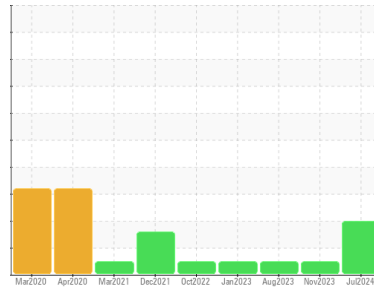




OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id
OR500
 Component
Hydraulic System
 Fluid
PETRO CANADA HYDREX AW 46 (244 LTR)

DIAGNOSIS

Recommendation
 The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
 All component wear rates are normal.

Contamination
 There is a moderate amount of silt (particulates < 14 microns in size) 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 | | | GFL0124588 | GFL0092236 | GFL0087406 |
| Sample Date | Client Info | | | 08 Jul 2024 | 15 Nov 2023 | 02 Aug 2023 |
| Machine Age | hrs | Client Info | | 18566 | 18038 | 17633 |
| Oil Age | hrs | Client Info | | 16763 | 1000 | 1398 |
| Oil Changed | Client Info | | | Not Chngd | Not Chngd | Not Chngd |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water | WC Method | | >0.1 | NEG | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|---------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) | >20 | 5 | 4 | 3 |
| Chromium | ppm | ASTM D5185(m) | >10 | 3 | 2 | 2 |
| Nickel | ppm | ASTM D5185(m) | >10 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >10 | <1 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) | >10 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) | >75 | 1 | 1 | 1 |
| Tin | ppm | ASTM D5185(m) | >10 | 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 |

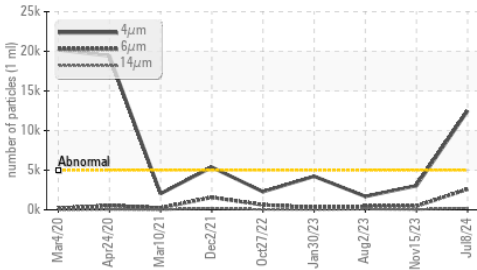
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|---------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185(m) | 0 | <1 | <1 | <1 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 0 | 4 | 2 | 2 |
| Calcium | ppm | ASTM D5185(m) | 50 | 134 | 116 | 130 |
| Phosphorus | ppm | ASTM D5185(m) | 330 | 621 | 617 | 671 |
| Zinc | ppm | ASTM D5185(m) | 430 | 794 | 810 | 825 |
| Sulfur | ppm | ASTM D5185(m) | 760 | 1466 | 1447 | 1423 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

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

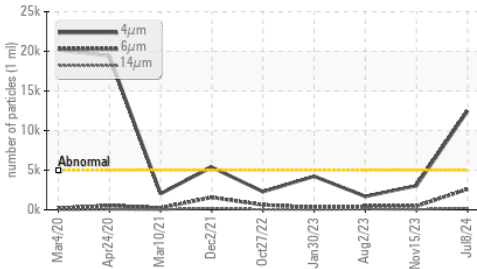
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--------------|-----------|-------------------|----------|----------|----------|
| Particles >4µm | ASTM D7647 | >5000 | ▲ 12492 | 3035 | 1691 | |
| Particles >6µm | ASTM D7647 | >1300 | ▲ 2615 | 471 | 450 | |
| Particles >14µm | ASTM D7647 | >160 | ● 227 | 39 | 79 | |
| Particles >21µm | ASTM D7647 | >40 | ● 74 | 9 | 27 | |
| Particles >38µm | ASTM D7647 | >10 | 5 | 1 | 1 | |
| Particles >71µm | ASTM D7647 | >3 | 1 | 1 | 0 | |
| Oil Cleanliness | ISO 4406 (c) | >19/17/14 | ▲ 21/19/15 | 19/16/12 | 18/16/13 | |

OIL ANALYSIS REPORT

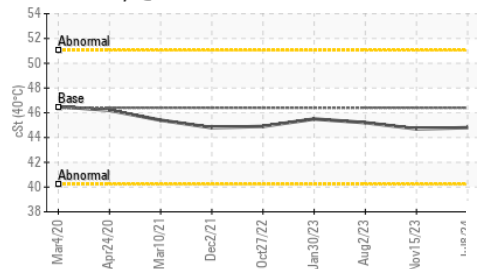
▲ Particle Trend



▲ Particle Trend



Viscosity @ 40°C



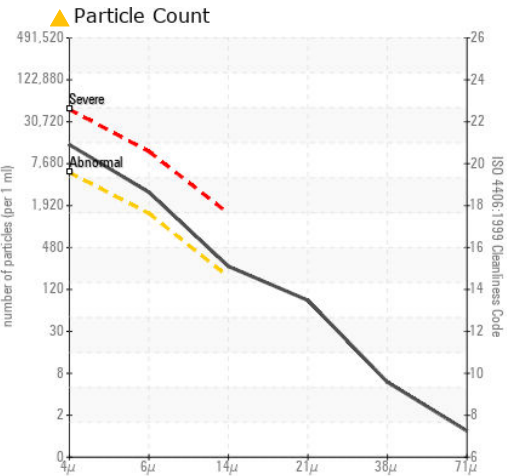
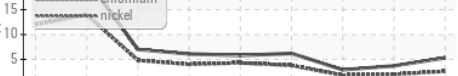
| VISUAL | method | limit/base | current | history1 | history2 | |
|------------------|--------|------------|---------|----------|----------|-------|
| White Metal | scalar | Visual* | NONE | VLITE | NONE | NONE |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | NONE |
| Precipitate | scalar | Visual* | NONE | NONE | NONE | NONE |
| Silt | scalar | Visual* | NONE | NONE | NONE | NONE |
| Debris | scalar | Visual* | NONE | NONE | NONE | 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* | >0.1 | 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 | 44.8 | 44.7 | 45.2 |

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



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0124588
Lab Number : 02647353
Unique Number : 5812905
Test Package : MOB 1 (Additional Tests : Bottom, PrtCount)

GFL Environmental - 720 - Lafleche - Landfill
 17125 Lafleche Road,
 Moose Creek, ON
 CA K0C 1W0
 Contact: Charles Bergeron
 cbergeron@gflenv.com
 T: (613)538-4853
 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.