



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

Machine Id
426021-4673

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 | | GFL0101316 | GFL0101366 | GFL0091832 |
| Sample Date | | Client Info | | 01 Feb 2024 | 13 Dec 2023 | 28 Sep 2023 |
| Machine Age | hrs | Client Info | | 43453 | 43336 | 0 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Not Changd | N/A |
| Filter Changed | | Client Info | | Changed | Not Changd | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >120 | 9 | 10 | 3 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >5 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | <1 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | <1 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

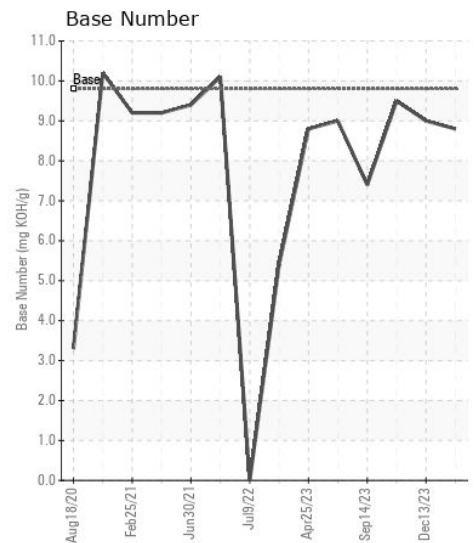
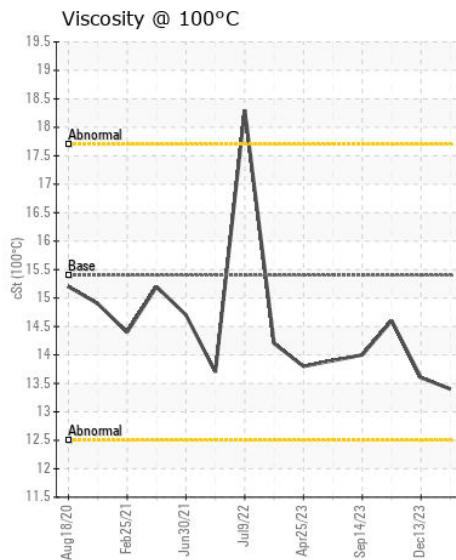
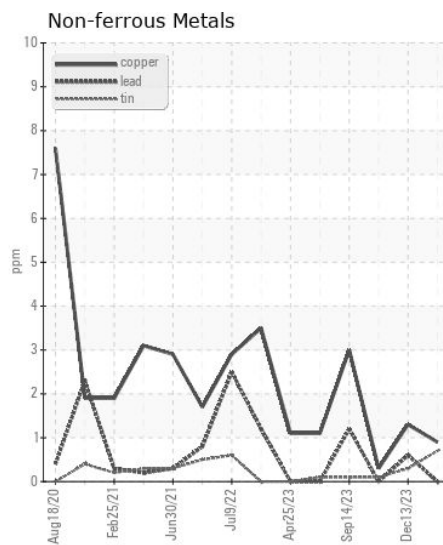
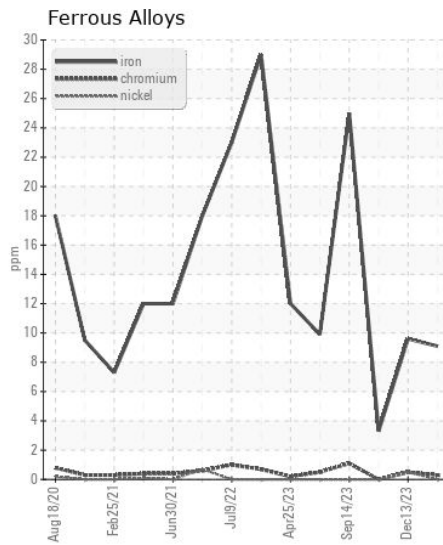
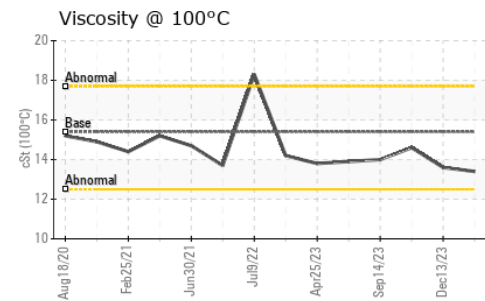
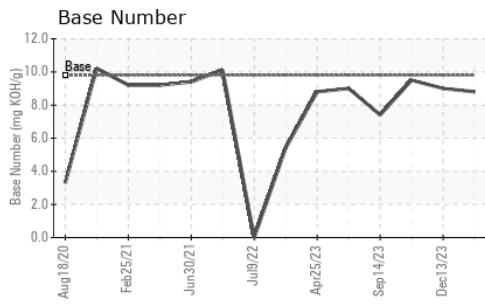
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 2 | 3 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 3 | 1 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >4 | 1.5 | 1.2 | 0.4 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.5 | 5.9 | 4.6 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.4 | 19.2 | 17.6 |
| 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 | 0 | <1 |
| Boron | ppm | ASTM D5185m | 0 | 3 | 3 | 3 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 12 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 59 | 58 | 61 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 1010 | 961 | 910 | 898 |
| Calcium | ppm | ASTM D5185m | 1070 | 1038 | 1000 | 1040 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1031 | 966 | 1024 |
| Zinc | ppm | ASTM D5185m | 1270 | 1241 | 1170 | 1225 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3143 | 3100 | 3629 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 12.9 | 13.0 | 12.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.8 | 9.0 | 9.5 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.4 | 13.6 | 14.6 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0101316
Lab Number : 06084239
Unique Number : 10871684
Test Package : FLEET

Received : 08 Feb 2024
Tested : 09 Feb 2024
Diagnosed : 09 Feb 2024 - Wes Davis

GFL Environmental - 654 - Richmond Hauling
 11800 Lewis Road
 Chester, VA
 US 23831
 Contact: Jimmy Mayes
 jmayes@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: