



Machine Id
830005
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON SAE 10W30 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0119017 | GFL0101739 | GFL0093921 |
| Sample Date | | Client Info | | 12 Jun 2024 | 12 Dec 2023 | 21 Sep 2023 |
| Machine Age | kms | Client Info | | 158657 | 6890 | 0 |
| Oil Age | kms | Client Info | | 0 | 0 | 0 |
| Filter Age | kms | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | Changed | N/A |
| Filter Changed | | Client Info | | N/A | Changed | N/A |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|------|--------------|-------|-----|
| Iron | ppm | ASTM D5185(m) | >50 | 21 | 14 | 25 |
| Chromium | ppm | ASTM D5185(m) | >4 | 1 | <1 | <1 |
| Nickel | ppm | ASTM D5185(m) | >2 | 1 | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >9 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185(m) | >30 | <1 | <1 | 0 |
| Copper | ppm | ASTM D5185(m) | >35 | 2 | <1 | 1 |
| Tin | ppm | ASTM D5185(m) | >4 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| White Metal | scalar | Visual* | NONE | NONE | VLITE | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | NONE | --- |

CONTAMINATION

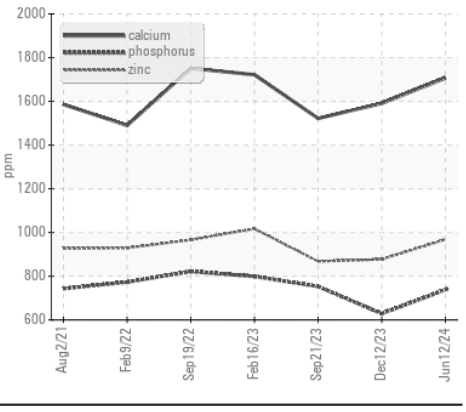
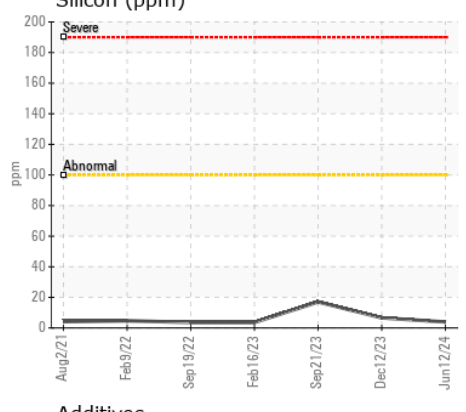
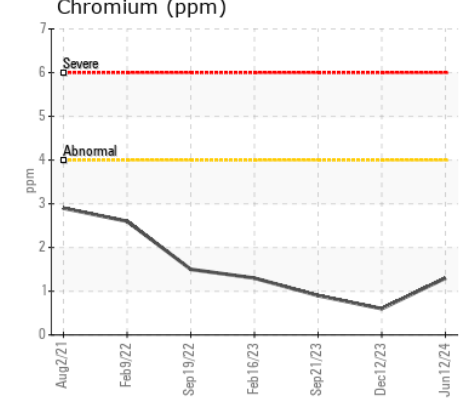
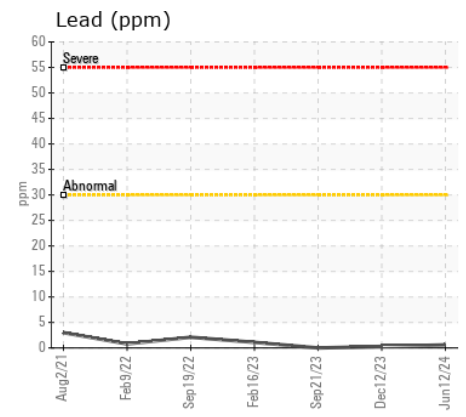
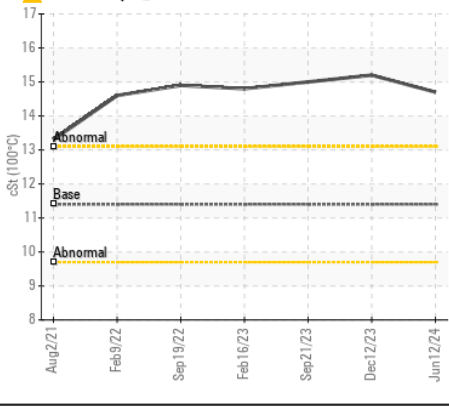
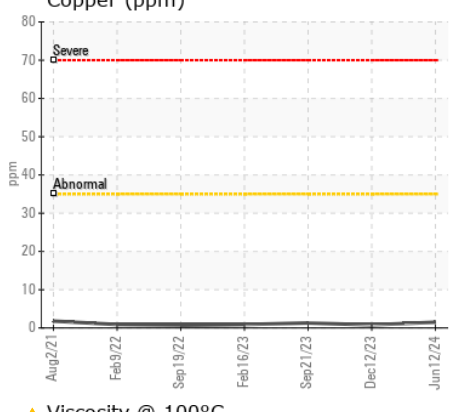
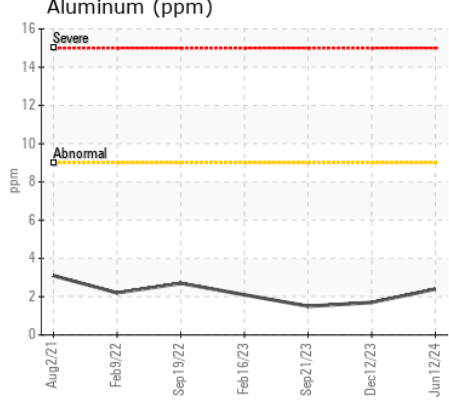
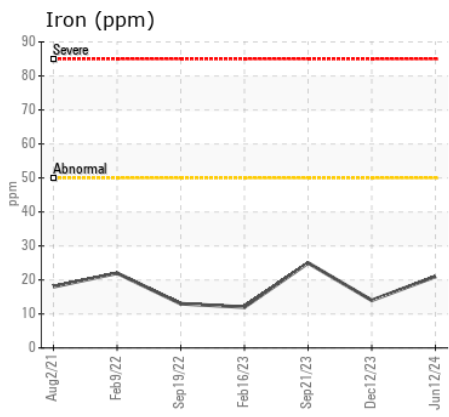
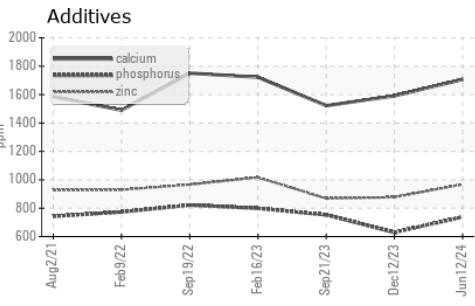
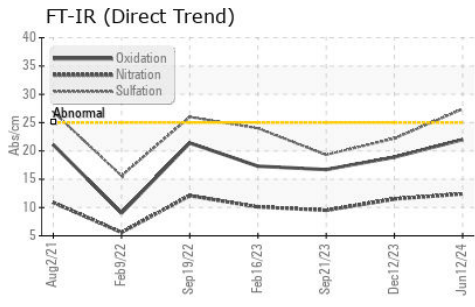
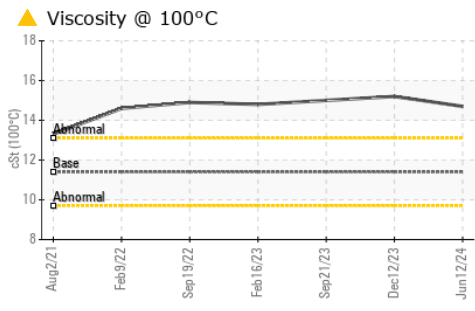
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185(m) | >+100 | 4 | 7 | 17 |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | 1 | 0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Soot % | % | ASTM D7844* | | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 12.4 | 11.5 | 9.5 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 27.4 | 22.2 | 19.3 |
| Silt | scalar | Visual* | NONE | NONE | NONE | --- |
| Debris | scalar | Visual* | NONE | NONE | NONE | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | NONE | --- |
| Appearance | scalar | Visual* | NORML | NORML | NORML | --- |
| Odor | scalar | Visual* | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 40 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|--------------|----------|---------------|------|---------------|------|------|
| Sodium | ppm | ASTM D5185(m) | | 9 | 7 | 6 |
| Boron | ppm | ASTM D5185(m) | 1 | 5 | 6 | 12 |
| Barium | ppm | ASTM D5185(m) | 1 | <1 | <1 | 4 |
| Molybdenum | ppm | ASTM D5185(m) | 1 | 60 | 52 | 50 |
| Manganese | ppm | ASTM D5185(m) | 1 | <1 | <1 | 4 |
| Magnesium | ppm | ASTM D5185(m) | 10 | 636 | 515 | 537 |
| Calcium | ppm | ASTM D5185(m) | 2942 | 1707 | 1591 | 1522 |
| Phosphorus | ppm | ASTM D5185(m) | 1102 | 738 | 629 | 753 |
| Zinc | ppm | ASTM D5185(m) | 1351 | 968 | 877 | 868 |
| Sulfur | ppm | ASTM D5185(m) | 3903 | 2076 | 2032 | 1979 |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 22.0 | 18.9 | 16.7 |
| Visc @ 100°C | cSt | ASTM D7279(m) | 11.4 | ▲ 14.7 | 15.2 | 15.0 |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0119017
Lab Number : 02644009
Unique Number : 5801548
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental - 554 - Edmonton SW
 8409 -15th Street NW
 Edmonton, AB
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 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.