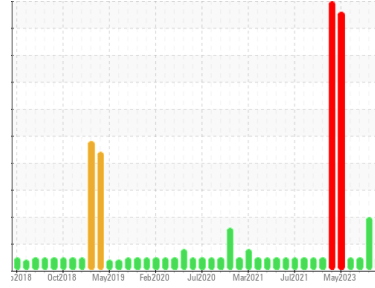


Area
Cranes
Machine Id
Crane - Fwd Hydraulic Reservoir (S/N Sample Tag MA-04003-S4)
Component
Hydraulic System
Fluid
PETRO CANADA ATF DEXRON III/MERCON (800 LTR)



DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is 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 | PC | PC0076312 | PC0078235 |
| Sample Date | Client Info | 20 Mar 2024 | 24 Jan 2024 | 27 Dec 2023 |
| Machine Age | hrs | Client Info | 0 | 0 |
| Oil Age | hrs | Client Info | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | | NORMAL | ABNORMAL |

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* | | 0 | 0 | 0 |
| Iron | ppm | ASTM D5185(m) >20 | 1 | 1 | <1 |
| Chromium | ppm | ASTM D5185(m) >10 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) >10 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) >10 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) >20 | <1 | 2 | 2 |
| Copper | ppm | ASTM D5185(m) >20 | 3 | 3 | 3 |
| Tin | ppm | ASTM D5185(m) >10 | 0 | <1 | <1 |
| Antimony | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | 0 | 0 | 0 |

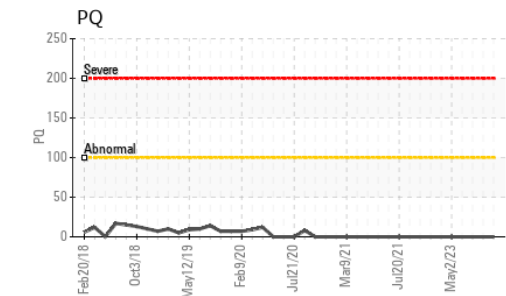
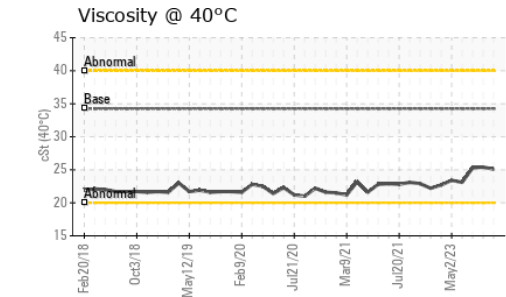
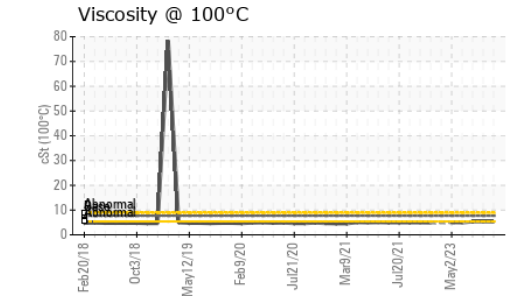
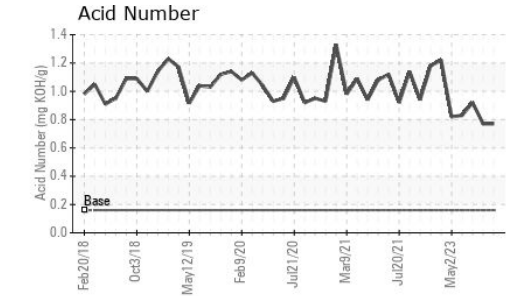
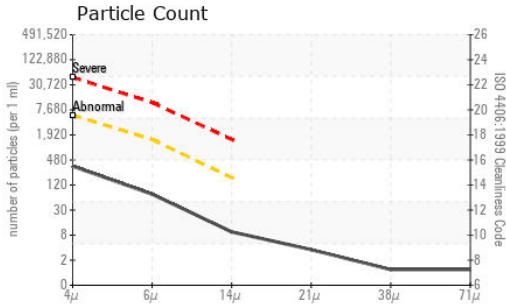
ADDITIVES method limit/base current history1 history2

| | | | | | |
|------------|-----|-------------------|--------------|-----|-----|
| Boron | ppm | ASTM D5185(m) 130 | 97 | 100 | 94 |
| Barium | ppm | ASTM D5185(m) 1.0 | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) 0.0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) 1.0 | 2 | 2 | 2 |
| Calcium | ppm | ASTM D5185(m) 20 | 75 | 75 | 75 |
| Phosphorus | ppm | ASTM D5185(m) 280 | 235 | 238 | 237 |
| Zinc | ppm | ASTM D5185(m) 10 | 41 | 38 | 38 |
| Sulfur | ppm | ASTM D5185(m) 440 | 733 | 778 | 775 |
| Lithium | ppm | ASTM D5185(m) | <1 | <1 | <1 |

CONTAMINANTS method limit/base current history1 history2

| | | | | | |
|-----------|-----|-------------------|--------------|----|----|
| Silicon | ppm | ASTM D5185(m) >15 | 1 | 2 | 2 |
| Sodium | ppm | ASTM D5185(m) | <1 | <1 | <1 |
| Potassium | ppm | ASTM D5185(m) >20 | <1 | <1 | <1 |

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : **02626064**
Unique Number : 5759196
Test Package : MAR 2 (Additional Tests: KV100, PQ, VI)
Received : 02 Apr 2024
Tested : 03 Apr 2024
Diagnosed : 03 Apr 2024 - Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

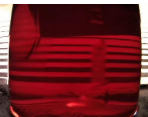


Suncor - Terra Nova Projects
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 St. John's, NL
 CA A1C 1B6
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| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--------------|-----------|-----------------|------------|----------|----------|
| Particles >4µm | ASTM D7647 | >5000 | 300 | ● 7582 | 718 | |
| Particles >6µm | ASTM D7647 | >1300 | 64 | ▲ 2871 | 207 | |
| Particles >14µm | ASTM D7647 | >160 | 8 | ▲ 360 | 18 | |
| Particles >21µm | ASTM D7647 | >40 | 3 | ▲ 126 | 4 | |
| Particles >38µm | ASTM D7647 | >10 | 1 | 14 | 1 | |
| Particles >71µm | ASTM D7647 | >3 | 1 | 1 | 1 | |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | 15/13/10 | ▲ 20/19/16 | 17/15/11 | |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.16 | 0.77 | 0.77 | 0.92 |

| 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 | VLITE | 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 D7279(m) | 34.26 | 25.1 | 25.4 | 25.3 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 7.7 | 5.2 | 5.3 | 5.3 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 210 | 143 | 147 | 148 |

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