



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

Machine Id
922014
 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 | | GFL0069925 | GFL0069914 | GFL0059586 |
| Sample Date | | Client Info | | 19 Jan 2024 | 07 Dec 2023 | 09 Dec 2022 |
| Machine Age | hrs | Client Info | | 458 | 319886 | 2370 |
| Oil Age | hrs | Client Info | | 458 | 0 | 2370 |
| Filter Age | hrs | Client Info | | 458 | 0 | 2370 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | SEVERE | SEVERE |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|-------|
| Iron | ppm | ASTM D5185m | >110 | 6 | 20 | 55 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | 1 | 2 |
| Nickel | ppm | ASTM D5185m | >2 | <1 | 1 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >25 | 1 | ▲ 6 | ▲ 7 |
| Lead | ppm | ASTM D5185m | >45 | <1 | 4 | ● 110 |
| Copper | ppm | ASTM D5185m | >85 | 3 | 13 | 11 |
| Tin | ppm | ASTM D5185m | >4 | 1 | <1 | 3 |
| Vanadium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

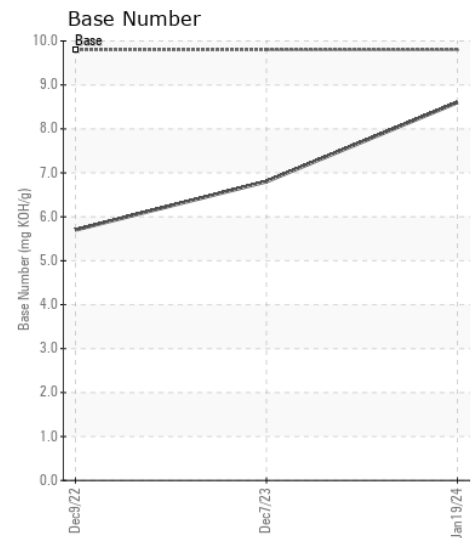
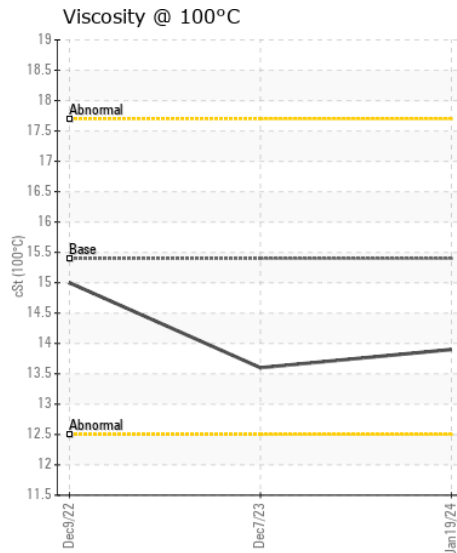
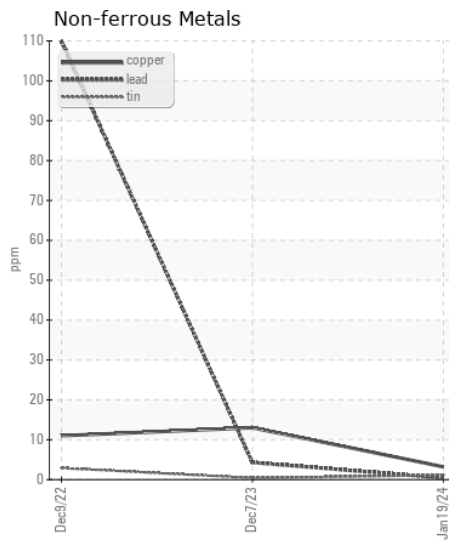
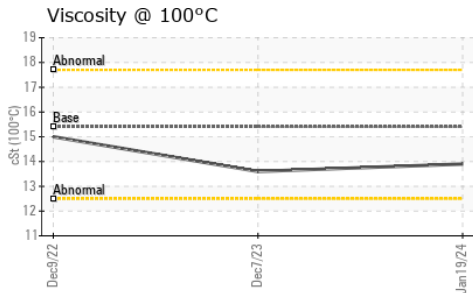
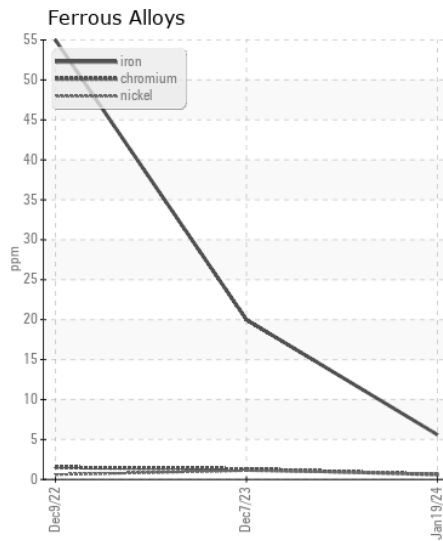
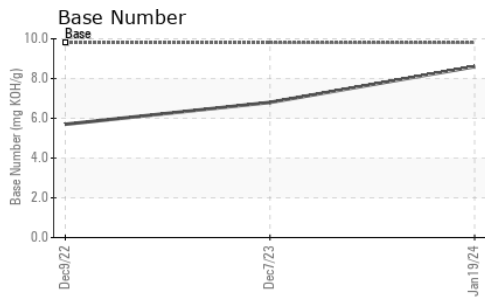
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|--------|
| Silicon | ppm | ASTM D5185m | >30 | 19 | ● 69 | ● 45 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | <1 | ▲ 550 |
| Fuel | | WC Method | >5 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | ● 0.12 |
| Soot % | % | *ASTM D7844 | >3 | 0.2 | 0.4 | 1.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.0 | 8.3 | 14.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.9 | 23.4 | 26.5 |
| 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 | | 3 | 1 | ▲ 321 |
| Boron | ppm | ASTM D5185m | 0 | 36 | 223 | 18 |
| Barium | ppm | ASTM D5185m | 0 | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 64 | 98 | 860 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 2 | 1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 876 | 673 | 319 |
| Calcium | ppm | ASTM D5185m | 1070 | 1071 | 1291 | 818 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 954 | 712 | 320 |
| Zinc | ppm | ASTM D5185m | 1270 | 1121 | 831 | 357 |
| Sulfur | ppm | ASTM D5185m | 2060 | 2846 | 2482 | 2294 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.1 | 17.5 | 30.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.6 | 6.8 | 5.7 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.9 | 13.6 | 15.0 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0069925
Lab Number : 06083269
Unique Number : 10870714
Test Package : FLEET

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

GFL Environmental - 902 - Chilton HC
 428 High St
 Chilton, WI
 US 53014

Contact: Keith Mueller
 keith.mueller@gflenv.com

T: (920)374-1404

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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