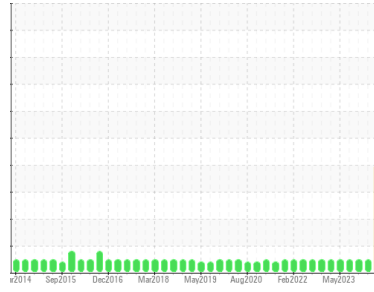


Area
TEAM 3
Machine Id
166161
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (113 LTR)

Sample Rating Trend



WATER



DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you use off-line filtration with water adsorbent filters to attempt to remove the water from this oil. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil. There is a moderate concentration of water present in the oil.

Fluid Condition

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

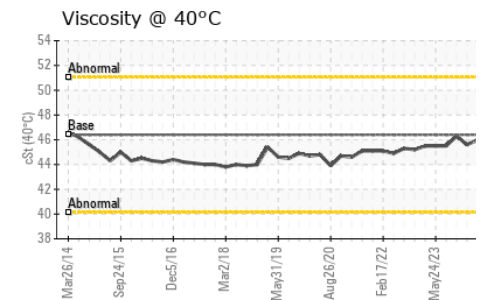
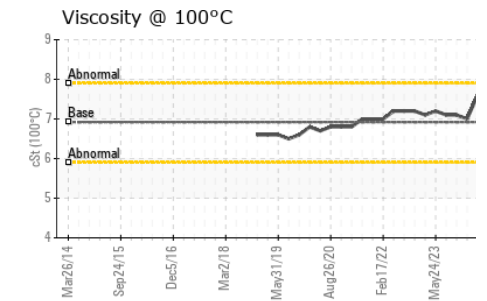
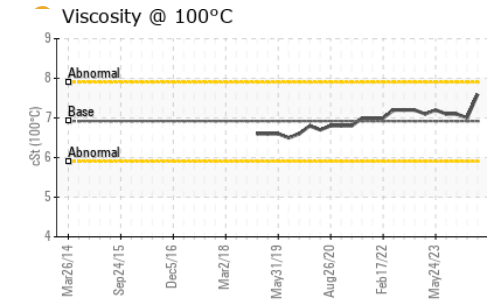
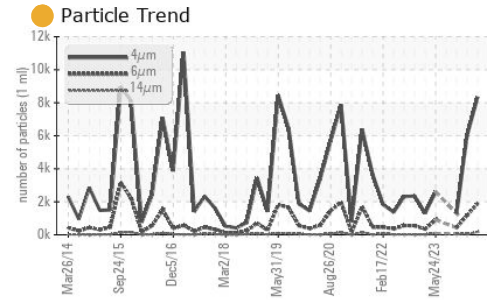
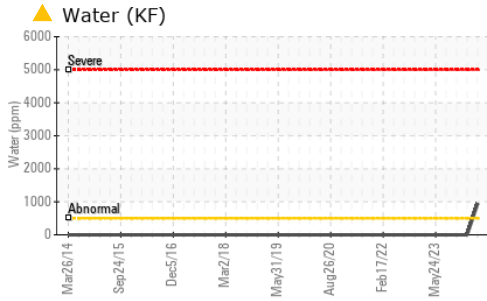
| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|--------------------|-------------|-------------|------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | | PC0078755 | PC0076967 | PC0069908 |
| Sample Date | Client Info | | | 28 May 2024 | 14 Jan 2024 | 05 Oct 2023 |
| Machine Age | mths | Client Info | | 0 | 0 | 0 |
| Oil Age | mths | Client Info | | 0 | 0 | 0 |
| Oil Changed | Client Info | | | N/A | N/A | N/A |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|---------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) | >20 | 3 | 4 | 8 |
| Chromium | ppm | ASTM D5185(m) | >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >20 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 0 | <1 | 0 |
| Lead | ppm | ASTM D5185(m) | >20 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185(m) | >20 | <1 | <1 | 2 |
| 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 | 0 | 0 | <1 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 0 | 0 | <1 | 0 |
| Calcium | ppm | ASTM D5185(m) | 50 | 39 | 44 | 36 |
| Phosphorus | ppm | ASTM D5185(m) | 330 | 341 | 337 | 332 |
| Zinc | ppm | ASTM D5185(m) | 430 | 431 | 408 | 409 |
| Sulfur | ppm | ASTM D5185(m) | 760 | 793 | 921 | 1007 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|---------------|------------|----------------|----------|----------|
| Silicon | ppm | ASTM D5185(m) | >15 | 0 | <1 | <1 |
| Sodium | ppm | ASTM D5185(m) | | <1 | 0 | <1 |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | <1 | 0 |
| Water | % | ASTM D6304* | >0.05 | ▲ 0.094 | --- | --- |
| ppm Water | ppm | ASTM D6304* | >500 | ▲ 945 | --- | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-------------------|----------|----------|
| Particles >4µm | | ASTM D7647 | | 8342 | 6009 | 1293 |
| Particles >6µm | | ASTM D7647 | >1300 | ● 1895 | 1180 | 424 |
| Particles >14µm | | ASTM D7647 | >160 | ● 182 | 41 | 45 |
| Particles >21µm | | ASTM D7647 | >40 | ● 58 | 16 | 9 |
| Particles >38µm | | ASTM D7647 | >10 | 9 | 4 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/14 | ● 20/18/15 | 20/17/13 | 17/16/13 |



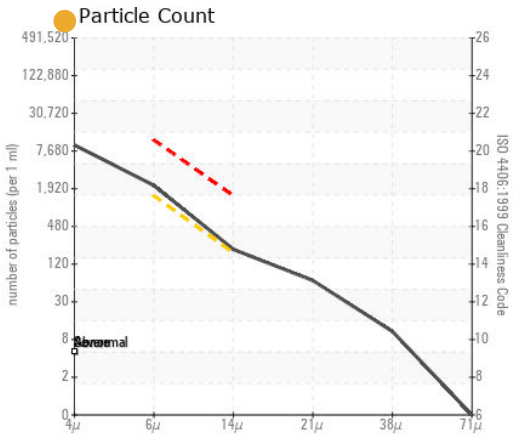
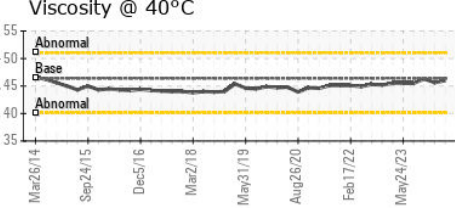
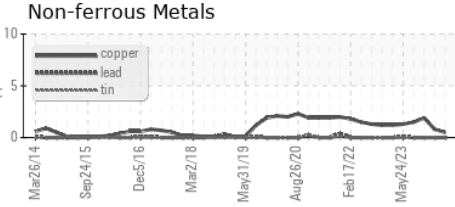
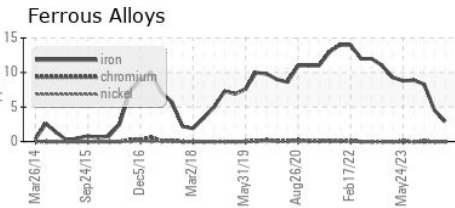
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | Visual* | NONE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | NONE |
| Silt | scalar | Visual* | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | NONE | NONE |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | NORML |
| Odor | scalar | Visual* | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.05 | NEG | NEG |
| Free Water | scalar | Visual* | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|----------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D7279(m) | 46.4 | 45.6 | 46.3 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 6.92 | 7 | 7.1 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 104 | 110 | 111 |

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



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0078755 **Received** : 07 Jun 2024
Lab Number : 02640507 **Tested** : 10 Jun 2024
Unique Number : 5789669 **Diagnosed** : 10 Jun 2024 - Kevin Marson
Test Package : MOB 2 (Additional Tests: KF, KV100, VI)

Dryden Fibre
 Box 3001, 1 Duke Street
 Dryden, ON
 CA P8N 2Z7
 Contact: Adebukola Adekanye
 aadekanye@drydenfibre.ca
 T: (807)223-9950
 F: (807)223-9176

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.