



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

Machine Id
749006-310058

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0106822 | GFL0092004 | GFL0084739 |
| Sample Date | | Client Info | | 26 Feb 2024 | 13 Dec 2023 | 20 Jun 2023 |
| Machine Age | hrs | Client Info | | 14494 | 137678 | 137678 |
| Oil Age | hrs | Client Info | | 600 | 13383 | 0 |
| Filter Age | hrs | Client Info | | 600 | 13383 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Not Changd |
| Filter Changed | | Client Info | | Changed | Changed | Not Changd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 26 | 32 | 21 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 2 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 1 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | <1 | <1 | 0 |
| Tin | ppm | ASTM D5185m | >15 | <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

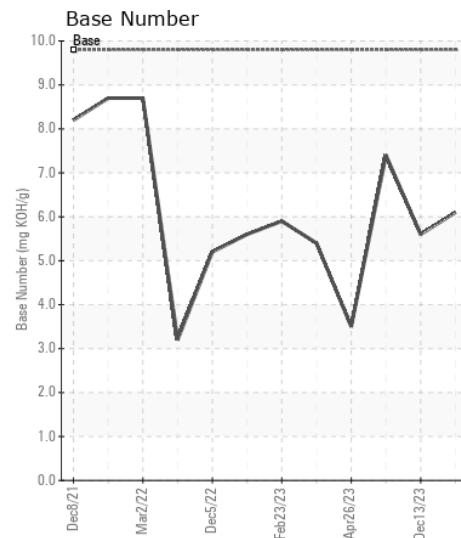
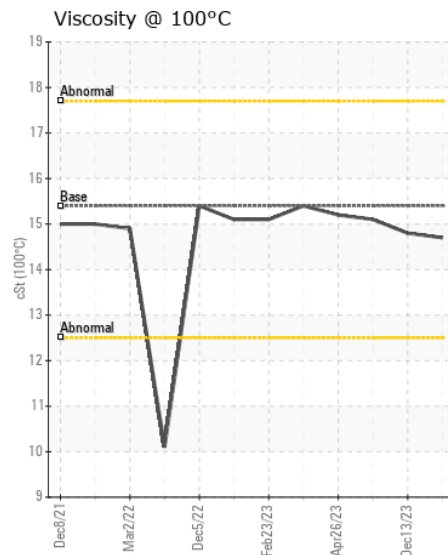
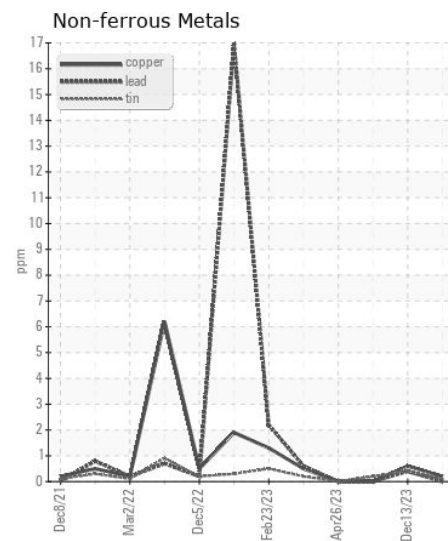
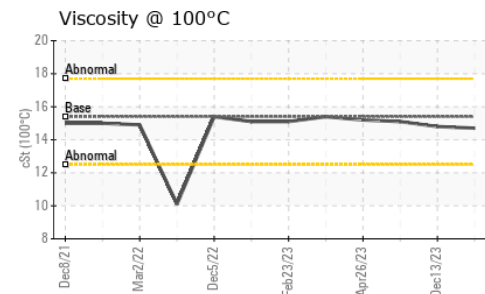
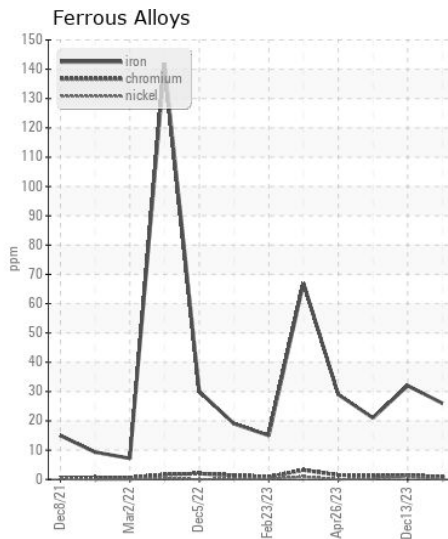
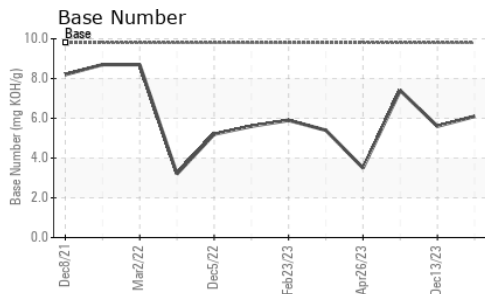
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 6 | 8 | 7 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 2 | 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 | 0 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.4 | 9.9 | 9.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 19.8 | 20.2 | 20.0 |
| 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 | >0.2 | 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 | 6 | 5 |
| Boron | ppm | ASTM D5185m | 0 | 15 | 12 | 21 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 12 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 54 | 56 | 51 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 602 | 540 | 600 |
| Calcium | ppm | ASTM D5185m | 1070 | 1564 | 1555 | 1611 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 788 | 702 | 758 |
| Zinc | ppm | ASTM D5185m | 1270 | 992 | 939 | 976 |
| Sulfur | ppm | ASTM D5185m | 2060 | 2457 | 2369 | 2905 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.8 | 17.5 | 17.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 6.1 | 5.6 | 7.4 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.7 | 14.8 | 15.1 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0106822

Lab Number : 06103483

Unique Number : 10901713

Test Package : FLEET

Received : 28 Feb 2024

Tested : 02 Mar 2024

Diagnosed : 02 Mar 2024 - Don Baldrige

GFL Environmental - 856 - Houston South

8515 Highway 6 South

Houston, TX

US 77083

Contact: Apolinar Zacarias

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T:

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)