



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



Machine Id
414076
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number | | Client Info | | GFL0110190 | --- | --- |
| Sample Date | | Client Info | | 19 Feb 2024 | --- | --- |
| Machine Age | hrs | Client Info | | 631 | --- | --- |
| Oil Age | hrs | Client Info | | 600 | --- | --- |
| Filter Age | hrs | Client Info | | 600 | --- | --- |
| Oil Changed | | Client Info | | Changed | --- | --- |
| Filter Changed | | Client Info | | Changed | --- | --- |
| Sample Status | | | | ATTENTION | --- | --- |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron | ppm | ASTM D5185m | >120 | 32 | --- | --- |
| Chromium | ppm | ASTM D5185m | >20 | 1 | --- | --- |
| Nickel | ppm | ASTM D5185m | >5 | 3 | --- | --- |
| Titanium | ppm | ASTM D5185m | >2 | 0 | --- | --- |
| Silver | ppm | ASTM D5185m | >2 | <1 | --- | --- |
| Aluminum | ppm | ASTM D5185m | >20 | 12 | --- | --- |
| Lead | ppm | ASTM D5185m | >40 | <1 | --- | --- |
| Copper | ppm | ASTM D5185m | >330 | 195 | --- | --- |
| Tin | ppm | ASTM D5185m | >15 | 3 | --- | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | --- | --- |
| White Metal | scalar | *Visual | NONE | NONE | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- | --- |

CONTAMINATION

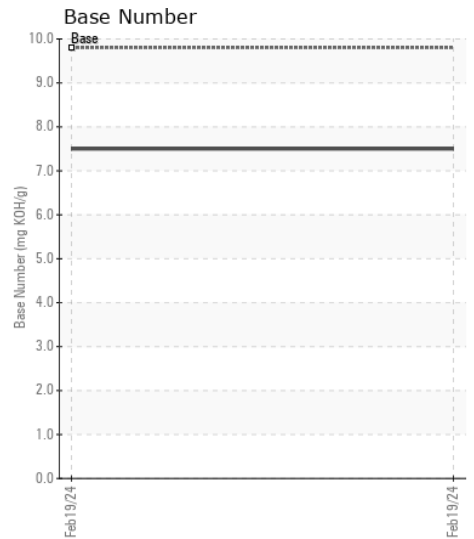
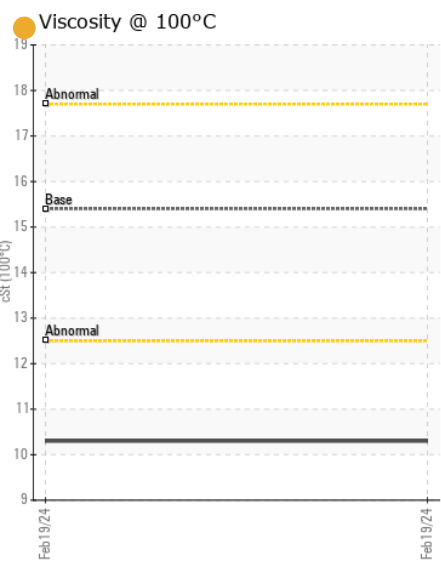
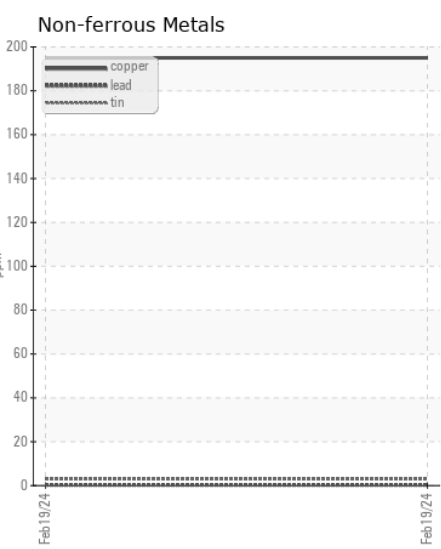
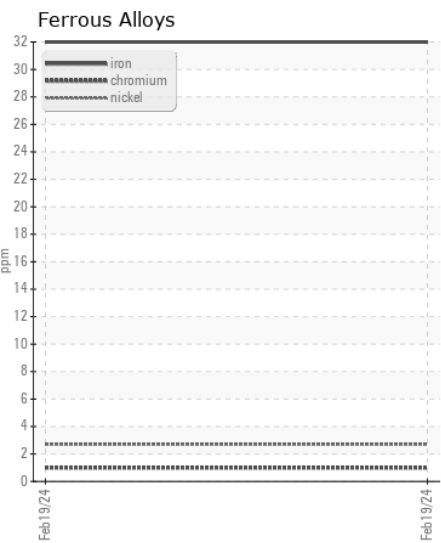
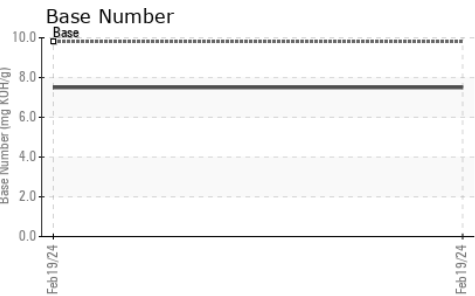
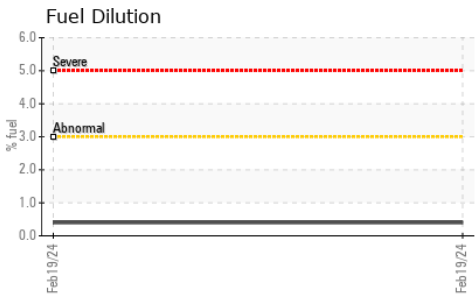
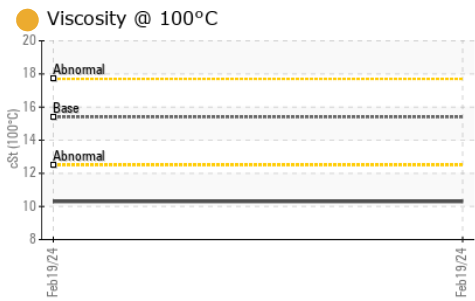
Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|--------------|-----|-----|
| Silicon | ppm | ASTM D5185m | >25 | 74 | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | 27 | --- | --- |
| Fuel | % | ASTM D3524 | >3.0 | 0.4 | --- | --- |
| Water | | WC Method | >0.2 | NEG | --- | --- |
| Glycol | | WC Method | | NEG | --- | --- |
| Soot % | % | *ASTM D7844 | >4 | 0.2 | --- | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 9.5 | --- | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.2 | --- | --- |
| Silt | scalar | *Visual | NONE | NONE | --- | --- |
| Debris | scalar | *Visual | NONE | NONE | --- | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- | --- |
| Odor | scalar | *Visual | NORML | NORML | --- | --- |
| Emulsified Water | scalar | *Visual | >0.2 | NEG | --- | --- |

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|------|-------------|-----|-----|
| Sodium | ppm | ASTM D5185m | | 3 | --- | --- |
| Boron | ppm | ASTM D5185m | 0 | 134 | --- | --- |
| Barium | ppm | ASTM D5185m | 0 | 0 | --- | --- |
| Molybdenum | ppm | ASTM D5185m | 60 | 103 | --- | --- |
| Manganese | ppm | ASTM D5185m | 0 | 3 | --- | --- |
| Magnesium | ppm | ASTM D5185m | 1010 | 690 | --- | --- |
| Calcium | ppm | ASTM D5185m | 1070 | 1264 | --- | --- |
| Phosphorus | ppm | ASTM D5185m | 1150 | 717 | --- | --- |
| Zinc | ppm | ASTM D5185m | 1270 | 846 | --- | --- |
| Sulfur | ppm | ASTM D5185m | 2060 | 2225 | --- | --- |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 21.9 | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.5 | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 10.3 | --- | --- |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110190 **Received** : 29 Feb 2024
Lab Number : 06105084 **Tested** : 04 Mar 2024
Unique Number : 10903314 **Diagnosed** : 04 Mar 2024 - Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 660 - Lynchburg Hauling
 2410 Mayflower Drive
 Lynchburg, VA
 US 24501
 Contact: NICK BEASLEY
 nbeasley@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)

T:
F: