

Area
KEMP QUARRIES / MUSKOGEE SAND [69617]

Machine Id
WL109

Component
Transmission (Manual)

Fluid
PETRO CANADA PRODURO TO-4 SAE 30 (--- GAL)

RECOMMENDATION

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

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | PCA0109270 | PCA0086517 | PCA0070575 |
| Sample Date | | Client Info | | 04 Apr 2024 | 05 Feb 2024 | 21 Nov 2023 |
| Machine Age | hrs | Client Info | | 58740 | 50702 | 50215 |
| Oil Age | hrs | Client Info | | 51204 | 50702 | 50215 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | Changed | N/A |
| Filter Changed | | Client Info | | N/A | Changed | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|-------------|------|------|
| Iron | ppm | ASTM D5185m | >200 | 2 | 1 | 3 |
| Chromium | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >7 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 0 | 1 | 1 |
| Lead | ppm | ASTM D5185m | >45 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >225 | 38 | 164 | 167 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

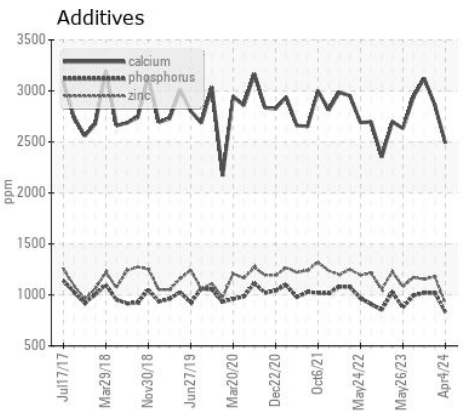
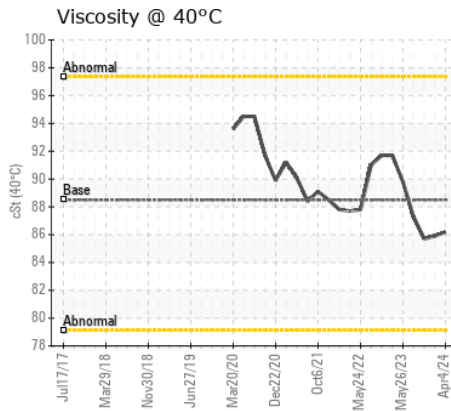
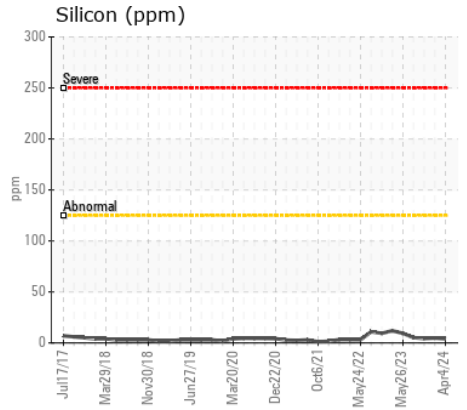
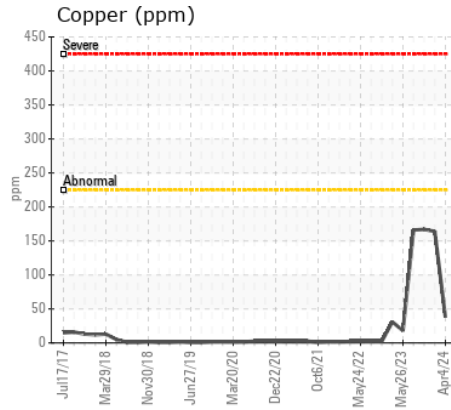
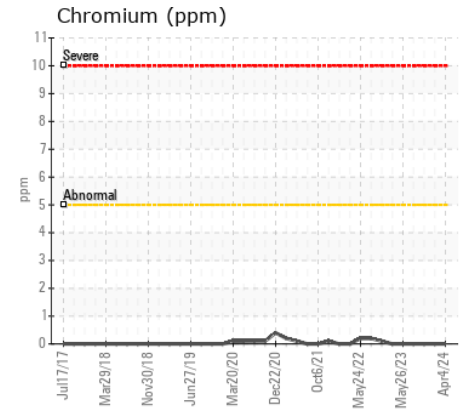
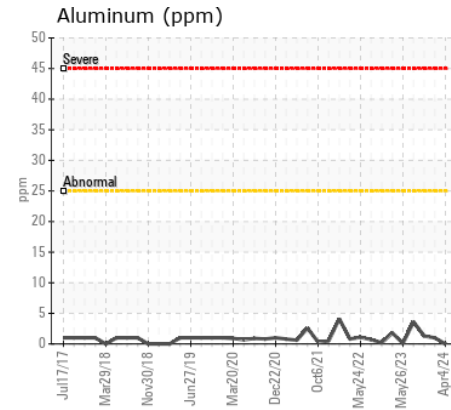
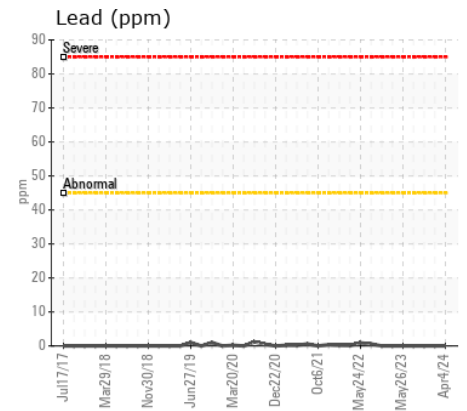
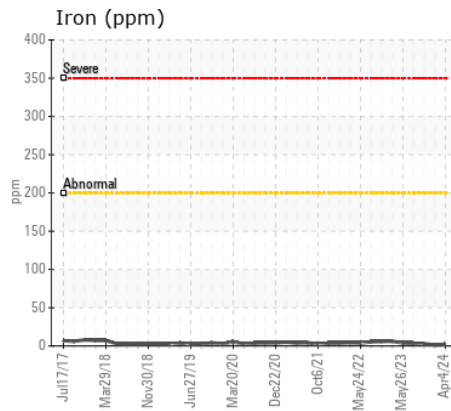
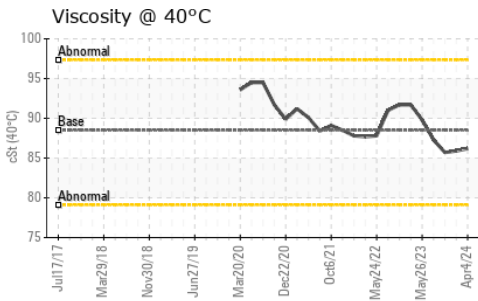
There is no indication of any contamination in the fluid.

| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >125 | 4 | 5 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 2 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| 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 | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|-------------|-----|-------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185m | | 2 | 1 | 0 |
| Boron | ppm | ASTM D5185m | 2 | 2 | 2 | <1 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 2 | 1 | 2 |
| Manganese | ppm | ASTM D5185m | 9 | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 1 | 23 | 25 | 20 |
| Calcium | ppm | ASTM D5185m | 3131 | 2489 | 2864 | 3124 |
| Phosphorus | ppm | ASTM D5185m | 1194 | 834 | 1019 | 1022 |
| Zinc | ppm | ASTM D5185m | 1281 | 920 | 1182 | 1154 |
| Sulfur | ppm | ASTM D5185m | 3811 | 3633 | 3970 | 4142 |
| Visc @ 40°C | cSt | ASTM D445 | 88.5 | 86.2 | 85.9 | 85.7 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109270
Lab Number : 06149187
Unique Number : 10979265
Test Package : MOB 1

Kemp Quarries - Muskogee Sand
 3395 W 50th St N
 Porter, OK
 US 74454
 Contact:

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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