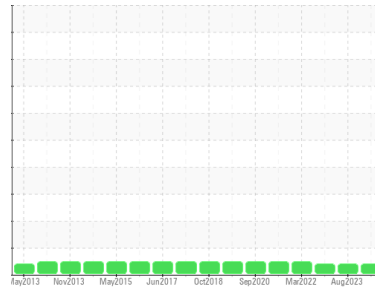


OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Area

LINE 2

Machine Id

[LINE 2] PX-13031 PX-13031

Component

Hydraulic System

Fluid

PETRO CANADA PURITY FG HYDRAULIC AW 68 (--- QTS)

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

Fluid Condition

The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | PCA0128275 | PCA0100828 | PCA0073887 |
| Sample Date | Client Info | 13 Jul 2024 | 25 Aug 2023 | 21 Nov 2022 |
| Machine Age | hrs | Client Info | 4201 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | MARGINAL | MARGINAL | ATTENTION |

CONTAMINATION

| method | limit/base | current | history1 | history2 |
|--------|-----------------|------------|----------|----------|
| Water | WC Method >0.05 | NEG | NEG | NEG |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|-----------------|--------------|----------|----|
| PQ | ASTM D8184 | 17 | 8 | 6 | |
| Iron | ppm | ASTM D5185m >20 | <1 | <1 | 1 |
| Chromium | ppm | ASTM D5185m >20 | <1 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | 3 | <1 | <1 |
| Lead | ppm | ASTM D5185m >20 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m >20 | 2 | <1 | 0 |
| Tin | ppm | ASTM D5185m >20 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | <1 | 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 | <1 | 2 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | <1 | 0 | <1 |
| Calcium | ppm | ASTM D5185m | 0 | 0 | 19 |
| Phosphorus | ppm | ASTM D5185m | 447 | 426 | 637 |
| Zinc | ppm | ASTM D5185m | 12 | 5 | 12 |
| Sulfur | ppm | ASTM D5185m | 610 | 548 | 622 |

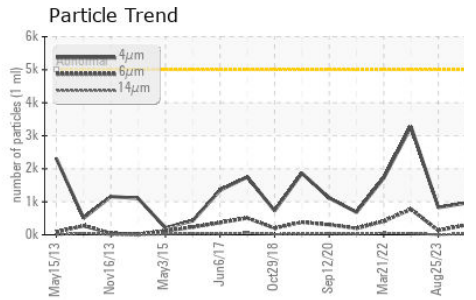
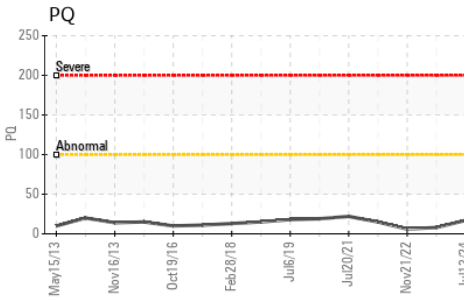
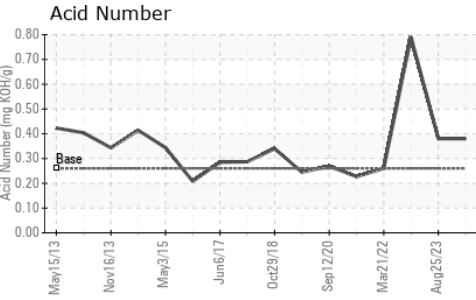
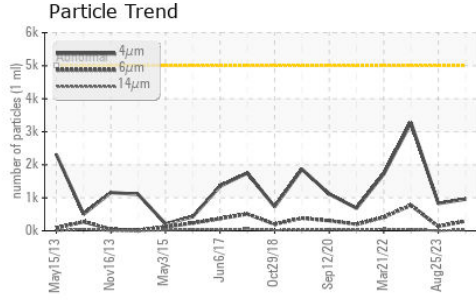
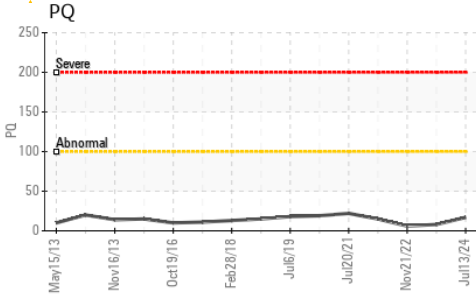
CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|-----------------|----------|----------|----|
| Silicon | ppm | ASTM D5185m >15 | 2 | 4 | 3 |
| Sodium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Potassium | ppm | ASTM D5185m >20 | 1 | <1 | 0 |

FLUID CLEANLINESS

| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 >5000 | 961 | 829 | 3276 |
| Particles >6µm | ASTM D7647 >1300 | 294 | 132 | 775 |
| Particles >14µm | ASTM D7647 >160 | 32 | 5 | 42 |
| Particles >21µm | ASTM D7647 >40 | 9 | 1 | 8 |
| Particles >38µm | ASTM D7647 >10 | 3 | 0 | 0 |
| Particles >71µm | ASTM D7647 >3 | 2 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) >19/17/14 | 17/15/12 | 17/14/10 | 19/17/13 |

OIL ANALYSIS REPORT

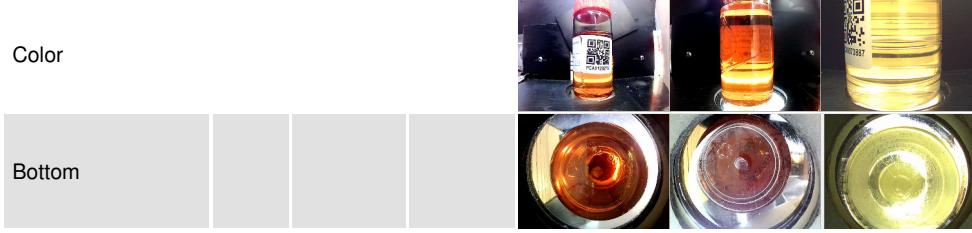


| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.26 | 0.38 | 0.38 | 0.79 |

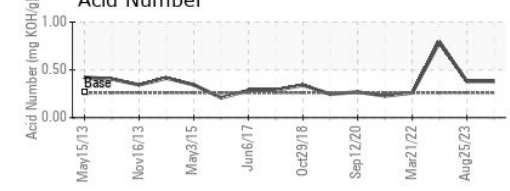
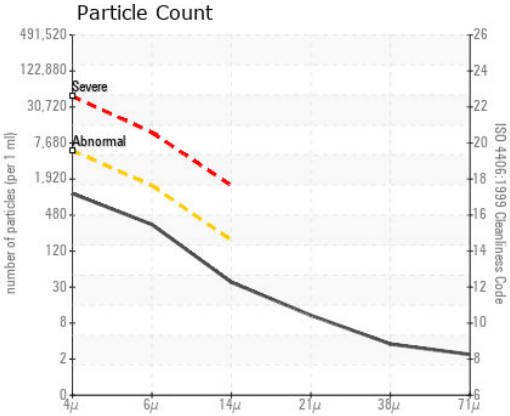
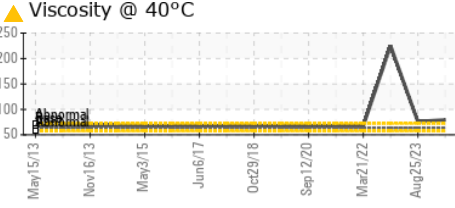
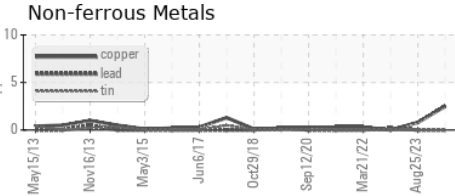
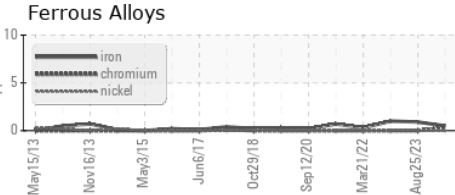
| VISUAL | | method | limit/base | current | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Precipitate | scalar | *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 | ▲ 79.5 | ▲ 75.93 | ● 225 |

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



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0128275 **Received** : 15 Jul 2024
Lab Number : 06235773 **Tested** : 16 Jul 2024
Unique Number : 11124607 **Diagnosed** : 17 Jul 2024 - Jonathan Hester
Test Package : IND 2 (Additional Tests: PQ)

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