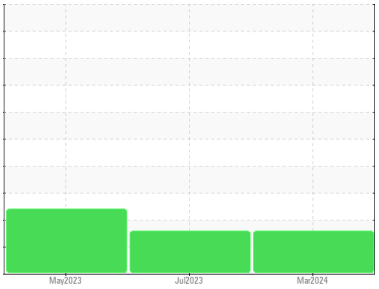
# OIL ANALYSIS REPORT

Sample Rating Trend




**WEAR**

Machine Id
**P-203**
Component
**Pump**
Fluid
**MOBIL SHC 626 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

**Wear**
The iron level is abnormal.

**Contamination**
There is a moderate amount of visible silt present in the sample.

**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 | | **USP0008196** | USP244882 | USP243161 |
| Sample Date | | Client Info | | **22 Mar 2024** | 25 Jul 2023 | 03 May 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 | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >75 | ▲ **77** | ▲ 97 | 47 |
| Chromium | ppm | ASTM D5185m | >5 | **<1** | 1 | <1 |
| Nickel | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >5 | **0** | <1 | 0 |
| Lead | ppm | ASTM D5185m | >10 | **0** | 0 | 0 |
| Copper | ppm | ASTM D5185m | >15 | **<1** | 6 | <1 |
| Tin | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

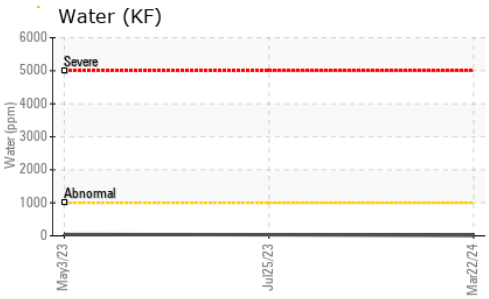
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **0** | 1 | 2 |
| Calcium | ppm | ASTM D5185m | | **1** | 0 | 0 |
| Phosphorus | ppm | ASTM D5185m | | **485** | 508 | 518 |
| Zinc | ppm | ASTM D5185m | | **1** | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | | **2** | 0 | 0 |

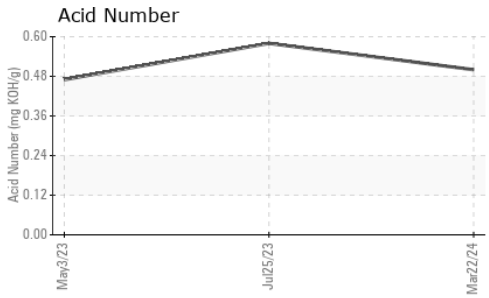
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >20 | **<1** | <1 | <1 |
| Sodium | ppm | ASTM D5185m | | **0** | 2 | <1 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | <1 |
| Water | % | ASTM D6304 | >.1 | **0.001** | 0.003 | 0.004 |
| ppm Water | ppm | ASTM D6304 | >1000 | **8** | 33.7 | 40.3 |

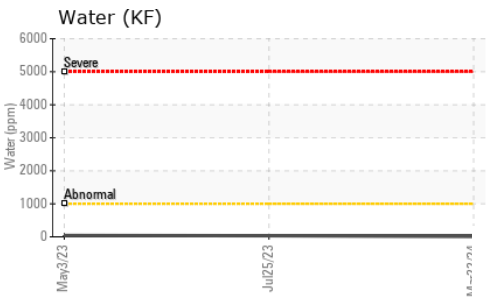
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | **---** | --- | ▲ 171027 |
| Particles >6µm | | ASTM D7647 | >1300 | **---** | --- | ▲ 74379 |
| Particles >14µm | | ASTM D7647 | >160 | **---** | --- | ▲ 2711 |
| Particles >21µm | | ASTM D7647 | >40 | **---** | --- | ▲ 331 |
| Particles >38µm | | ASTM D7647 | >10 | **---** | --- | ▲ 20 |
| Particles >71µm | | ASTM D7647 | >3 | **---** | --- | 2 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | **---** | --- | ▲ 25/23/19 |

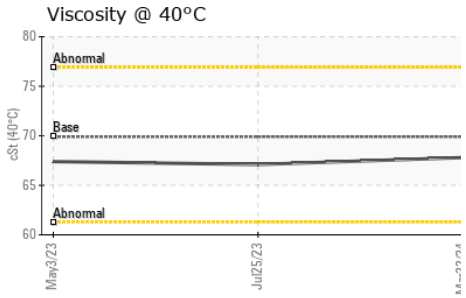
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.50** | 0.58 | 0.47 |

# OIL ANALYSIS REPORT



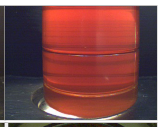
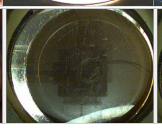



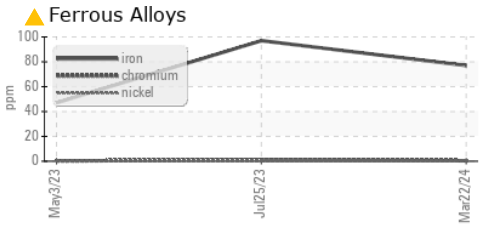



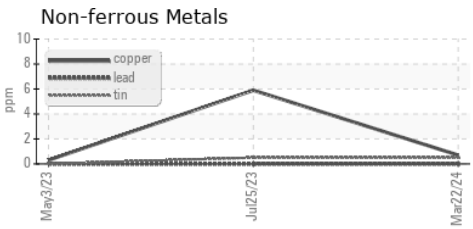

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | ▲ **MODER** | ▲ MODER | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | LIGHT |
| 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 | >.1 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

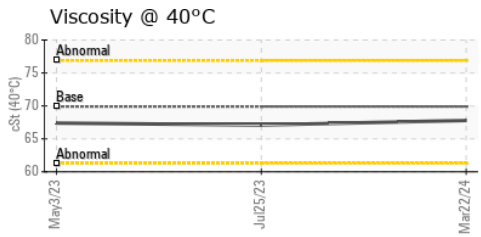
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 69.9 | **67.8** | 67.1 | 67.4 |

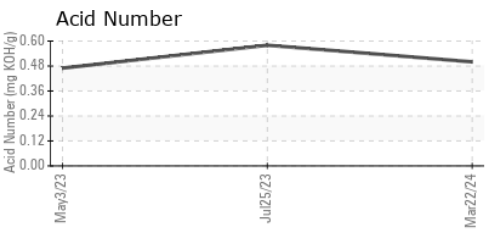
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  |  |  |
| Bottom | | |  |  |  |

## GRAPHS




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : USP0008196
**Lab Number** : 06135004
**Unique Number** : 10954469
**Test Package** : IND 2

**Received** : 01 Apr 2024
**Tested** : 03 Apr 2024
**Diagnosed** : 03 Apr 2024 - Doug Bogart

**POET BIOPROCESSING**
3638 FIR AVE
HANLONTOWN, IA
US 50444
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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F: