



| | |
|-----------------|---------------|
| WEAR | NORMAL |
| CONTAMINATION | NORMAL |
| FLUID CONDITION | NORMAL |



Area
GFL2160
Machine Id
428064
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0110268 | GFL0099666 | GFL0087412 |
| Sample Date | | Client Info | | 08 Feb 2024 | 16 Nov 2023 | 29 Jun 2023 |
| Machine Age | hrs | Client Info | | 13071 | 445336 | 418801 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|----------|-----|---------------|------|--------------|----|----|
| Iron | ppm | ASTM D5185(m) | >65 | 12 | 12 | 15 |
| Chromium | ppm | ASTM D5185(m) | >5 | <1 | <1 | 1 |
| Nickel | ppm | ASTM D5185(m) | >3 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | >5 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >2 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >35 | 6 | 5 | 6 |
| Lead | ppm | ASTM D5185(m) | >10 | <1 | <1 | 0 |
| Copper | ppm | ASTM D5185(m) | >180 | 2 | 4 | 4 |
| Tin | ppm | ASTM D5185(m) | >8 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

CONTAMINATION

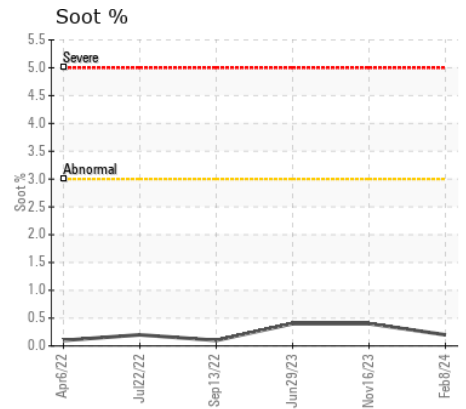
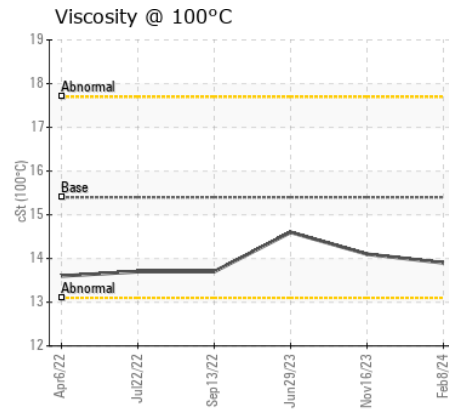
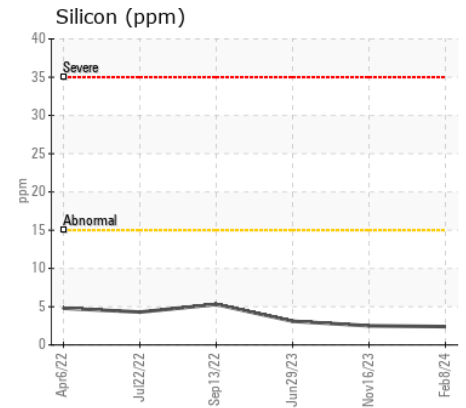
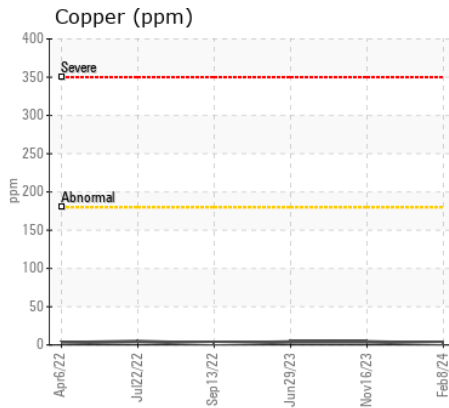
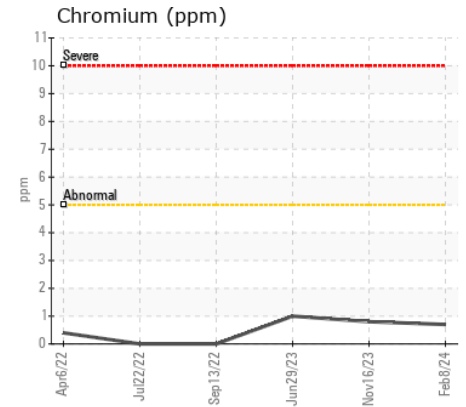
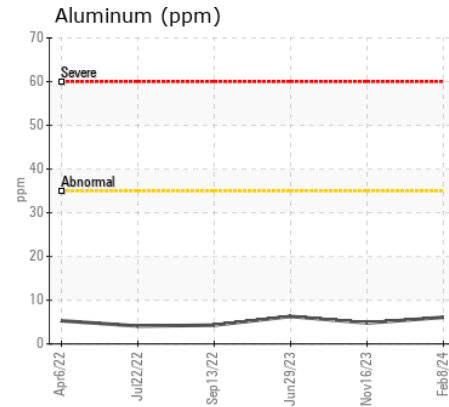
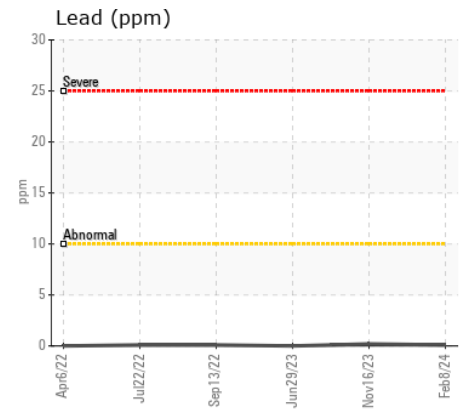
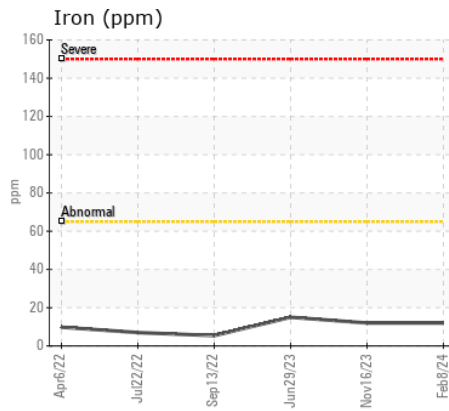
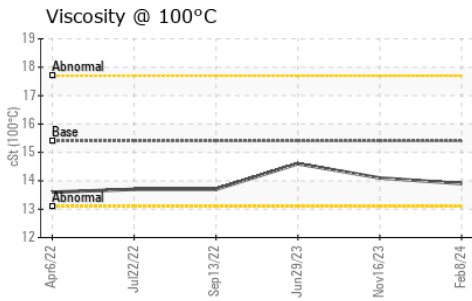
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|------|------|
| Silicon | ppm | ASTM D5185(m) | >15 | 2 | 2 | 3 |
| Potassium | ppm | ASTM D5185(m) | >20 | 3 | 3 | 5 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | 0.0 |
| Soot % | % | ASTM D7844* | >3 | 0.2 | 0.4 | 0.4 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 7.1 | 8.3 | 8.2 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 18.8 | 19.3 | 20.1 |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

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

| | | | | | | |
|--------------|----------|---------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185(m) | | 1 | 2 | 2 |
| Boron | ppm | ASTM D5185(m) | 0 | 2 | 2 | 8 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 60 | 58 | 60 | 61 |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185(m) | 1010 | 969 | 951 | 957 |
| Calcium | ppm | ASTM D5185(m) | 1070 | 1058 | 1001 | 1040 |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 1037 | 960 | 1033 |
| Zinc | ppm | ASTM D5185(m) | 1270 | 1177 | 1190 | 1168 |
| Sulfur | ppm | ASTM D5185(m) | 2060 | 2753 | 2391 | 2464 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 14.4 | 16.0 | 15.2 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.4 | 13.9 | 14.1 | 14.6 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0110268
Lab Number : 02616141
Unique Number : 5733251
Test Package : MOB 1
Received : 16 Feb 2024
Tested : 16 Feb 2024
Diagnosed : 16 Feb 2024 - Kevin Marson

GFL Environmental - 252 - GTA Hauling
 3668 Weston Road
 North York, ON
 CA M9L 1W2
 Contact: Amanda Cipollone
 acipollone@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: