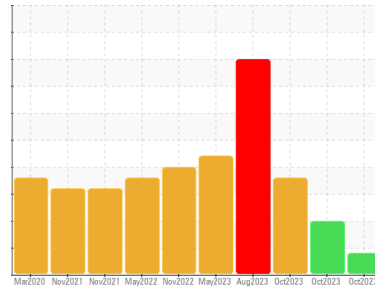




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id
9215
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX MV 32 (--- GAL)

DIAGNOSIS

Recommendation

Nous avons pris note que le filtre a été remplacé au moment de l'échantillonnage. Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

Wear

Les taux d'usure de tous les composants sont normaux.

Contamination

Il y a une quantité modérée de particules (de 4 à 14 microns) dans l'huile.

Fluid Condition

L'huile peut encore servir si la contamination peut être réduite à un niveau acceptable.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | GFL0096388 | GFL0096417 | GFL0096433 |
| Sample Date | Client Info | | 30 Oct 2023 | 25 Oct 2023 | 20 Oct 2023 |
| Machine Age | kms | Client Info | 458010 | 456887 | 455724 |
| Oil Age | kms | Client Info | 0 | 0 | 0 |
| Oil Changed | Client Info | | Changed | Not Changd | N/A |
| Sample Status | | | ABNORMAL | SEVERE | SEVERE |

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185(m) | >50 | 4 | 5 | 8 |
| Chromium | ppm | ASTM D5185(m) | >10 | 2 | 4 | 4 |
| Nickel | ppm | ASTM D5185(m) | >4 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | <1 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >5 | 0 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) | >4 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185(m) | >15 | <1 | <1 | <1 |
| Tin | ppm | ASTM D5185(m) | >4 | 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 | <1 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | 1 | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 0 | 10 | 9 | 10 |
| Calcium | ppm | ASTM D5185(m) | 50 | 65 | 64 | 64 |
| Phosphorus | ppm | ASTM D5185(m) | 330 | 380 | 334 | 358 |
| Zinc | ppm | ASTM D5185(m) | 430 | 489 | 429 | 463 |
| Sulfur | ppm | ASTM D5185(m) | 760 | 887 | 818 | 850 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

CONTAMINANTS

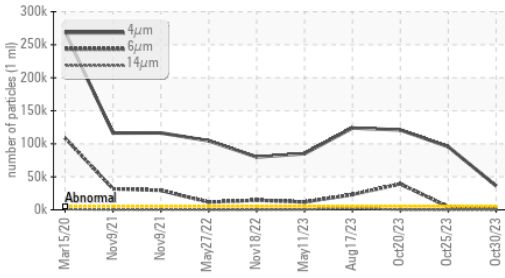
| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|--------------|----------|----|
| Silicon | ppm | ASTM D5185(m) | >15 | <1 | 1 | 2 |
| Sodium | ppm | ASTM D5185(m) | | 2 | 2 | 2 |
| Potassium | ppm | ASTM D5185(m) | >20 | 0 | 0 | <1 |

FLUID CLEANLINESS

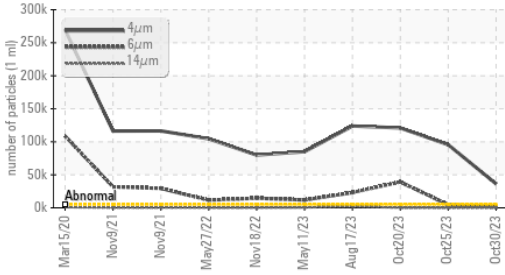
| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-------------------|------------|------------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 36335 | ● 95518 | ● 120948 |
| Particles >6µm | ASTM D7647 | >1300 | 1118 | ▲ 4748 | ● 39159 |
| Particles >14µm | ASTM D7647 | >160 | 71 | 48 | 151 |
| Particles >21µm | ASTM D7647 | >40 | 20 | 10 | 19 |
| Particles >38µm | ASTM D7647 | >10 | 2 | 1 | 1 |
| Particles >71µm | ASTM D7647 | >3 | 1 | 0 | 0 |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 22/17/13 | ● 24/19/13 | ● 24/22/14 |

