



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

Machine Id
822019-114
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0122057 | GFL0111851 | GFL0108303 |
| Sample Date | | Client Info | | 23 May 2024 | 26 Feb 2024 | 19 Feb 2024 |
| Machine Age | mls | Client Info | | 256740 | 251300 | 177140 |
| Oil Age | mls | Client Info | | 182575 | 251295 | 177136 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Filter Changed | | Client Info | | Changed | Not Changd | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >110 | 35 | 8 | 5 |
| Chromium | ppm | ASTM D5185m | >4 | 2 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | <1 | <1 | <1 |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | <1 | 1 |
| Lead | ppm | ASTM D5185m | >45 | 4 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >85 | 1 | <1 | 0 |
| Tin | ppm | ASTM D5185m | >4 | 1 | <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

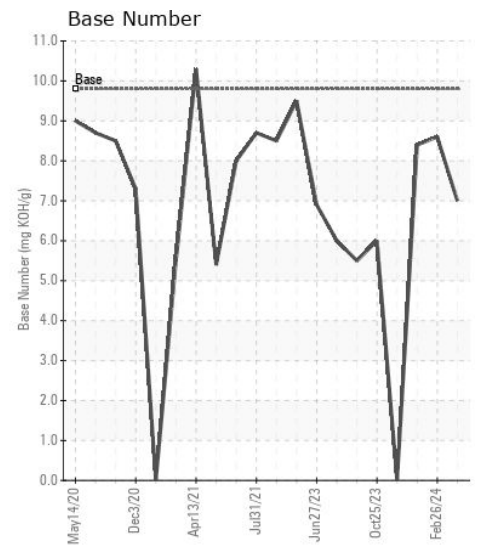
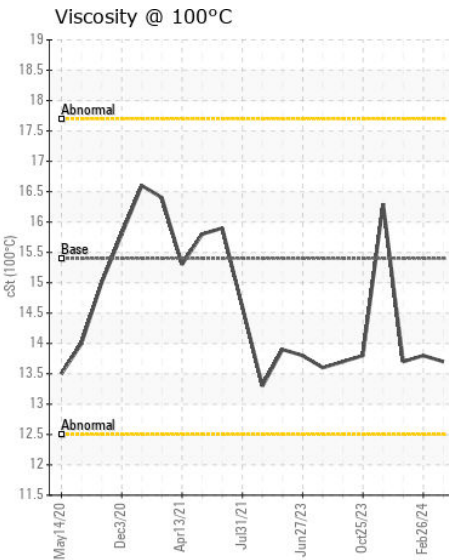
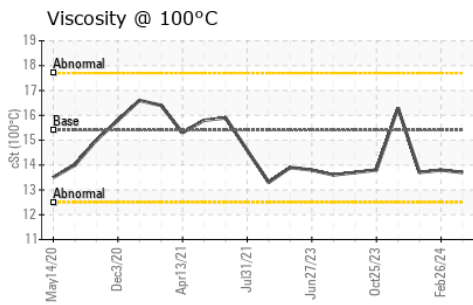
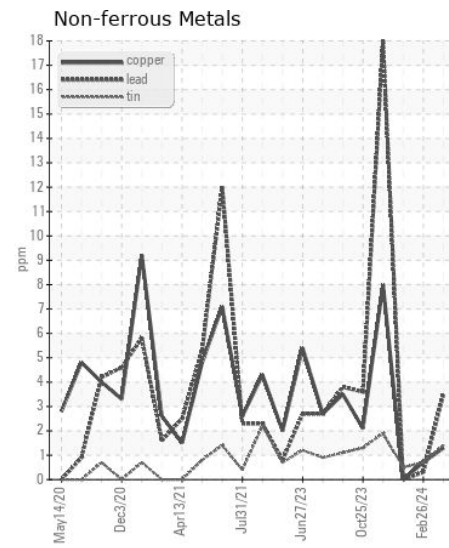
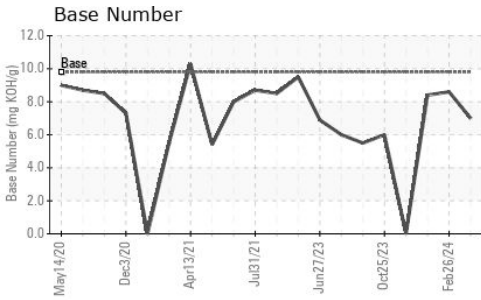
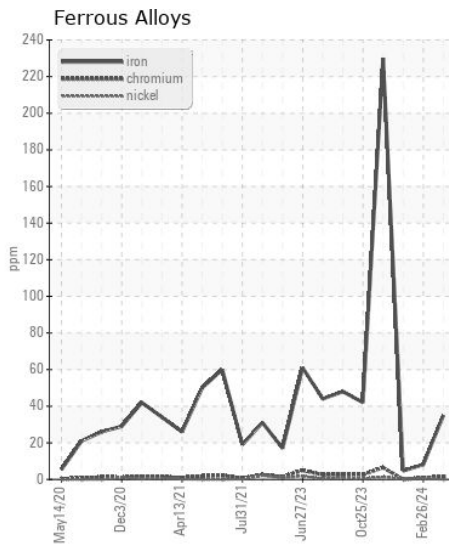
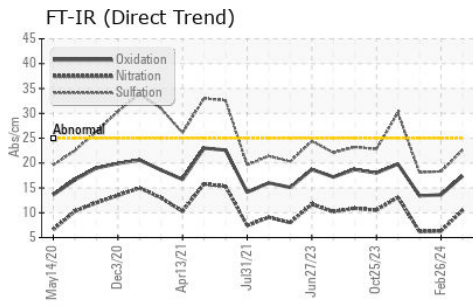
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >30 | 12 | 6 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 3 | 2 |
| 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 | 1.2 | 0.3 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.5 | 6.3 | 6.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.6 | 18.3 | 18.1 |
| 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 | | 6 | 2 | 2 |
| Boron | ppm | ASTM D5185m | 0 | 10 | 15 | 14 |
| Barium | ppm | ASTM D5185m | 0 | 0 | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 59 | 58 | 52 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 932 | 868 | 845 |
| Calcium | ppm | ASTM D5185m | 1070 | 1120 | 1059 | 999 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1058 | 1007 | 971 |
| Zinc | ppm | ASTM D5185m | 1270 | 1252 | 1167 | 1163 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3210 | 3246 | 2883 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.4 | 13.6 | 13.4 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.0 | 8.6 | 8.4 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.7 | 13.8 | 13.7 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122057
Lab Number : 06193833
Unique Number : 11055956
Test Package : FLEET

Received : 29 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 2024 - Wes Davis

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408
 Contact: WILLIAM MILO
 wmilo@gflenv.com

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)

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F: