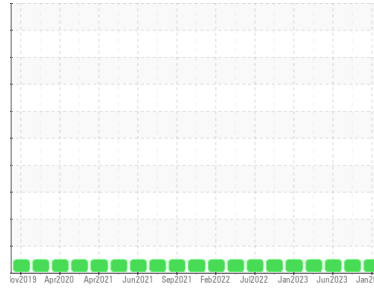




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
401215
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | GFL0090388 | GFL0090410 | GFL0071498 |
| Sample Date | Client Info | | 15 Jan 2024 | 02 Nov 2023 | 23 Jun 2023 |
| Machine Age | kms | Client Info | 441037 | 423725 | 401215 |
| Oil Age | kms | Client Info | 0 | 0 | 401215 |
| Oil Changed | Client Info | | Changed | N/A | N/A |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

CONTAMINATION

| | method | limit/base | current | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Water | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | WC Method | | NEG | NEG | NEG |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|--------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185(m) >120 | 9 | 8 | 6 |
| Chromium | ppm | ASTM D5185(m) >20 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) >15 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) >3 | 0 | <1 | <1 |
| Aluminum | ppm | ASTM D5185(m) >20 | 2 | <1 | <1 |
| Lead | ppm | ASTM D5185(m) >40 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185(m) >330 | 1 | 1 | <1 |
| Tin | ppm | ASTM D5185(m) >15 | <1 | 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 | 2 | 2 | 2 |
| Barium | ppm | ASTM D5185(m) 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) 60 | 58 | 60 | 58 |
| Manganese | ppm | ASTM D5185(m) 0 | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185(m) 1010 | 962 | 965 | 971 |
| Calcium | ppm | ASTM D5185(m) 1070 | 1041 | 1044 | 1044 |
| Phosphorus | ppm | ASTM D5185(m) 1150 | 984 | 950 | 1035 |
| Zinc | ppm | ASTM D5185(m) 1270 | 1155 | 1175 | 1174 |
| Sulfur | ppm | ASTM D5185(m) 2060 | 2576 | 2391 | 2474 |
| Lithium | ppm | ASTM D5185(m) | <1 | <1 | <1 |

CONTAMINANTS

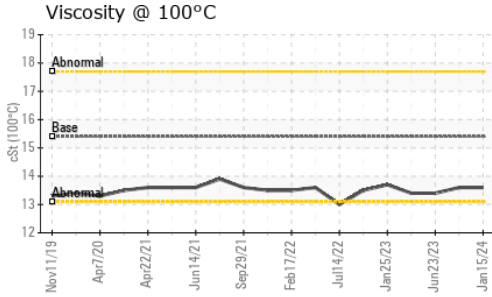
| | method | limit/base | current | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185(m) >25 | 2 | 3 | 3 |
| Sodium | ppm | ASTM D5185(m) | 2 | 3 | 3 |
| Potassium | ppm | ASTM D5185(m) >20 | <1 | 0 | <1 |

INFRA-RED

| | method | limit/base | current | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot % | % | ASTM D7844* >4 | 0.3 | 0.3 | 0 |
| Nitration | Abs/cm | ASTM D7624* >20 | 7.7 | 7.0 | 6.7 |
| Sulfation | Abs./1mm | ASTM D7415* >30 | 19.5 | 19.2 | 18.8 |



OIL ANALYSIS REPORT



FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|-----------|----------------------|---------|----------|----------|
| Oxidation | Abs./1mm ASTM D7414* | >25 | 14.8 | 15.1 |

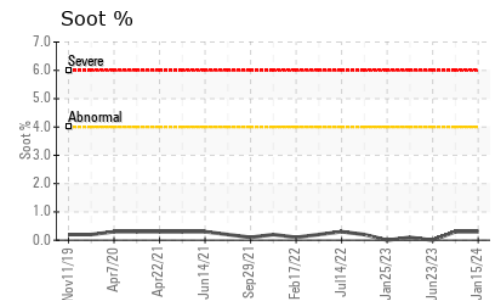
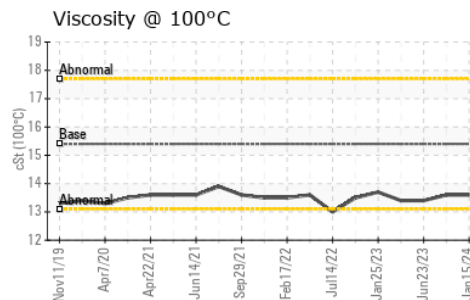
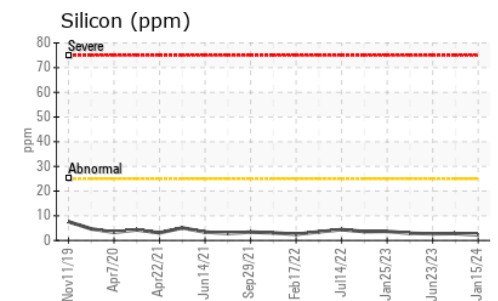
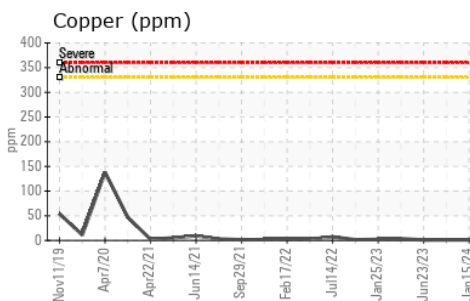
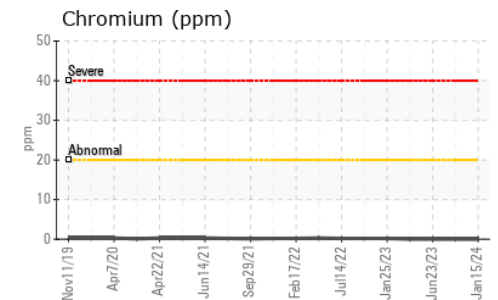
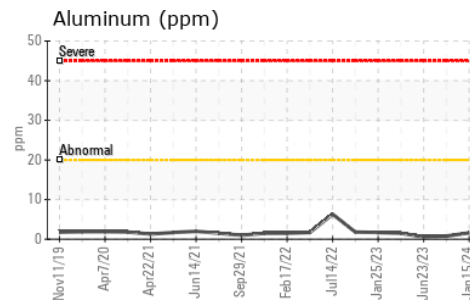
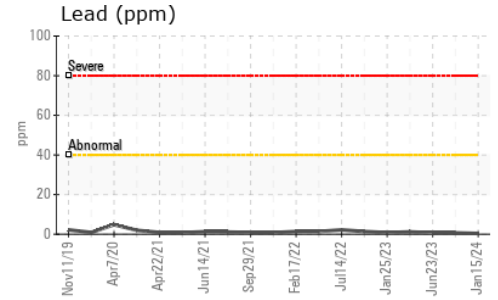
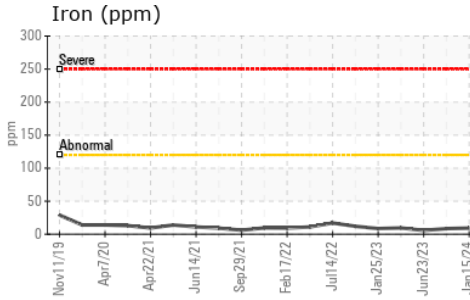
VISUAL

| method | limit/base | current | history1 | history2 |
|------------------|----------------|---------|----------|----------|
| Emulsified Water | scalar Visual* | >0.2 | NEG | NEG |
| Free Water | scalar Visual* | NEG | NEG | NEG |

FLUID PROPERTIES

| method | limit/base | current | history1 | history2 |
|--------------|-------------------|---------|----------|----------|
| Visc @ 100°C | cSt ASTM D7279(m) | 15.4 | 13.6 | 13.4 |

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
 Sample No. : GFL0090388
 Lab Number : 02609202
 Unique Number : 5710288
 Test Package : MOB 1

GFL Environmental - 216M
 2475 Beryl Drive
 Oakville, ON
 CA L6J 7X4
 Contact: Matthew Gunness
 mgunness@gflenv.com

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.

T:
F: