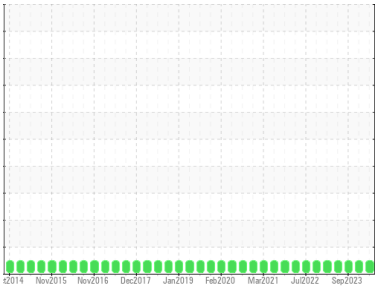
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
## KOSHER RESERVOIR (S/N MK6D/WRV1)
Component
**Hydraulic System**
Fluid
**PETRO CANADA PURITY FG HYDRAULIC AW 68 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

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

**Contamination**
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

**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 | | **USP0008236** | USP0005150 | USP0001564 |
| Sample Date | | Client Info | | **12 Mar 2024** | 13 Dec 2023 | 19 Sep 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 | | | | **NORMAL** | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | **<1** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **<1** | 0 | 0 |
| Lead | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |
| Copper | ppm | ASTM D5185m | >20 | **0** | <1 | <1 |
| Tin | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | <1 | 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** | <1 | 0 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | | **0** | 7 | 3 |
| Calcium | ppm | ASTM D5185m | | **61** | 67 | 57 |
| Phosphorus | ppm | ASTM D5185m | | **337** | 364 | 352 |
| Zinc | ppm | ASTM D5185m | | **439** | 461 | 439 |
| Sulfur | ppm | ASTM D5185m | | **927** | 965 | 916 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **0** | 0 | 0 |
| Sodium | ppm | ASTM D5185m | | **<1** | 0 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 1 | 0 |
| Water | % | ASTM D6304 | >0.05 | **0.003** | 0.020 | 0.003 |
| ppm Water | ppm | ASTM D6304 | >500 | **35** | 207 | 33.2 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | **490** | 221 | 206 |
| Particles >6µm | | ASTM D7647 | >1300 | **81** | 46 | 67 |
| Particles >14µm | | ASTM D7647 | >160 | **13** | 7 | 9 |
| Particles >21µm | | ASTM D7647 | >40 | **5** | 3 | 3 |
| Particles >38µm | | ASTM D7647 | >10 | **1** | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | **16/14/11** | 15/13/10 | 15/13/10 |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.26 | **0.37** | 0.39 | 0.37 |

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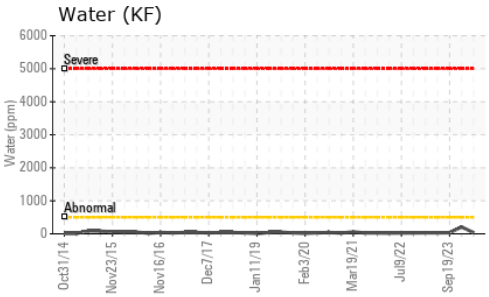
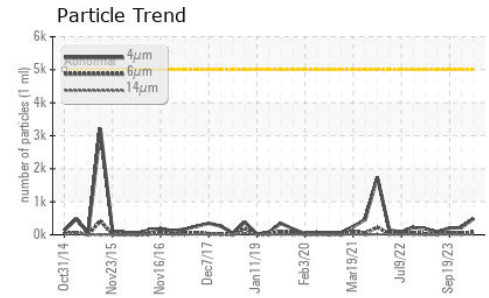
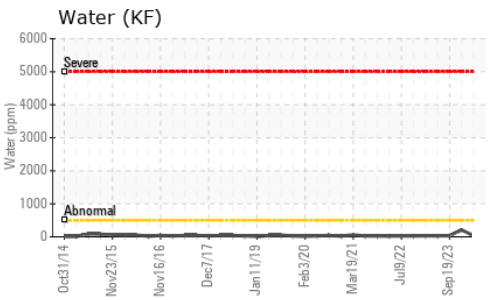
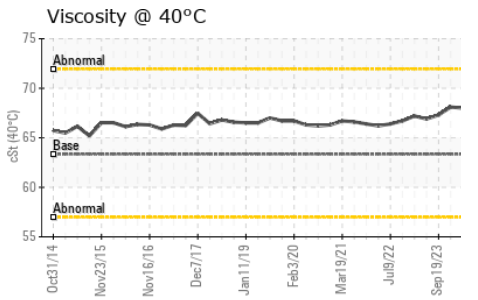
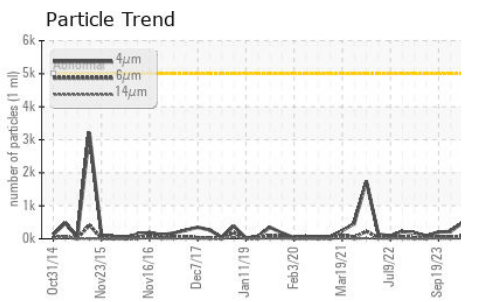


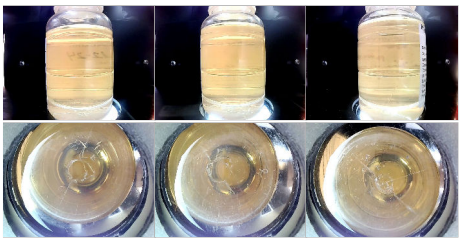



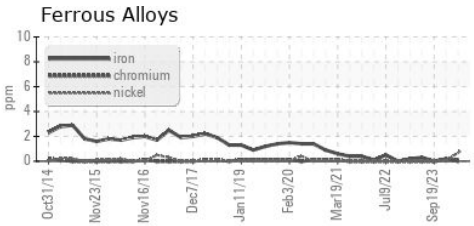

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

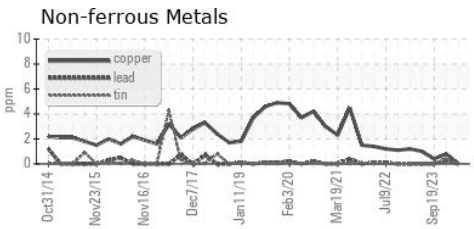
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 63.34 | **68.0** | 68.1 | 67.3 |

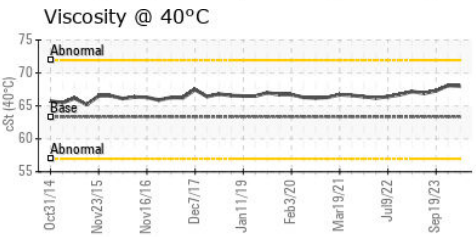
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | | | |
| Bottom | | | | | |

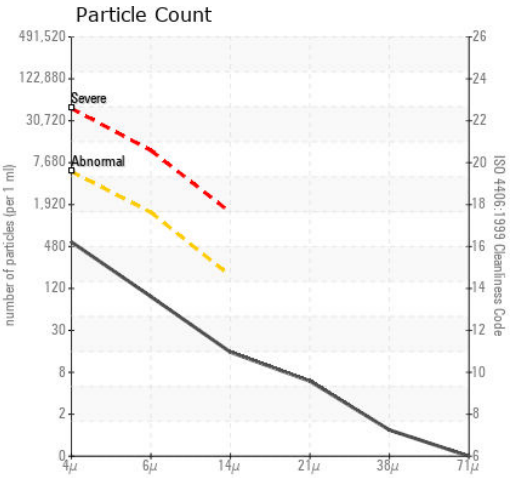


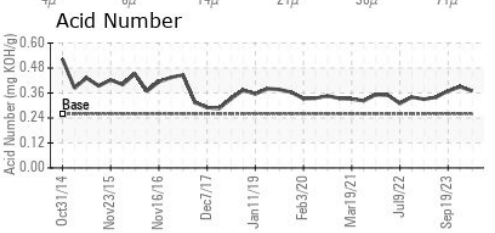
## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : USP0008236
**Lab Number** : 06133394
**Unique Number** : 10952859
**Test Package** : IND 2

**Received** : 29 Mar 2024
**Tested** : 01 Apr 2024
**Diagnosed** : 01 Apr 2024 - Doug Bogart

**GIBBON PACK**
PO Box 730
GIBBON, NE
US 68840
Contact: SERVICE MANAGER

*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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