



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



Machine Id
4517M
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 | | GFL0104254 | GFL0104228 | GFL0084953 |
| Sample Date | | Client Info | | 11 Jan 2024 | 08 Dec 2023 | 17 Oct 2023 |
| Machine Age | hrs | Client Info | | 23252 | 23029 | 150320 |
| Oil Age | hrs | Client Info | | 23252 | 1102 | 150320 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | N/A | Changed |
| Filter Changed | | Client Info | | Changed | N/A | Changed |
| Sample Status | | | | NORMAL | ABNORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >90 | 4 | 36 | 5 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 2 | 3 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 0 | <1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

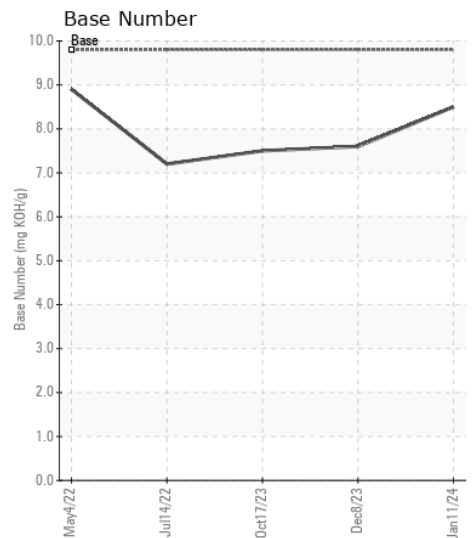
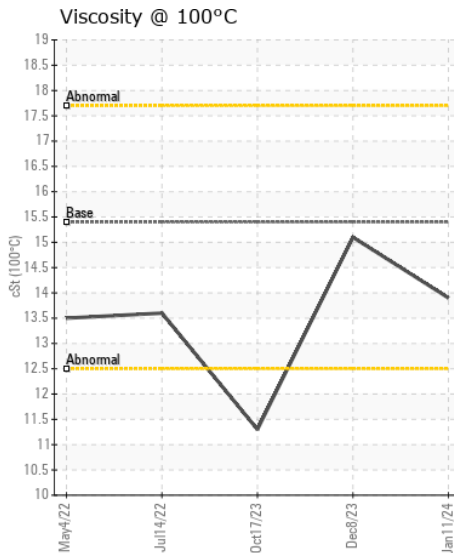
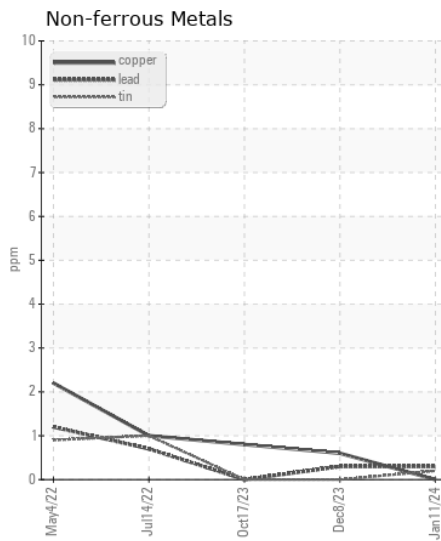
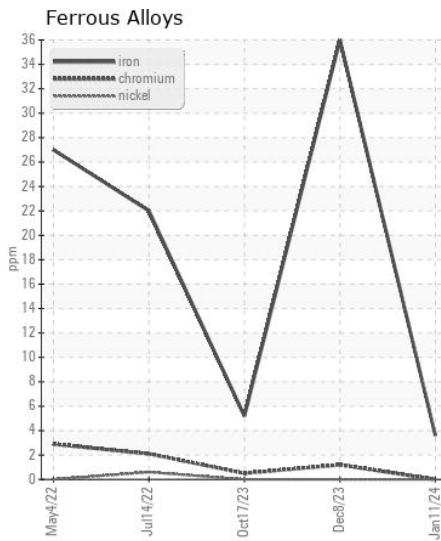
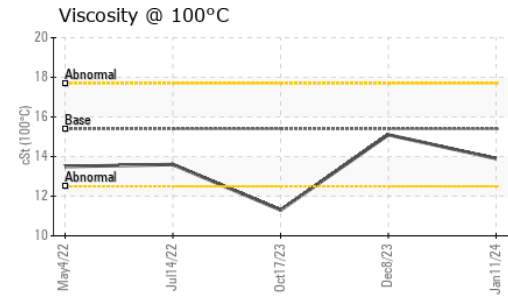
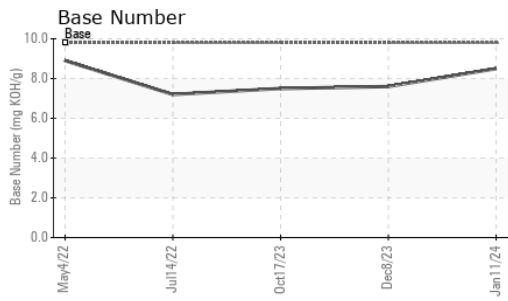
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 3 | 6 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 2 | 2 |
| Fuel | | WC Method | >3.0 | <1.0 | 0.0 | ▲ 4.1 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >6 | 0.2 | 1.4 | 0.2 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 5.7 | 11.0 | 4.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 18.3 | 23.3 | 18.2 |
| 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 | ▲ 121 | 6 |
| Boron | ppm | ASTM D5185m | 0 | 3 | 8 | 0 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 56 | 66 | 45 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 917 | 1066 | 755 |
| Calcium | ppm | ASTM D5185m | 1070 | 945 | 1210 | 820 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1082 | 1175 | 885 |
| Zinc | ppm | ASTM D5185m | 1270 | 1229 | 1385 | 1076 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3074 | 3182 | 2625 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 14.0 | 18.1 | 13.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.5 | 7.6 | 7.5 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.9 | 15.1 | ▲ 11.3 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0104254 **Received** : 16 Jan 2024
Lab Number : 06060748 **Diagnosed** : 17 Jan 2024
Unique Number : 10832130 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 410 - Michigan West
 39000 Van Born Rd
 Wayne, MI
 US 48184
 Contact: Belal Dgheish
 bdgheish@gflenv.com
 T: (734)714-2340
 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)