



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

Machine Id
420023-402284

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 | | GFL0109132 | GFL0109227 | GFL0098288 |
| Sample Date | | Client Info | | 13 Mar 2024 | 13 Feb 2024 | 22 Nov 2023 |
| Machine Age | hrs | Client Info | | 24846 | 24686 | 24575 |
| Oil Age | hrs | Client Info | | 600 | 600 | 24180 |
| Filter Age | hrs | Client Info | | 600 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changd | Changed | N/A |
| Filter Changed | | Client Info | | Not Changd | Changed | N/A |
| Sample Status | | | | NORMAL | ABNORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >110 | 8 | 66 | 46 |
| Chromium | ppm | ASTM D5185m | >4 | 0 | 3 | 2 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | <1 | ▲ 54 | ▲ 48 |
| Lead | ppm | ASTM D5185m | >45 | 0 | 0 | 1 |
| Copper | ppm | ASTM D5185m | >85 | 0 | 2 | 3 |
| Tin | ppm | ASTM D5185m | >4 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

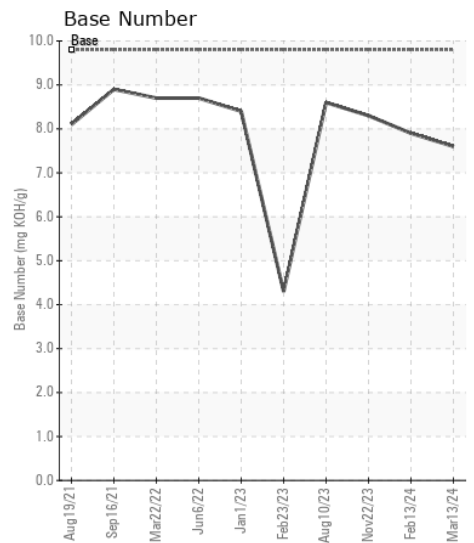
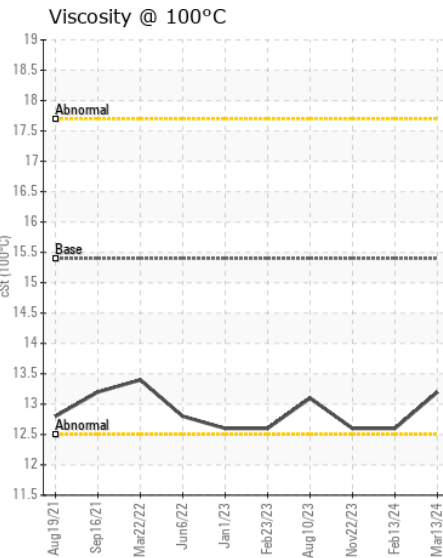
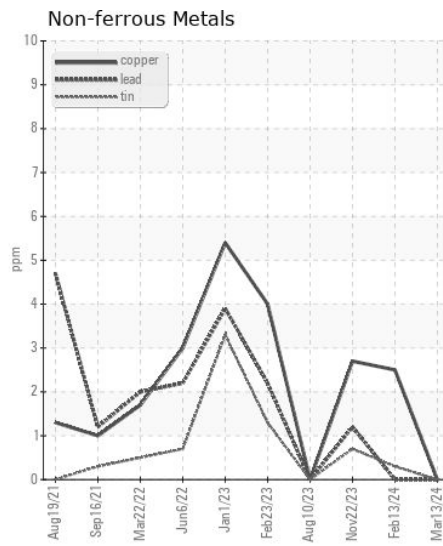
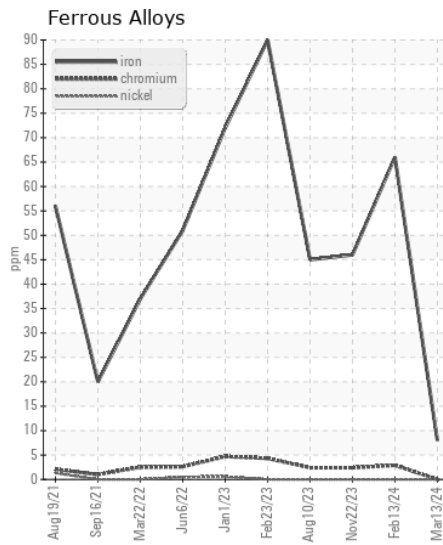
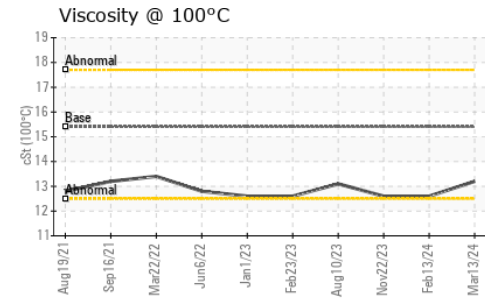
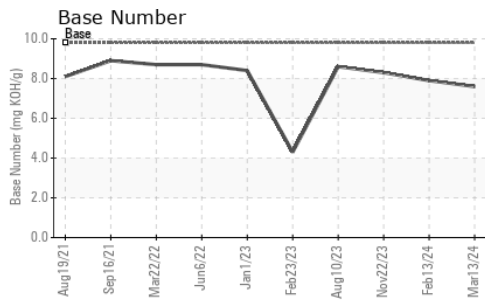
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >30 | 2 | 19 | 14 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 0 | 0 |
| 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 | 0.3 | 0.9 | 0.8 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.1 | 7.7 | 7.4 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.1 | 18.4 | 18.9 |
| 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 | | 4 | 4 | 3 |
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 61 | 53 | 55 |
| Manganese | ppm | ASTM D5185m | 0 | 0 | 1 | 1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 1044 | 881 | 897 |
| Calcium | ppm | ASTM D5185m | 1070 | 1157 | 960 | 986 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1128 | 949 | 994 |
| Zinc | ppm | ASTM D5185m | 1270 | 1385 | 1130 | 1180 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3686 | 2729 | 2808 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 16.9 | 13.7 | 14.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.6 | 7.9 | 8.3 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.2 | 12.6 | 12.6 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109132
Lab Number : 06123390
Unique Number : 10937541
Test Package : FLEET

Received : 20 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 21 Mar 2024 - Wes Davis

GFL Environmental - 822 - Springfield Hauling
 2120 West Bennett Street
 Springfield, MO
 US 65807
 Contact: Dennis Moore
 dennis.moore@gflenv.com
 T: (417)403-3641
 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)