OIL ANALYSIS REPORT

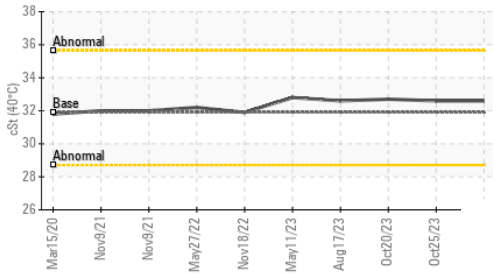
▲ Particle Trend



▲ Particle Trend



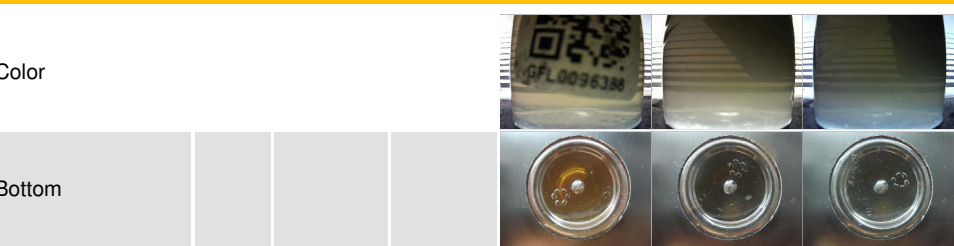
Viscosity @ 40°C



| 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 | VLITE |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE |
| Appearance | scalar | Visual* | NORML | NORML | NORML |
| Odor | scalar | Visual* | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.1 | NEG | NEG |
| Free Water | scalar | Visual* | | NEG | NEG |

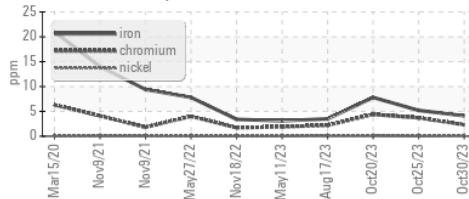
| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D7279(m) | 31.9 | 32.6 | 32.7 |

SAMPLE IMAGES

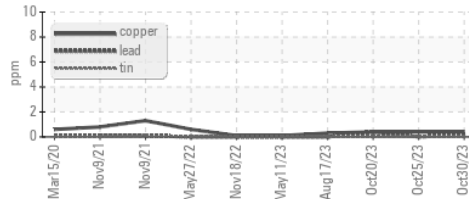


GRAPHS

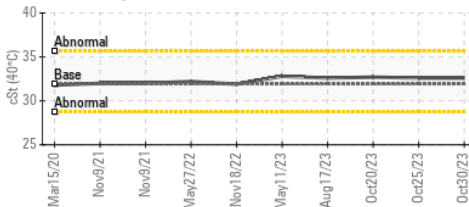
Ferrous Alloys



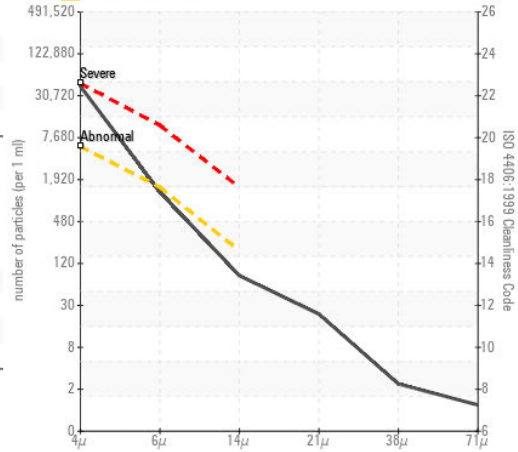
Non-ferrous Metals



Viscosity @ 40°C



▲ Particle Count



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 747 - GMA - Solid Waste
Sample No. : GFL0096388 **Received** : 02 Nov 2023
Lab Number : 02593666 **Diagnosed** : 03 Nov 2023
Unique Number : 5670745 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: PrtCount)

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.

Contact: Steve Voyer
 svoyer@matrec.ca

T:
F: