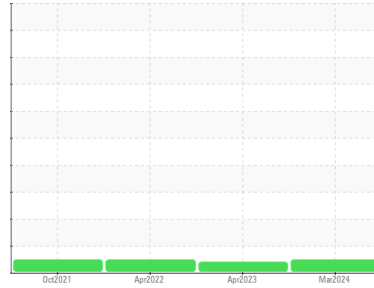


OIL ANALYSIS REPORT



Area
KEMP QUARRIES / SELIGMAN [65165]
Machine Id
CATERPILLAR OHT114
Component
Transmission (Manual)
Fluid
PETRO CANADA PRODURO TO-4 SAE 30 (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: PM-3 sampled fluid)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | PCA0109073 | PCA0086068 | PCA0037563 |
| Sample Date | Client Info | | 11 Mar 2024 | 05 Apr 2023 | 15 Apr 2022 |
| Machine Age | hrs | Client Info | 37902 | 37377 | 36878 |
| Oil Age | hrs | Client Info | 37902 | 31377 | 36878 |
| Oil Changed | Client Info | | N/A | Changed | N/A |
| Sample Status | | | NORMAL | ABNORMAL | NORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|-------|-----------|------------|------------|----------|----------|
| Water | WC Method | >0.1 | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >200 | 15 | 23 | 10 |
| Chromium | ppm | ASTM D5185m >5 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m >7 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >25 | 2 | <1 | 1 |
| Lead | ppm | ASTM D5185m >45 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185m >225 | 10 | 56 | 3 |
| Tin | ppm | ASTM D5185m >10 | <1 | 0 | <1 |
| Antimony | ppm | ASTM D5185m | --- | --- | --- |
| 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 2 | 1 | <1 | 1 |
| Barium | ppm | ASTM D5185m 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m 0 | 2 | 2 | 1 |
| Manganese | ppm | ASTM D5185m 9 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m 1 | 21 | 15 | 16 |
| Calcium | ppm | ASTM D5185m 3131 | 3012 | 2021 | 2249 |
| Phosphorus | ppm | ASTM D5185m 1194 | 893 | 817 | 836 |
| Zinc | ppm | ASTM D5185m 1281 | 1086 | 1017 | 1000 |
| Sulfur | ppm | ASTM D5185m 3811 | 3603 | 3935 | 2993 |

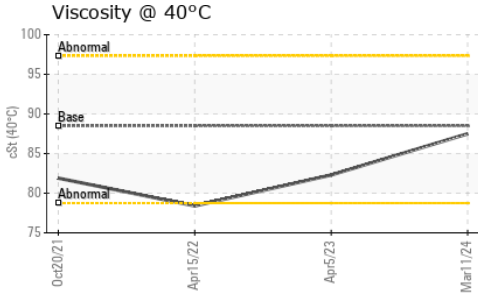
CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|------------------|-----------|----------|----------|
| Silicon | ppm | ASTM D5185m >125 | 21 | 9 | 4 |
| Sodium | ppm | ASTM D5185m | 0 | 9 | 2 |
| Potassium | ppm | ASTM D5185m >20 | 2 | <1 | 0 |

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 | ▲ MODER | 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 >0.1 | NEG | NEG | NEG |
| Free Water | scalar | *Visual | NEG | NEG | NEG |

OIL ANALYSIS REPORT

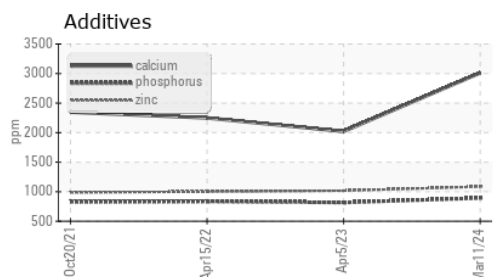
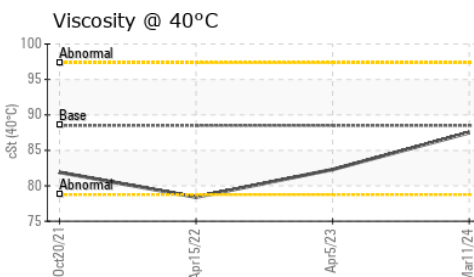
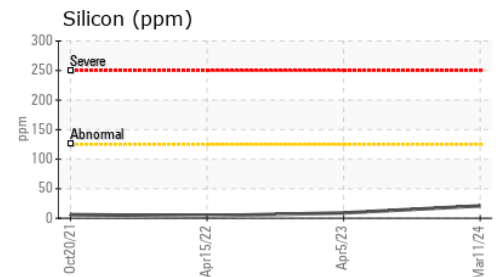
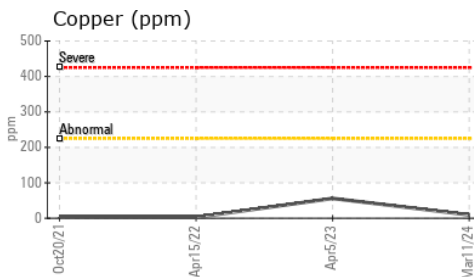
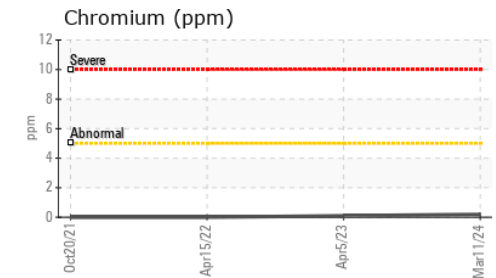
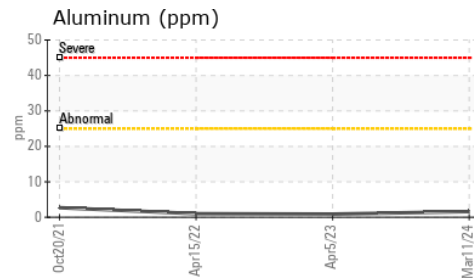
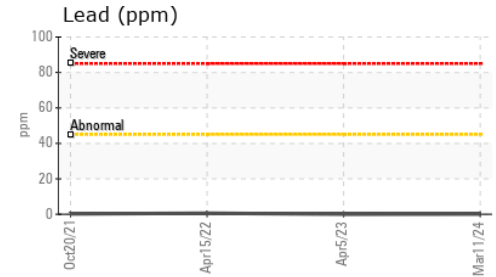
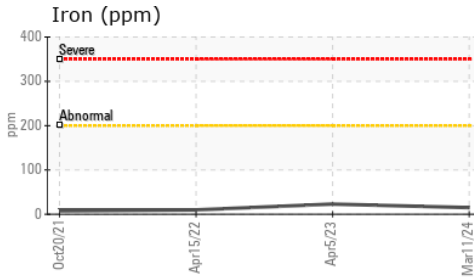


| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|-----------|------------|-------------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 88.5 | 87.5 | 82.3 | 78.4 |

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

| | | | | | | |
|--------|--|--|--|----------|----------|----------|
| Color | | | | no image | no image | no image |
| Bottom | | | | no image | no image | no image |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109073
Lab Number : **06121852**
Unique Number : 10936003
Test Package : MOB 1

Received : 18 Mar 2024
Tested : 19 Mar 2024
Diagnosed : 21 Mar 2024 - Angela Borella

Kemp Quarries - BCS - Seligman
 8261 Farm rd 2295
 Seligman, MO
 US 65745

Contact: TECHNICIAN ACCOUNT
 catherine.anastasio@wearcheck.com

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)

T:
F: