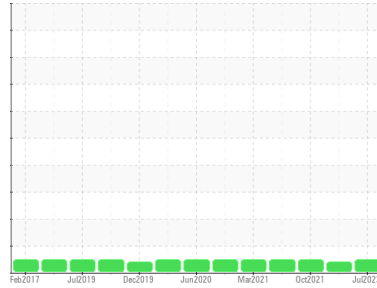




Machine Id
IMM #20 (S/N 2647427)

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX AW 46 (4000 LTR)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.

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 acceptable for the time in service (unconfirmed).

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | PC0076922 | PC0062450 | PC0052979 |
| Sample Date | Client Info | | 11 Jul 2023 | 21 Sep 2022 | 28 Oct 2021 |
| Machine Age | mths | Client Info | 0 | 0 | 0 |
| Oil Age | mths | Client Info | 0 | 72 | 0 |
| Oil Changed | Client Info | | N/A | Not Changd | N/A |
| Sample Status | | | NORMAL | MARGINAL | NORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) >20 | <1 | <1 | <1 |
| Chromium | ppm | ASTM D5185(m) >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) >20 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) >20 | 0 | 0 | 0 |
| Lead | ppm | ASTM D5185(m) >20 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185(m) >20 | <1 | <1 | 1 |
| Tin | ppm | ASTM D5185(m) >20 | 0 | 0 | 0 |
| 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) 0 | <1 | <1 | <1 |
| Barium | ppm | ASTM D5185(m) 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) 0 | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) 0 | 2 | 0 | 0 |
| Calcium | ppm | ASTM D5185(m) 50 | 38 | 39 | 41 |
| Phosphorus | ppm | ASTM D5185(m) 330 | 357 | 351 | 363 |
| Zinc | ppm | ASTM D5185(m) 430 | 393 | 380 | 421 |
| Sulfur | ppm | ASTM D5185(m) 760 | 730 | 727 | 755 |
| Lithium | ppm | ASTM D5185(m) | <1 | <1 | <1 |

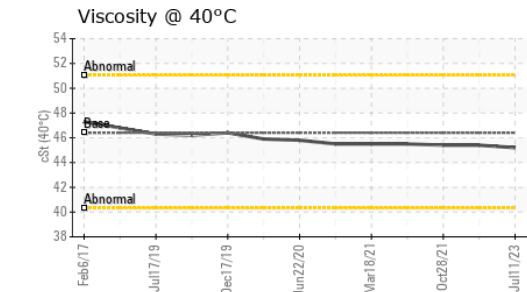
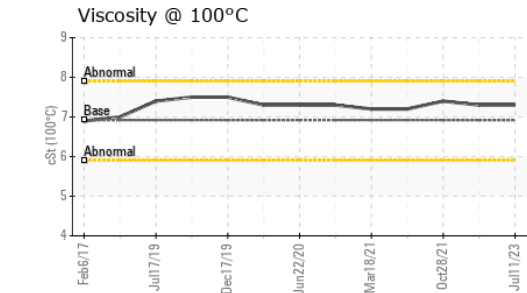
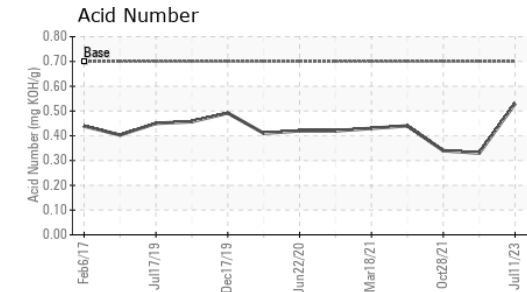
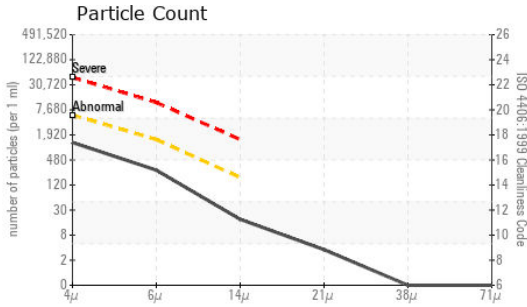
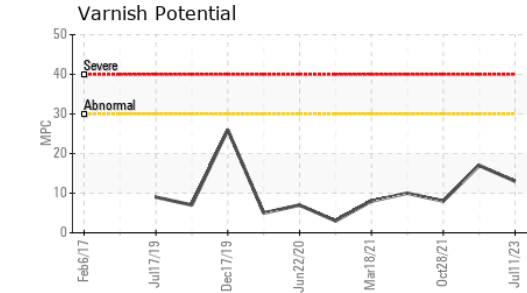
CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185(m) >15 | 0 | 0 | 0 |
| Sodium | ppm | ASTM D5185(m) | <1 | 0 | 0 |
| Potassium | ppm | ASTM D5185(m) >20 | <1 | 0 | <1 |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 | >5000 | 1106 | 988 | 381 |
| Particles >6µm | ASTM D7647 | >1300 | 241 | 262 | 108 |
| Particles >14µm | ASTM D7647 | >160 | 16 | 12 | 9 |
| Particles >21µm | ASTM D7647 | >40 | 3 | 3 | 2 |
| Particles >38µm | ASTM D7647 | >10 | 0 | 0 | 0 |
| Particles >71µm | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | 17/15/11 | 17/15/11 | 16/14/10 |

OIL ANALYSIS REPORT

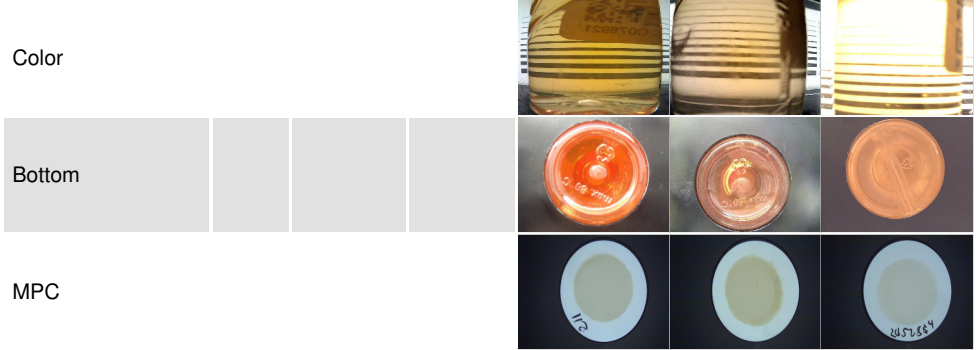


| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-----------------------|----------|----------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D974* | 0.70 | 0.53 | 0.33 | 0.34 |
| MPC Varnish Potential | Scale | ASTM D7843(m)* | >15 | 13 | ▲ 17 | 8 |

| 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 | VLITE | 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) | 46.4 | 45.2 | 45.4 | 45.4 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 6.92 | 7.3 | 7.3 | 7.4 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 104 | 123 | 122 | 126 |

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0076922
Lab Number : **02571211**
Unique Number : 5616262
Test Package : IND 2 (Additional Tests: KV100, MPC, TAN Man, VI)

ROPAK PACKAGING CANADA
 2240 WYECROFT RD
 OAKVILLE, ON
 CA L6L 6M1
 Contact: Frank Maio
 Frank.Maio@mauserpackaging.com
 T: (905)465-9019
 F:

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.

MPC (Varnish Test)



Sample Color & Clarity



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