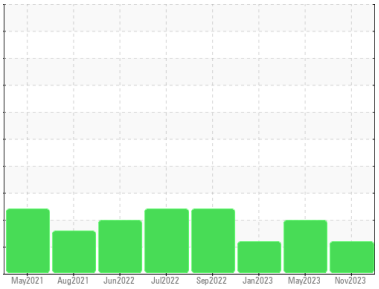
# PROBLEM SUMMARY

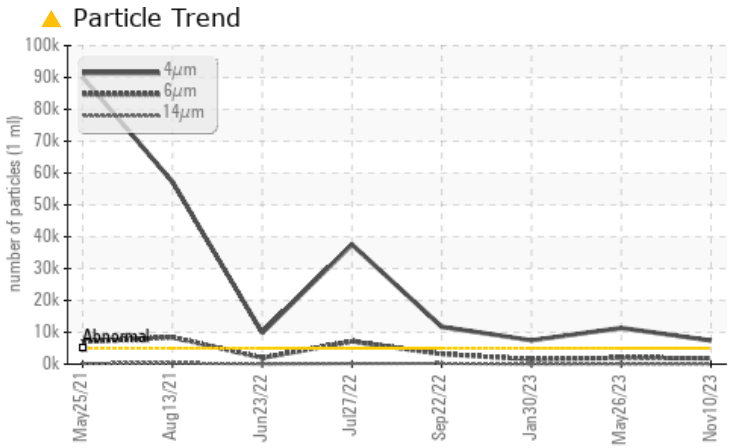
Sample Rating Trend




ISO

Area
**COLD MILL/CM-5-STAND**
Machine Id
**AOR HPU 5STD-ROLL-AORR**
Component
**Hydraulic System**
Fluid
**PETRO CANADA HYDREX AW 68 (100 GAL)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

No corrective action is recommended at this time.
Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | ATTENTION | ABNORMAL | ATTENTION |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | ▲ **7411** | ▲ 11347 | ▲ 7470 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **1837** | ▲ 1970 | ▲ 1483 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ **20/18/14** | ▲ 21/18/13 | ▲ 20/18/12 |

**Customer Id:** CONMUSAL
**Sample No.:** KFS0004940
**Lab Number:** 06007652
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
Don Baldridge +1
don.b505@comcast.net

*To change component or sample information:*
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

**26 May 2023 Diag: Don Baldridge**

WEAR

No corrective action is recommended at this time. Resample at the next service interval to monitor.The copper level is abnormal. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

**30 Jan 2023 Diag: Jonathan Hester**

ISO

No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

**22 Sep 2022 Diag: Don Baldridge**

WEAR

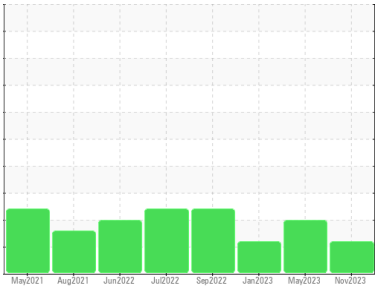
We recommend you service the filters on this component. We recommend an early resample to monitor this condition.An increase in the copper level is noted. All other component wear rates are normal. There is a high amount of particulates present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

KIMBRO FLUID SOLUTIONS

# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Area
## COLD MILL/CM-5-STAND
Machine Id
## AOR HPU 5STD-ROLL-AORR
Component
**Hydraulic System**
Fluid
**PETRO CANADA HYDREX AW 68 (100 GAL)**

## DIAGNOSIS

**Recommendation**
No corrective action is recommended at this time. Resample at the next service interval to monitor.

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

**Contamination**
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

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

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **KFS0004940** | KFS0002541 | KFS0002519 |
| Sample Date | | Client Info | | **10 Nov 2023** | 26 May 2023 | 30 Jan 2023 |
| Machine Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **ATTENTION** | ABNORMAL | ATTENTION |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **0** | <1 | <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 | **20** | ▲ 22 | 10 |
| 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 | 0 |
| Barium | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Calcium | ppm | ASTM D5185m | 50 | **37** | 44 | 49 |
| Phosphorus | ppm | ASTM D5185m | 330 | **328** | 325 | 333 |
| Zinc | ppm | ASTM D5185m | 430 | **436** | 437 | 442 |
| Sulfur | ppm | ASTM D5185m | 760 | **793** | 953 | 949 |

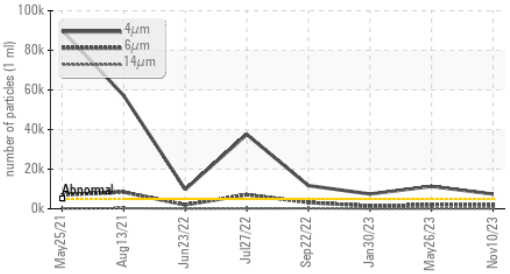
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **0** | <1 | 0 |
| Sodium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | ▲ **7411** | ▲ 11347 | ▲ 7470 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **1837** | ▲ 1970 | ▲ 1483 |
| Particles >14µm | | ASTM D7647 | >160 | **81** | 76 | 27 |
| Particles >21µm | | ASTM D7647 | >40 | **11** | 10 | 2 |
| Particles >38µm | | ASTM D7647 | >10 | **0** | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | ▲ **20/18/14** | ▲ 21/18/13 | ▲ 20/18/12 |

