



Area

(YA122726)

Machine Id

3647C

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (35 GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0109665 | GFL0092684 | GFL0086421 |
| Sample Date | | Client Info | | 10 Apr 2024 | 04 Jan 2024 | 29 Jun 2023 |
| Machine Age | hrs | Client Info | | 0 | 18265 | 18265 |
| Oil Age | hrs | Client Info | | 0 | 313 | 762 |
| Filter Age | hrs | Client Info | | 0 | 313 | 0 |
| Oil Changed | | Client Info | | N/A | Not Changd | Changed |
| Filter Changed | | Client Info | | N/A | Not Changd | Changed |
| Sample Status | | | | SEVERE | NORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|-------------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 26 | 15 | 59 |
| Chromium | ppm | ASTM D5185m | >4 | 4 | 2 | 7 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 1 | 3 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >9 | 3 | 2 | 3 |
| Lead | ppm | ASTM D5185m | >30 | 1 | 2 | 19 |
| Copper | ppm | ASTM D5185m | >35 | 4 | 6 | 4 |
| Tin | ppm | ASTM D5185m | >4 | 1 | 1 | 2 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

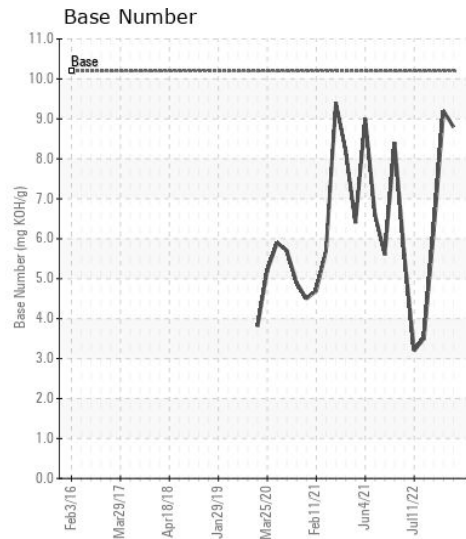
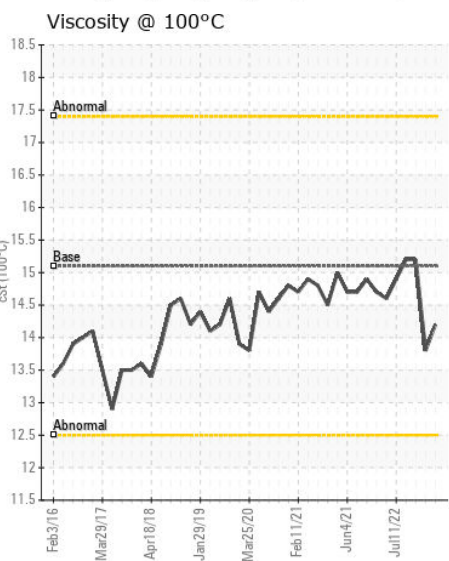
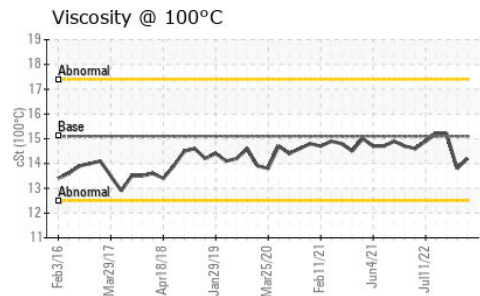
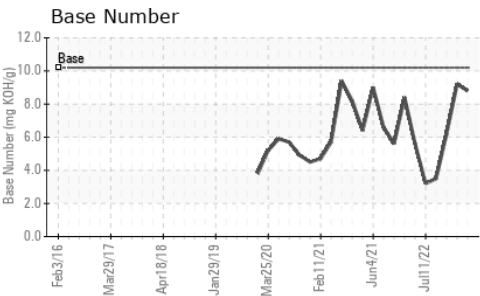
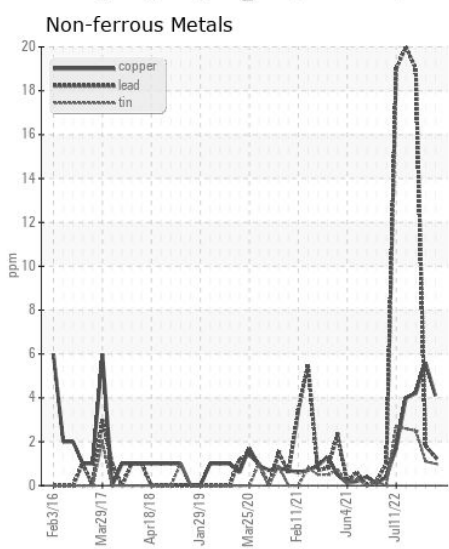
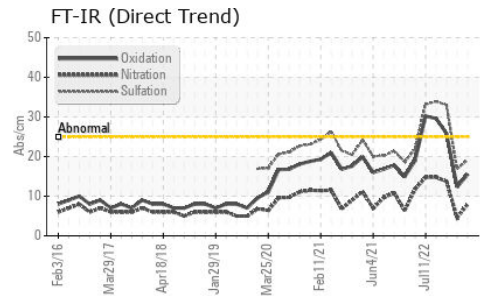
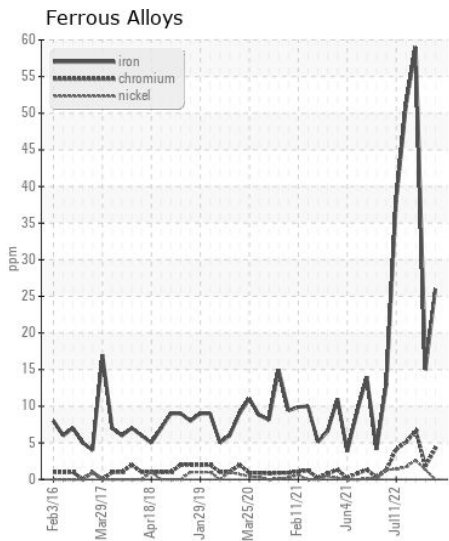
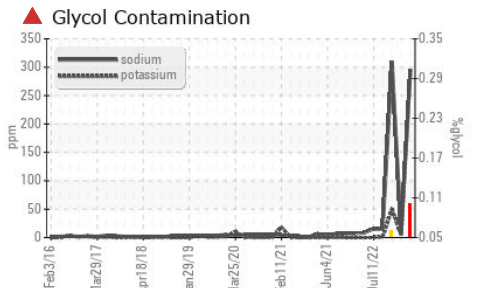
Sodium and/or potassium levels are high. Test for glycol is positive. There is a high concentration of glycol present in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|---------------|-------|---------------|
| Silicon | ppm | ASTM D5185m | >+100 | 18 | 13 | 16 |
| Potassium | ppm | ASTM D5185m | >20 | ▲ 298 | 4 | ▲ 50 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | % | *ASTM D2982 | | ▲ 0.10 | --- | ▲ 0.06 |
| Soot % | % | *ASTM D7844 | | 0 | 0 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.9 | 4.6 | 13.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.2 | 16.9 | 33.0 |
| 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 | >0.1 | NEG | NEG | NEG |

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|--------------|
| Sodium | ppm | ASTM D5185m | | ▲ 295 | 8 | ● 310 |
| Boron | ppm | ASTM D5185m | 50 | 22 | 4 | 9 |
| Barium | ppm | ASTM D5185m | 5 | <1 | 0 | 1 |
| Molybdenum | ppm | ASTM D5185m | 50 | 99 | 61 | 105 |
| Manganese | ppm | ASTM D5185m | 0 | 2 | 2 | 3 |
| Magnesium | ppm | ASTM D5185m | 560 | 767 | 889 | 1196 |
| Calcium | ppm | ASTM D5185m | 1510 | 1419 | 1120 | 2281 |
| Phosphorus | ppm | ASTM D5185m | 780 | 954 | 841 | 1443 |
| Zinc | ppm | ASTM D5185m | 870 | 1108 | 1220 | 1775 |
| Sulfur | ppm | ASTM D5185m | 2040 | 3222 | 2898 | 3904 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 15.5 | 12.3 | 25.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.2 | 8.8 | 9.2 | 6.2 |
| Visc @ 100°C | cSt | ASTM D445 | 15.1 | 14.2 | 13.8 | 15.2 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109665 **Received** : 16 Apr 2024
Lab Number : 06150037 **Tested** : 17 Apr 2024
Unique Number : 10980115 **Diagnosed** : 18 Apr 2024 - Don Baldrige
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 005 - Wilson/Tri-East(CNG)
 2810 Contentnea Road S
 Wilson, NC
 US 27893-8501
 Contact: SPENCER LIGGON
 spencer.liggon@gflenv.com
 T: (800)207-6618
 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)