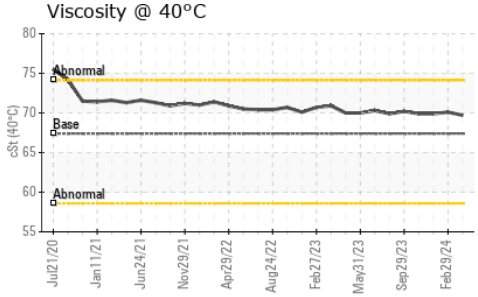
Particle Trend



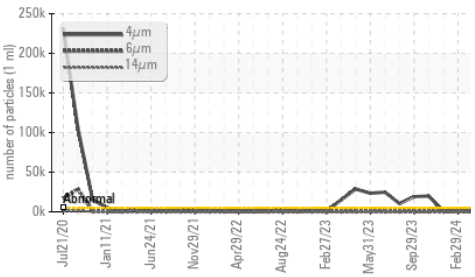

Acid Number




Viscosity @ 40°C




Particle Trend

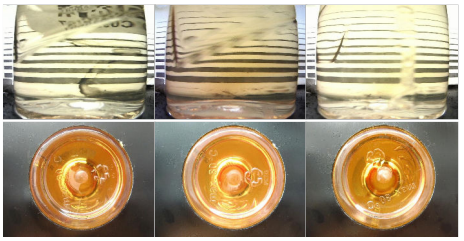



| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.60 | **0.25** | 0.24 | 0.32 |

| 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 |

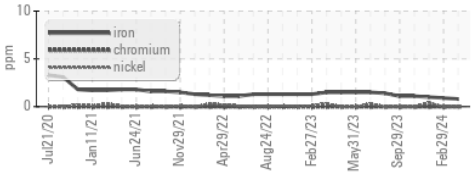
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 67.4 | **69.7** | 70.1 | 69.9 |

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

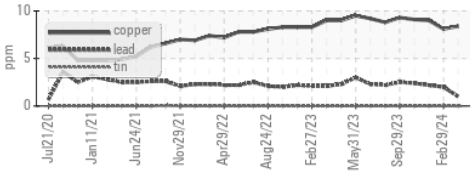


## GRAPHS

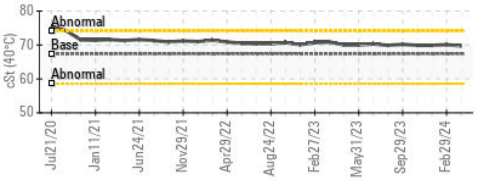
Ferrous Alloys



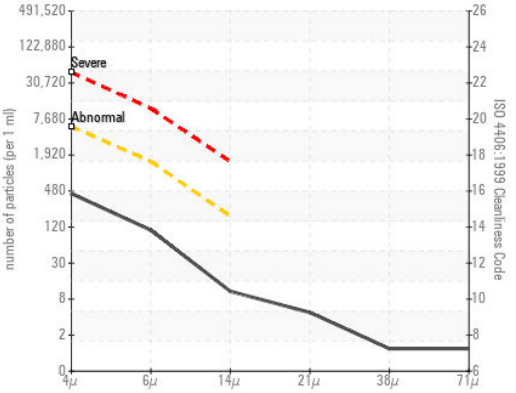

Non-ferrous Metals



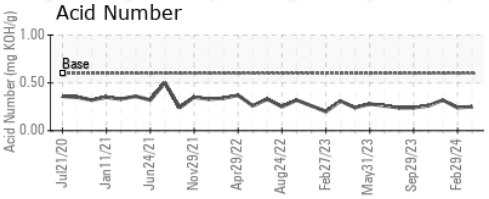

Viscosity @ 40°C




Particle Count




Acid Number




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC0920607
**Lab Number** : 02627879
**Unique Number** : 5761011
**Test Package** : IND 2

**Received** : 10 Apr 2024
**Tested** : 11 Apr 2024
**Diagnosed** : 11 Apr 2024 - Wes Davis

*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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