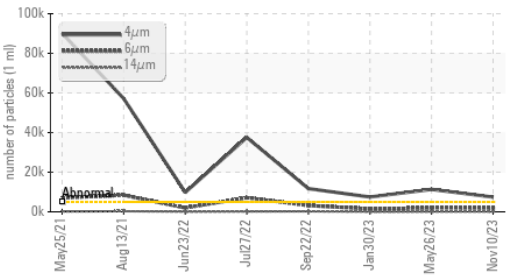
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.60 | **0.31** | 0.32 | 0.37 |

# OIL ANALYSIS REPORT

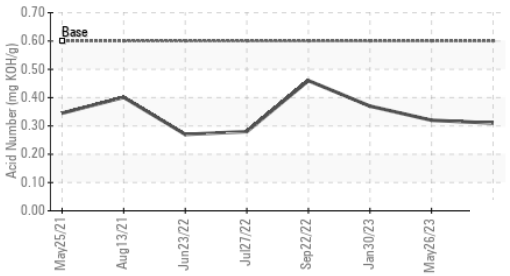
Particle Trend



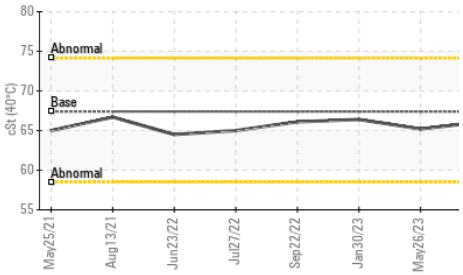

Particle Trend




Acid Number

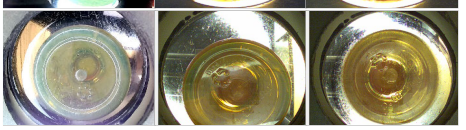



Viscosity @ 40°C



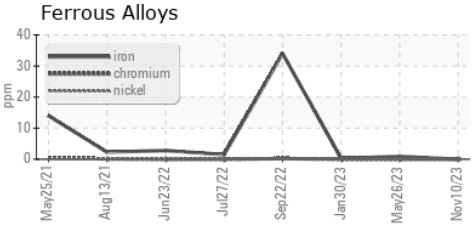

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| 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 | 67.4 | **66.1** | 65.2 | 66.4 |

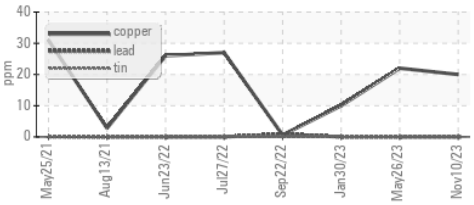
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

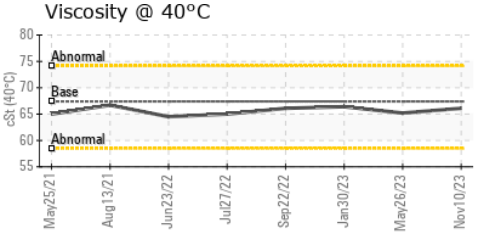
Ferrous Alloys



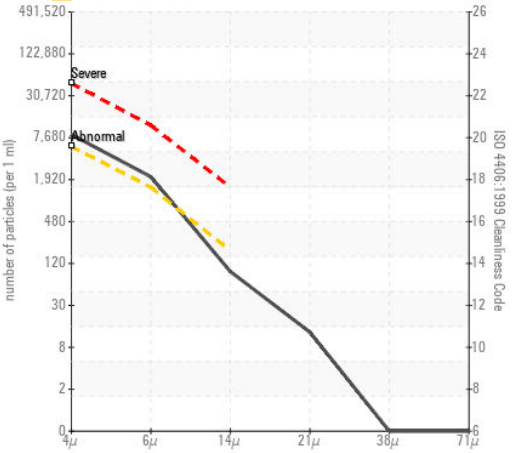

Non-ferrous Metals



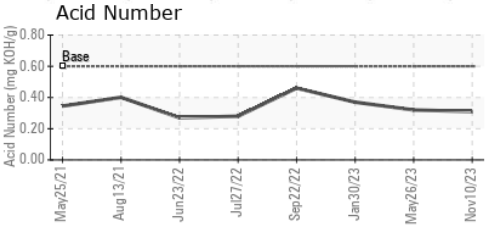

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KFS0004940
**Lab Number** : 06007652
**Unique Number** : 10741414
**Test Package** : IND 2

**Received** : 14 Nov 2023
**Diagnosed** : 16 Nov 2023
**Diagnostician** : Don Baldridge

*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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