



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

Machine Id
211017
Component
Front Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0110204 | GFL0110179 | GFL0060489 |
| Sample Date | | Client Info | | 24 May 2024 | 08 Jan 2024 | 16 Aug 2023 |
| Machine Age | hrs | Client Info | | 28022 | 25348 | 21759 |
| Oil Age | hrs | Client Info | | 2674 | 600 | 600 |
| Filter Age | hrs | Client Info | | 2674 | 600 | 600 |
| Oil Changed | | Client Info | | Not Changd | Changed | Changed |
| Filter Changed | | Client Info | | Not Changd | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 43 | 62 | 105 |
| Chromium | ppm | ASTM D5185m | >20 | 3 | 2 | 6 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >25 | 6 | 5 | 13 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 2 | 6 |
| Tin | ppm | ASTM D5185m | >15 | 0 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

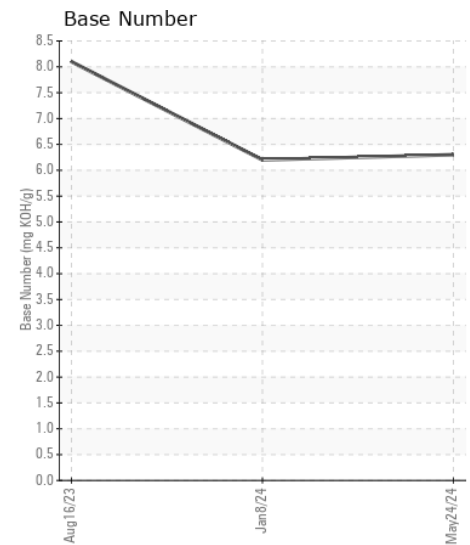
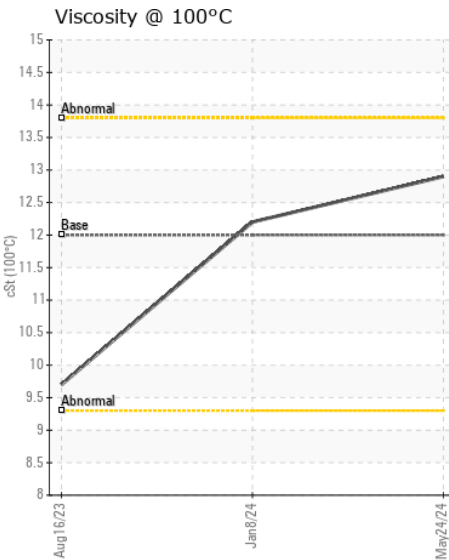
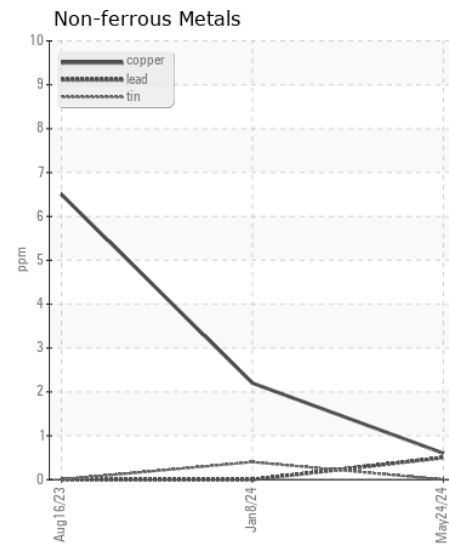
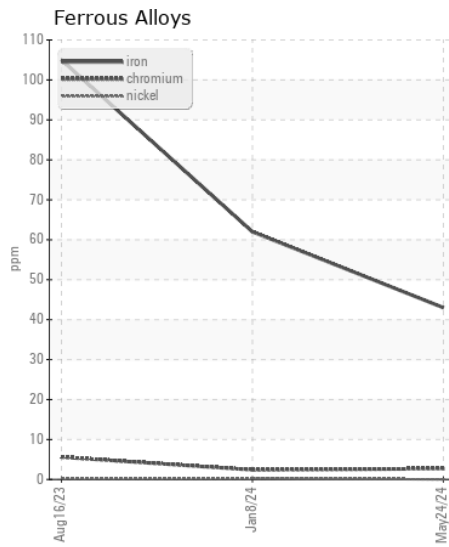
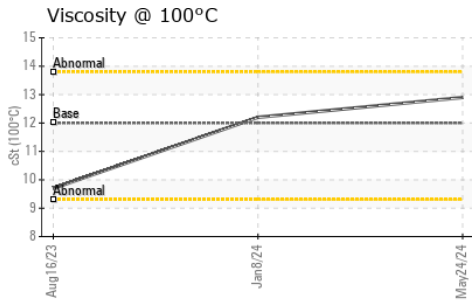
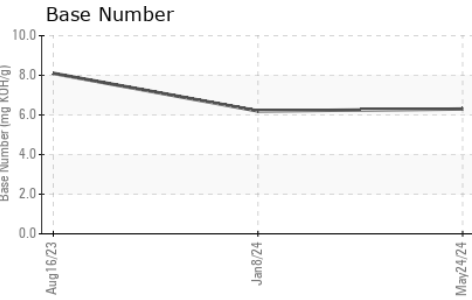
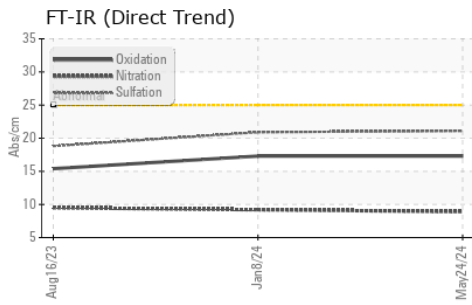
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 7 | 6 | 10 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 4 | 1 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.3 | 0.4 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.9 | 9.2 | 9.5 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.1 | 20.9 | 18.8 |
| 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

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 D5185m | | 1 | 9 | 2 |
| Boron | ppm | ASTM D5185m | 2 | 138 | 111 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 50 | 4 | 9 | 58 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | 2 |
| Magnesium | ppm | ASTM D5185m | 950 | 129 | 157 | 954 |
| Calcium | ppm | ASTM D5185m | 1050 | 2240 | 1748 | 1096 |
| Phosphorus | ppm | ASTM D5185m | 995 | 1075 | 924 | 993 |
| Zinc | ppm | ASTM D5185m | 1180 | 1296 | 1040 | 1221 |
| Sulfur | ppm | ASTM D5185m | 2600 | 4232 | 3309 | 3478 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.3 | 17.3 | 15.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 6.3 | 6.2 | 8.1 |
| Visc @ 100°C | cSt | ASTM D445 | 12.00 | 12.9 | 12.2 | 9.7 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110204 **Received** : 28 May 2024
Lab Number : 06193336 **Tested** : 30 May 2024
Unique Number : 11050088 **Diagnosed** : 30 May 2024 - Sean Felton
Test Package : FLEET

GFL Environmental - 660 - Lynchburg Hauling
 2410 Mayflower Drive
 Lynchburg, VA
 US 24501
 Contact: Delbert Beasley
 dbeasley@countyrecycling.net
 T: (434)665-5998
 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)