



| | |
|-----------------|-----------------|
| WEAR | ABNORMAL |
| CONTAMINATION | ABNORMAL |
| FLUID CONDITION | ABNORMAL |

Area
(TX96335)
Machine Id
221010 - 204 can truck
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (9 QTS)

RECOMMENDATION

We advise that you check the fuel injection system. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0096510 | GFL0090909 | GFL0090923 |
| Sample Date | | Client Info | | 21 Feb 2024 | 11 Oct 2023 | 18 Sep 2023 |
| Machine Age | hrs | Client Info | | 10805 | 10805 | 10795 |
| Oil Age | hrs | Client Info | | 0 | 100 | 89 |
| Filter Age | hrs | Client Info | | 0 | 0 | 89 |
| Oil Changed | | Client Info | | Not Changd | N/A | Not Changd |
| Filter Changed | | Client Info | | Not Changd | N/A | Not Changd |
| Sample Status | | | | ABNORMAL | ABNORMAL | ABNORMAL |

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 51 | 49 | 48 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | 4 | 5 | 4 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | ▲ 32 | ▲ 29 | ▲ 31 |
| Lead | ppm | ASTM D5185m | >40 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 2 | 3 | 2 |
| Tin | ppm | ASTM D5185m | >15 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

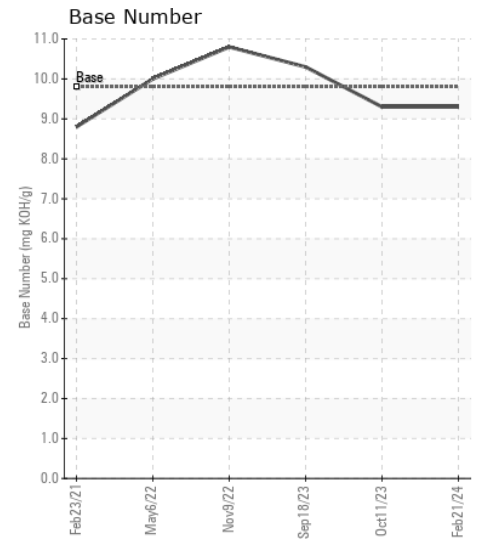
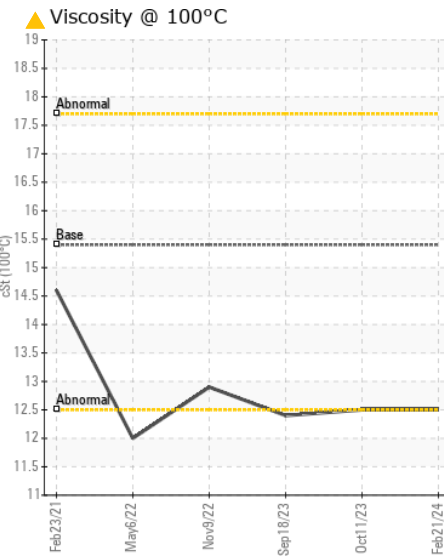
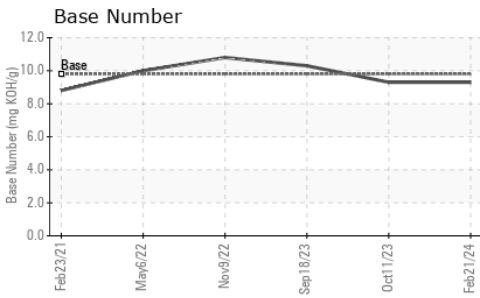
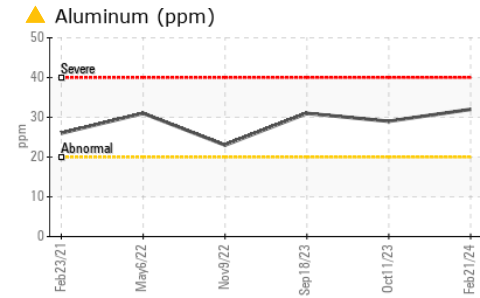
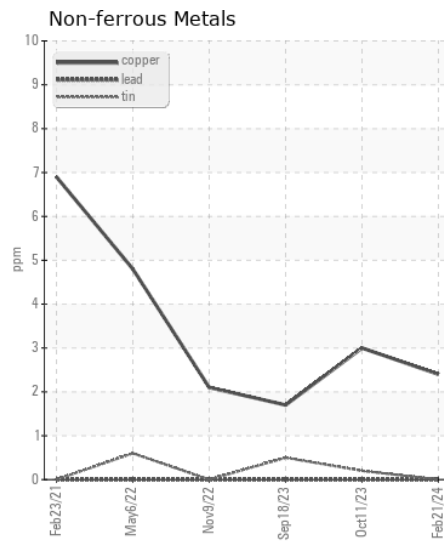
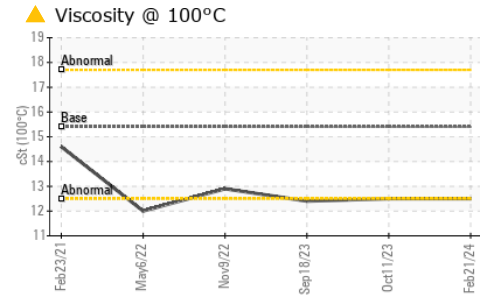
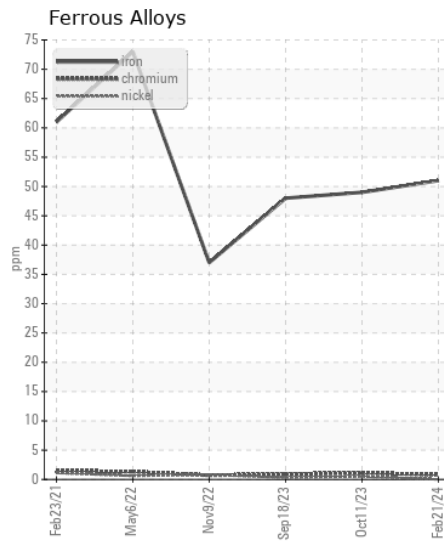
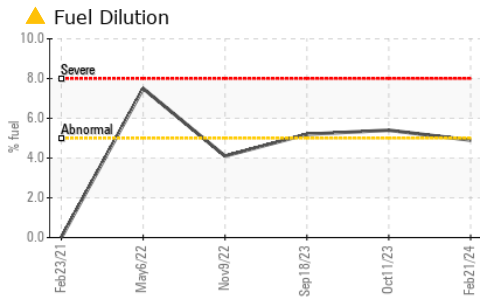
There is a moderate amount of fuel present in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 7 | 7 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | 25 | 24 | 20 |
| Fuel | % | ASTM D3524 | >5 | ▲ 4.9 | ▲ 5.4 | ▲ 5.2 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.9 | 0.8 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.8 | 8.2 | 9.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.6 | 18.7 | 22.2 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Appearance | scalar | *Visual | NORML | NORML | NORML | NORML |
| Odor | scalar | *Visual | NORML | NORML | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | NEG | NEG |

FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

| | | | | | | |
|------------------|----------|-------------|------|---------------|--------|--------|
| Sodium | ppm | ASTM D5185m | | 15 | 15 | 13 |
| Boron | ppm | ASTM D5185m | 0 | 15 | 18 | 20 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 3 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 56 | 55 | 59 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 826 | 780 | 888 |
| Calcium | ppm | ASTM D5185m | 1070 | 1020 | 1029 | 1138 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 997 | 929 | 1049 |
| Zinc | ppm | ASTM D5185m | 1270 | 1181 | 1073 | 1243 |
| Sulfur | ppm | ASTM D5185m | 2060 | 2937 | 2733 | 3742 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.5 | 14.5 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 9.3 | 9.3 | 10.3 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | ▲ 12.5 | ▲ 12.5 | ▲ 12.4 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0096510 **Received** : 28 Feb 2024
Lab Number : 06103631 **Tested** : 04 Mar 2024
Unique Number : 10901861 **Diagnosed** : 04 Mar 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: PercentFuel)

GFL Environmental - 656 - Culpeper Hauling
 15490 Montanus Drive
 Culpeper, VA
 US 22701
 Contact: Matt Hanna
 mhanna@gflenv.com
 T: (540)727-0887
 F:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)