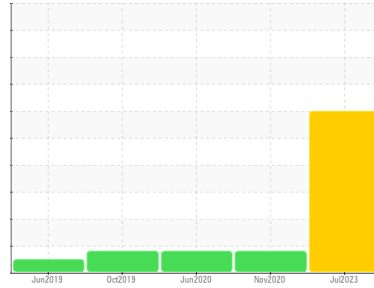




Machine Id
SM-CYCLO COMP 542-92Y-WF-423 SP-01-0230-WF - WAVE FEEDER INTERIEUR (S/N 2624)

Component
Reduction Gear

Fluid
PETRO CANADA ENDURATEX EP 150 (16 LTR)



DIAGNOSIS

Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

Iron ppm levels are severe. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | PC0051119 | PC0022023 | PC0022021 |
| Sample Date | Client Info | 11 Jul 2023 | 09 Nov 2020 | 15 Jun 2020 |
| Machine Age | hrs | 24000 | 24000 | 22000 |
| Oil Age | hrs | 0 | 4000 | 2000 |
| Oil Changed | Client Info | N/A | Not Changd | Not Changd |
| Sample Status | | SEVERE | ABNORMAL | ABNORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|-----------|-------------|------------------------------|--------------|----------|----|
| PQ | ASTM D8184* | 14 | --- | --- | |
| Iron | ppm | ASTM D5185(m) >150 | 368 | 89 | 74 |
| Chromium | ppm | ASTM D5185(m) >10 | 1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185(m) | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185(m) | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) >25 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) >100 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185(m) >50 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185(m) >10 | 0 | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) >5 | 0 | 0 | <1 |
| 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) 55 | 37 | 53 | 60 |
| Barium | ppm | ASTM D5185(m) 0 | <1 | <1 | <1 |
| Molybdenum | ppm | ASTM D5185(m) 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) 0 | 3 | <1 | <1 |
| Magnesium | ppm | ASTM D5185(m) 2 | <1 | 0 | <1 |
| Calcium | ppm | ASTM D5185(m) 6 | 11 | 6 | 5 |
| Phosphorus | ppm | ASTM D5185(m) 250 | 246 | 235 | 245 |
| Zinc | ppm | ASTM D5185(m) 3 | 4 | 2 | 2 |
| Sulfur | ppm | ASTM D5185(m) 7500 | 4863 | 5133 | 5348 |
| Lithium | ppm | ASTM D5185(m) | <1 | <1 | <1 |

CONTAMINANTS

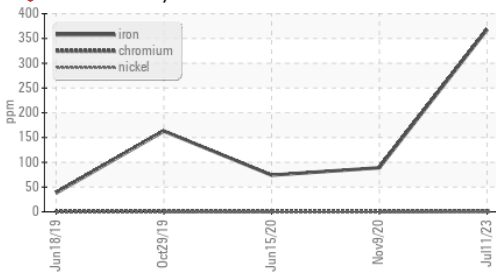
| method | limit/base | current | history1 | history2 | |
|-----------|------------|-----------------------------|--------------|----------|---|
| Silicon | ppm | ASTM D5185(m) >50 | 6 | 3 | 2 |
| Sodium | ppm | ASTM D5185(m) | <1 | <1 | 0 |
| Potassium | ppm | ASTM D5185(m) >20 | 1 | 0 | 0 |

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 | VLITE |
| 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 |
| Free Water | scalar | Visual* | NEG | NEG | NEG |

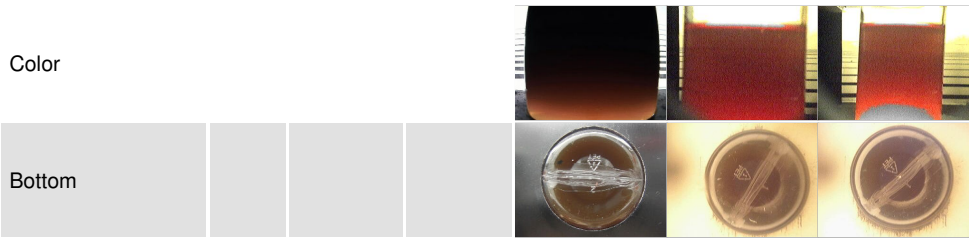
OIL ANALYSIS REPORT

Ferrous Alloys

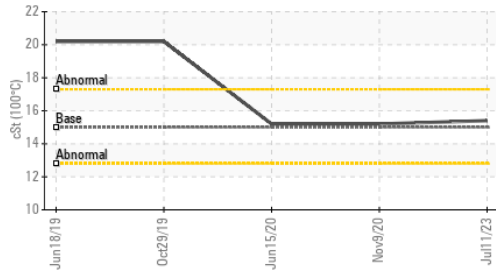


| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|----------------------|-------|---------------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D7279(m) | 150.0 | 152 | ▲ 155 | ▲ 155 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.0 | 15.4 | ▲ 15.2 | ▲ 15.2 |
| Viscosity Index (VI) | Scale | ASTM D2270* | 100 | 102 | 98 | 98 |

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

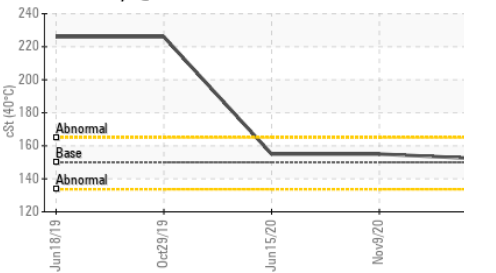


Viscosity @ 100°C

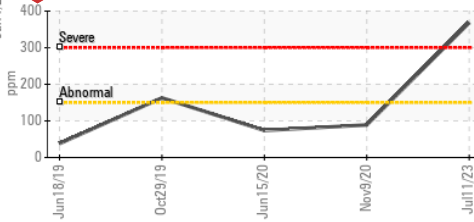


GRAPHS

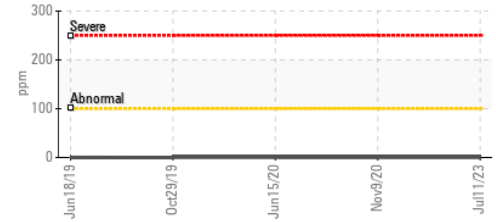
Viscosity @ 40°C



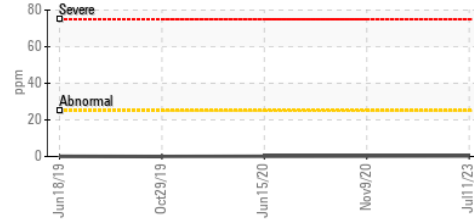
Iron (ppm)



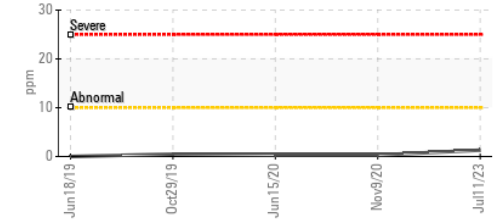
Lead (ppm)



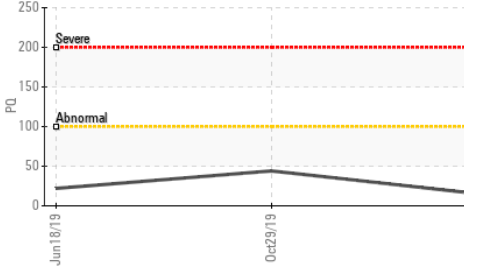
Aluminum (ppm)



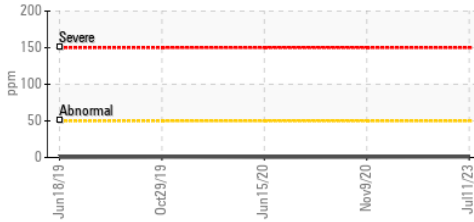
Chromium (ppm)



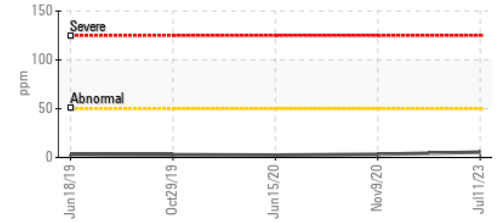
PQ



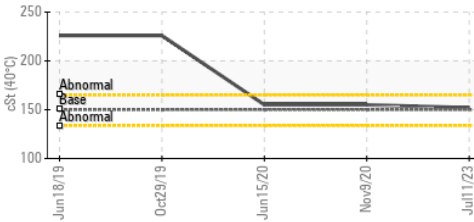
Copper (ppm)



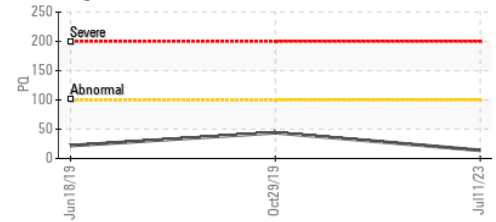
Silicon (ppm)



Viscosity @ 40°C



PQ



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC0051119 **Received** : 13 Jul 2023
Lab Number : 02569819 **Diagnosed** : 14 Jul 2023
Unique Number : 5606865 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: KV100, PQ, VI)

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.

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 CA 60R 3X0

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 T: (418)356-7693
 F: x: