



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

Machine Id
421009
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | GFL0089841 | --- | --- |
| Sample Date | | Client Info | | 26 Apr 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 23689 | --- | --- |
| Oil Age | hrs | Client Info | | 581 | --- | --- |
| Filter Age | hrs | Client Info | | 581 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|---------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185(m) | >100 | 38 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >4 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | 5 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >40 | 6 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >330 | <1 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >15 | 0 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |
| White Metal | scalar | Visual* | NONE | NONE | --- | --- |
| Yellow Metal | scalar | Visual* | NONE | NONE | --- | --- |

CONTAMINATION

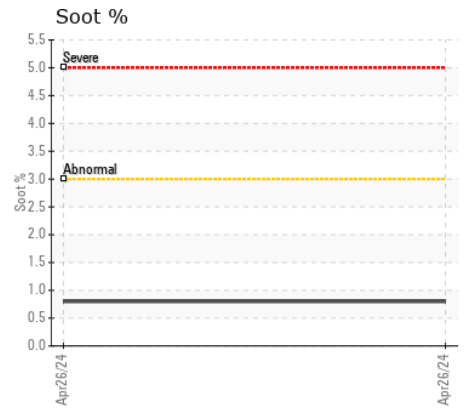
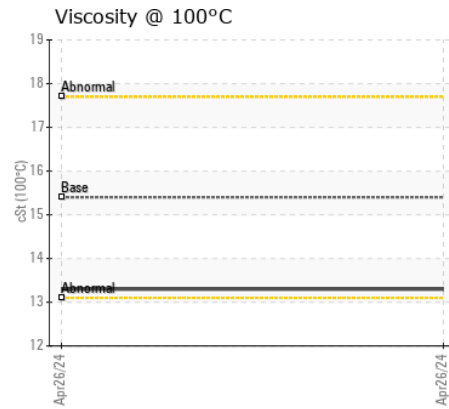
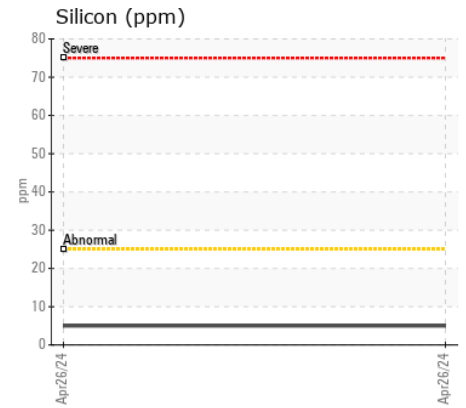
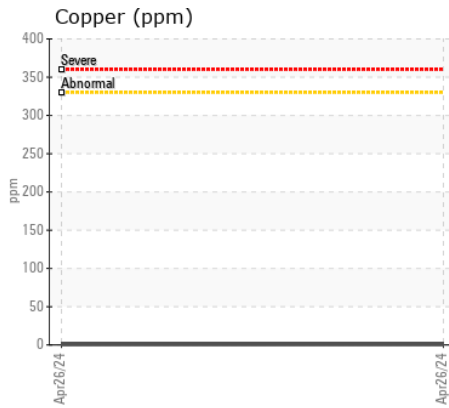
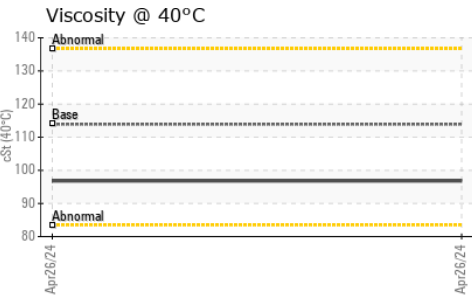
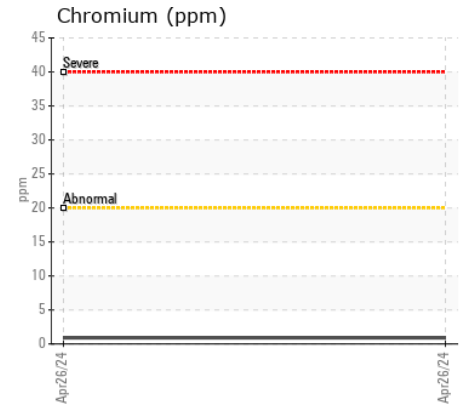
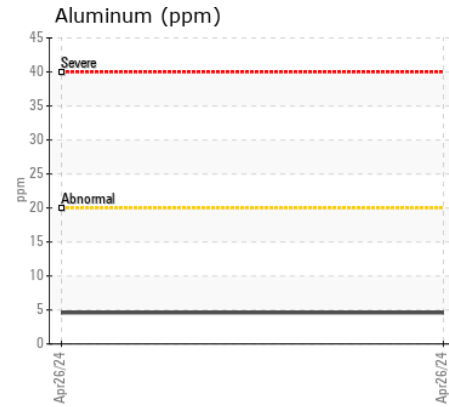
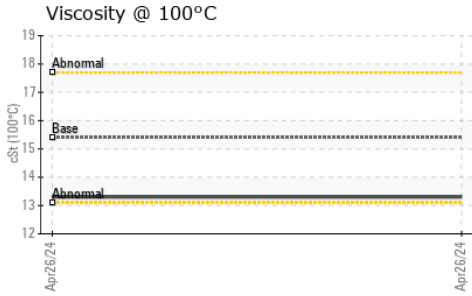
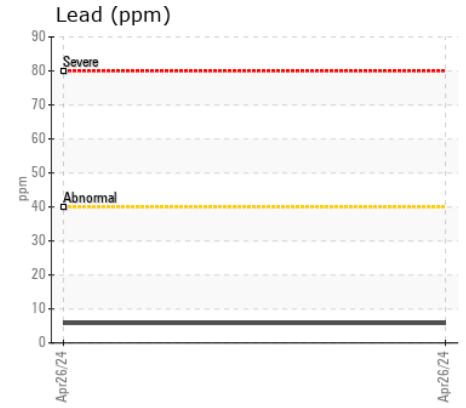
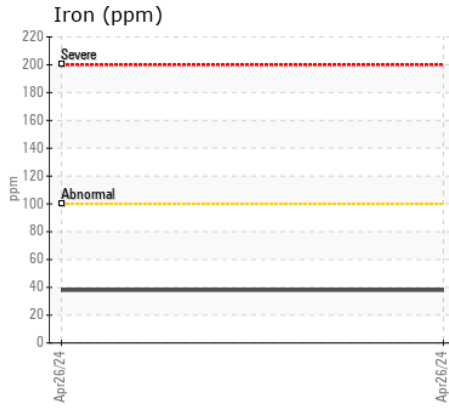
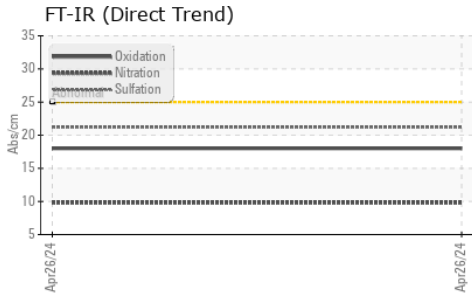
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|-------|----------------|-----|-----|
| Silicon | ppm | ASTM D5185(m) | >25 | 5 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 8 | --- | --- |
| Fuel | | WC Method | >5 | <1.0 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | ASTM D7844* | >3 | 0.8 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 9.8 | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 21.2 | --- | --- |
| Silt | scalar | Visual* | NONE | NONE | --- | --- |
| Debris | scalar | Visual* | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | Visual* | NONE | NONE | --- | --- |
| Appearance | scalar | Visual* | NORML | NORML | --- | --- |
| Odor | scalar | Visual* | NORML | NORML | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |

FLUID CONDITION

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

| | | | | | | |
|----------------------|----------|---------------|-------|--------------|-----|-----|
| Sodium | ppm | ASTM D5185(m) | | 5 | --- | --- |
| Boron | ppm | ASTM D5185(m) | 0 | 4 | --- | --- |
| Barium | ppm | ASTM D5185(m) | 0 | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 60 | 55 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | 0 | <1 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 1010 | 915 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 1070 | 1046 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 938 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 1270 | 1144 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 2060 | 2421 | --- | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 18.0 | --- | --- |
| Visc @ 40°C | cSt | ASTM D7279(m) | 113.9 | 96.8 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.4 | 13.3 | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270* | 142 | 136 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0089841
Lab Number : 02644776
Unique Number : 5802315
Test Package : MOB 1 (Additional Tests: KV40, VI, Visual)

GFL Environmental DO NOT USE_USE GFL582
 4624 Cumberland Road
 Cumberland, BC
 CA V0R 1S0
 Contact: Kyle Fallowfield
 kfallowfield@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: