



OIL ANALYSIS REPORT

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

Machine Id
433006
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON XL SYN BLEND 15W40 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. 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 | | GFL0117290 | --- | --- |
| Sample Date | | Client Info | | 18 Apr 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 1494 | --- | --- |
| Oil Age | hrs | Client Info | | 1494 | --- | --- |
| Filter Age | hrs | Client Info | | 1494 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | NORMAL | --- | --- |

WEAR

Metal levels are typical for a components first oil change.

| | | | | | | |
|----------|-----|---------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185(m) | >100 | 72 | --- | --- |
| Chromium | ppm | ASTM D5185(m) | >20 | <1 | --- | --- |
| Nickel | ppm | ASTM D5185(m) | >4 | <1 | --- | --- |
| Titanium | ppm | ASTM D5185(m) | | <1 | --- | --- |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | --- | --- |
| Aluminum | ppm | ASTM D5185(m) | >20 | 5 | --- | --- |
| Lead | ppm | ASTM D5185(m) | >40 | 10 | --- | --- |
| Copper | ppm | ASTM D5185(m) | >330 | 12 | --- | --- |
| Tin | ppm | ASTM D5185(m) | >15 | 2 | --- | --- |
| Vanadium | ppm | ASTM D5185(m) | | 0 | --- | --- |

CONTAMINATION

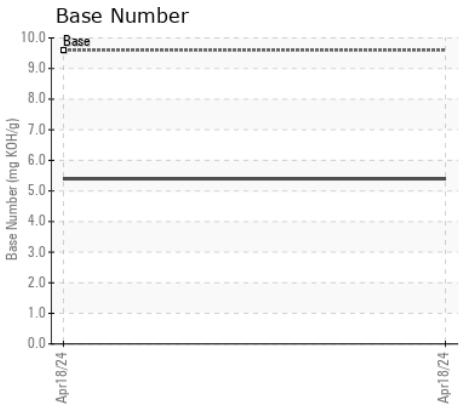
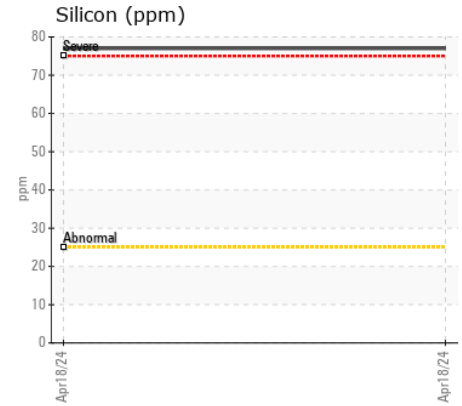
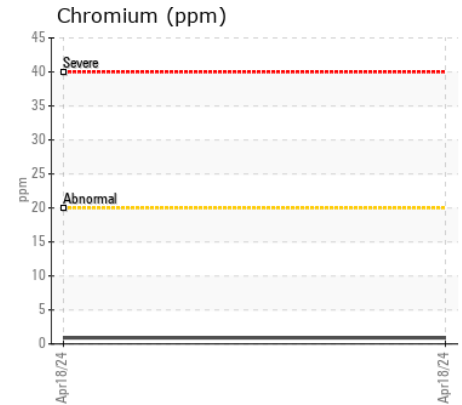
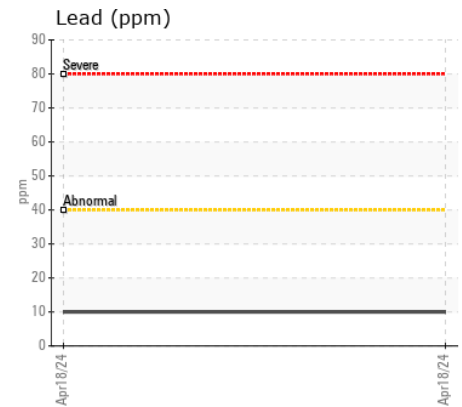
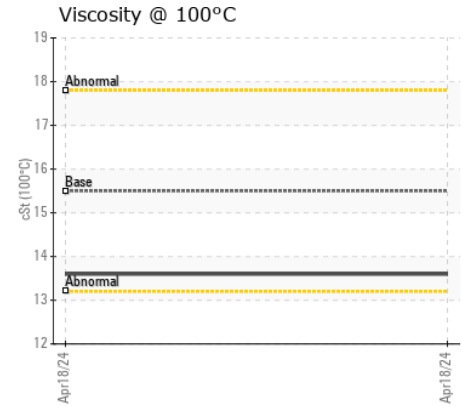
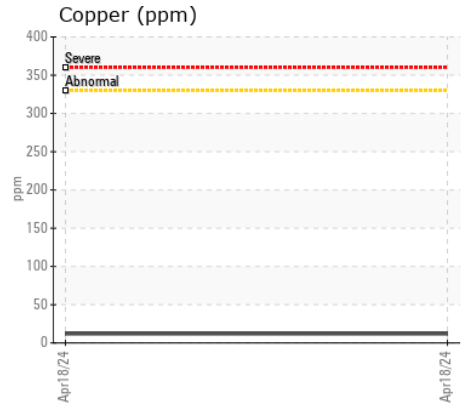
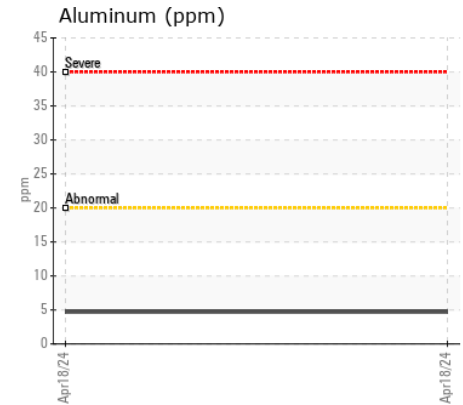
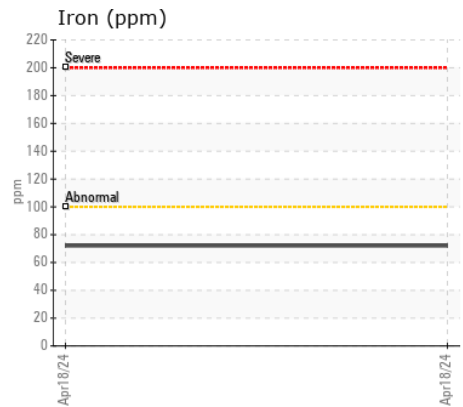
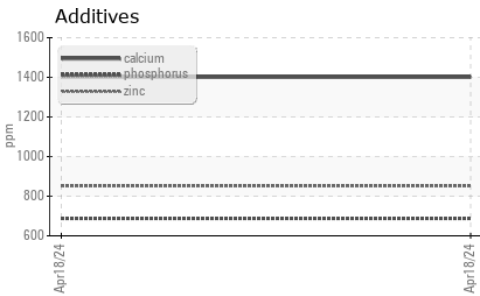
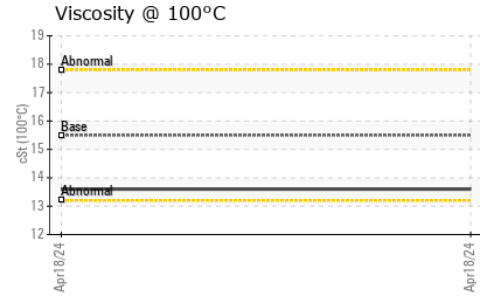
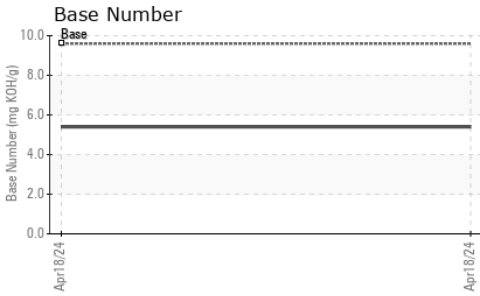
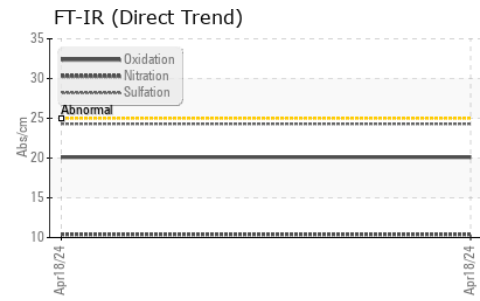
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|---------------|------|----------------|-----|-----|
| Silicon | ppm | ASTM D5185(m) | >25 | 77 | --- | --- |
| Potassium | ppm | ASTM D5185(m) | >20 | 6 | --- | --- |
| Fuel | | WC Method | >5 | <1.0 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | ASTM D7844* | >3 | 0 | --- | --- |
| Nitration | Abs/cm | ASTM D7624* | >20 | 10.4 | --- | --- |
| Sulfation | Abs/.1mm | ASTM D7415* | >30 | 24.3 | --- | --- |
| Emulsified Water | scalar | Visual* | >0.2 | NEG | --- | --- |

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|---------------|------|-------------|-----|-----|
| Sodium | ppm | ASTM D5185(m) | | 4 | --- | --- |
| Boron | ppm | ASTM D5185(m) | 1 | 10 | --- | --- |
| Barium | ppm | ASTM D5185(m) | 1 | 5 | --- | --- |
| Molybdenum | ppm | ASTM D5185(m) | 60 | 104 | --- | --- |
| Manganese | ppm | ASTM D5185(m) | 1 | 5 | --- | --- |
| Magnesium | ppm | ASTM D5185(m) | 1010 | 696 | --- | --- |
| Calcium | ppm | ASTM D5185(m) | 1070 | 1401 | --- | --- |
| Phosphorus | ppm | ASTM D5185(m) | 1150 | 688 | --- | --- |
| Zinc | ppm | ASTM D5185(m) | 1270 | 851 | --- | --- |
| Sulfur | ppm | ASTM D5185(m) | 2060 | 2125 | --- | --- |
| Oxidation | Abs/.1mm | ASTM D7414* | >25 | 20.1 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896* | 9.6 | 5.40 | --- | --- |
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.5 | 13.6 | --- | --- |



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 550 - Rocky View County**
Sample No. : GFL0117290 **Received** : 23 Apr 2024 220 Carmek Blvd
Lab Number : 02630889 **Tested** : 23 Apr 2024 Rocky View County, AB
Unique Number : 5772042 **Diagnosed** : 24 Apr 2024 - Kevin Marson CA T1X 1X1
Test Package : MOB 2 Contact: GFL Calgary
calgarymaintenance@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:
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