



Area
GFL216
Machine Id
911022
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0121955 | GFL0107346 | GFL0108430 |
| Sample Date | | Client Info | | 17 Jun 2024 | 03 Apr 2024 | 18 Jan 2024 |
| Machine Age | kms | Client Info | | 107612 | 0 | 97743 |
| Oil Age | kms | Client Info | | 0 | 0 | 0 |
| Filter Age | kms | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | N/A | Changed |
| Filter Changed | | Client Info | | Changed | N/A | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|----------|-----|---------------|------|--------------|----|----|
| Iron | ppm | ASTM D5185(m) | >120 | 6 | 6 | 6 |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185(m) | >5 | <1 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | >2 | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >20 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185(m) | >40 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185(m) | >330 | <1 | <1 | 1 |
| Tin | ppm | ASTM D5185(m) | >15 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

CONTAMINATION

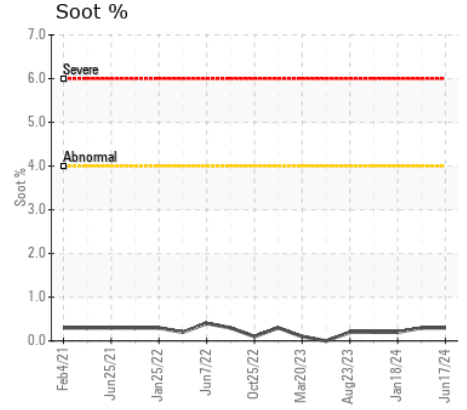
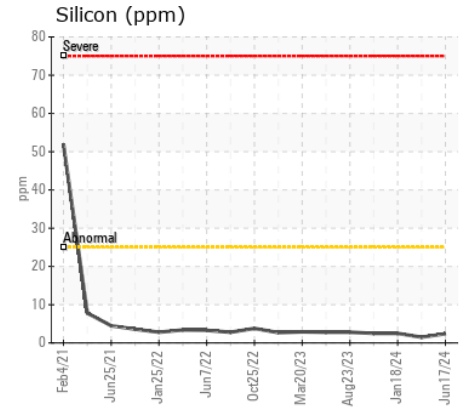
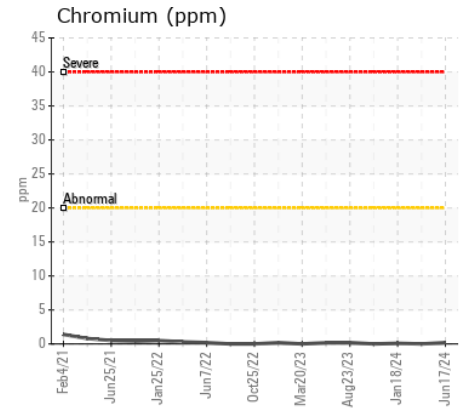
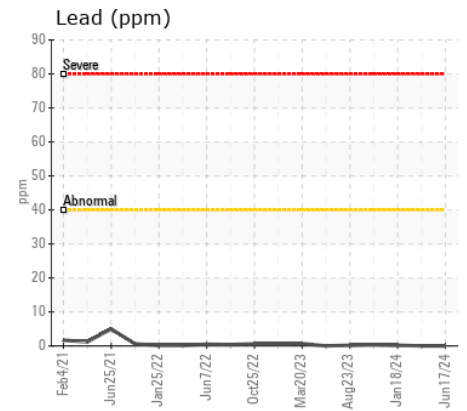
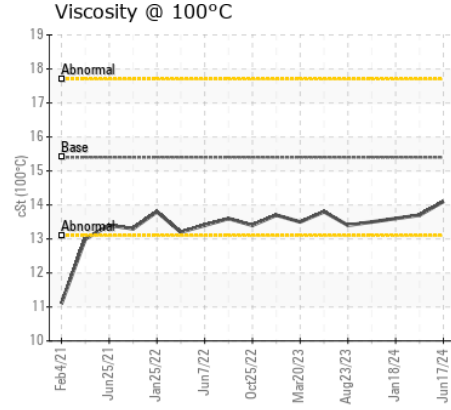
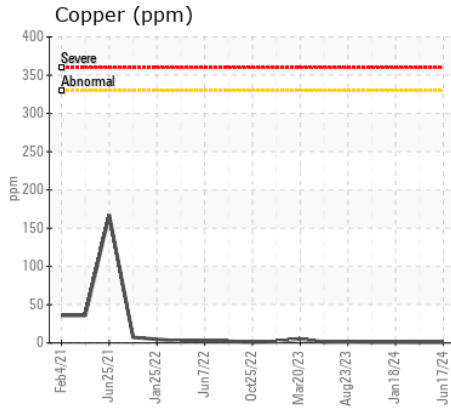
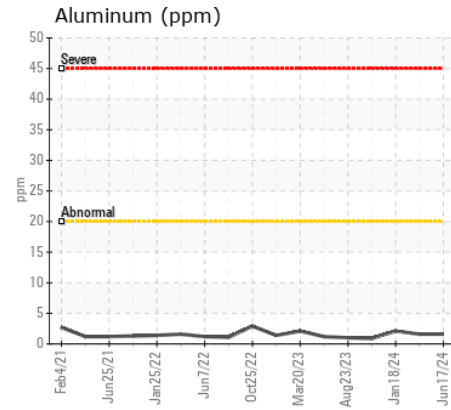
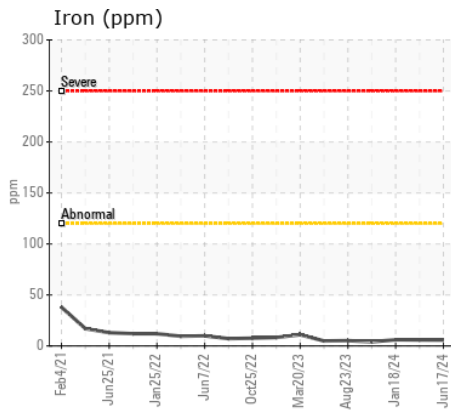
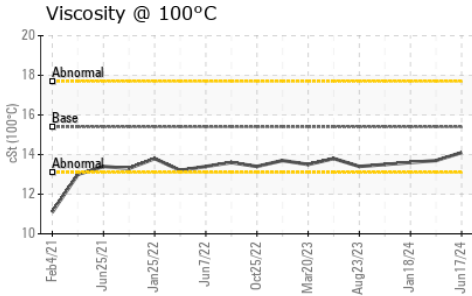
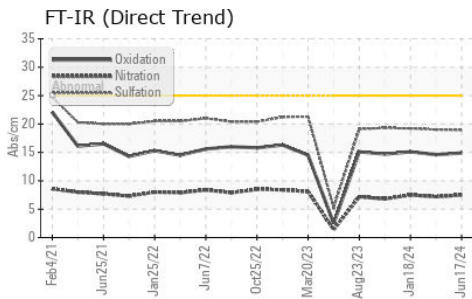
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|------|------|
| Silicon | ppm | ASTM D5185(m) | >25 | 2 | 2 | 2 |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | 1 | 2 |
| 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 |
| Soot % | % | ASTM D7844* | >4 | 0.3 | 0.3 | 0.2 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 7.5 | 7.2 | 7.5 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 18.9 | 19.0 | 19.2 |
| 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) | | 3 | 2 | 3 |
| Boron | ppm | ASTM D5185(m) | 0 | 3 | 6 | 2 |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185(m) | 60 | 60 | 59 | 57 |
| Manganese | ppm | ASTM D5185(m) | 0 | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | 1010 | 935 | 970 | 948 |
| Calcium | ppm | ASTM D5185(m) | 1070 | 1018 | 1038 | 1050 |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 976 | 966 | 952 |
| Zinc | ppm | ASTM D5185(m) | 1270 | 1161 | 1160 | 1156 |
| Sulfur | ppm | ASTM D5185(m) | 2060 | 2434 | 2428 | 2511 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 14.9 | 14.6 | 15.1 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.4 | 14.1 | 13.7 | 13.6 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0121955
Lab Number : 02642815
Unique Number : 5800354
Test Package : MOB 1

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.

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F: