



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



Area
(BD56782)
Machine Id
714051
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 | | GFL0101012 | GFL0101068 | GFL0092779 |
| Sample Date | | Client Info | | 17 May 2024 | 12 Feb 2024 | 26 Oct 2023 |
| Machine Age | hrs | Client Info | | 472 | 0 | 472 |
| Oil Age | hrs | Client Info | | 472 | 0 | 472 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

Metal levels are typical for a new component breaking in.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >90 | 6 | 27 | 35 |
| Chromium | ppm | ASTM D5185m | >20 | 0 | 1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 2 | 4 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 0 | 4 | 15 |
| 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

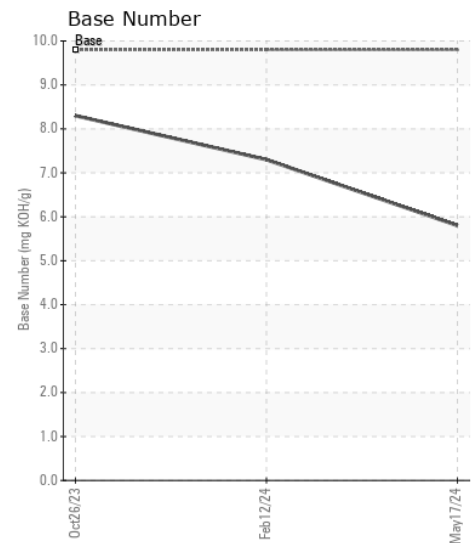
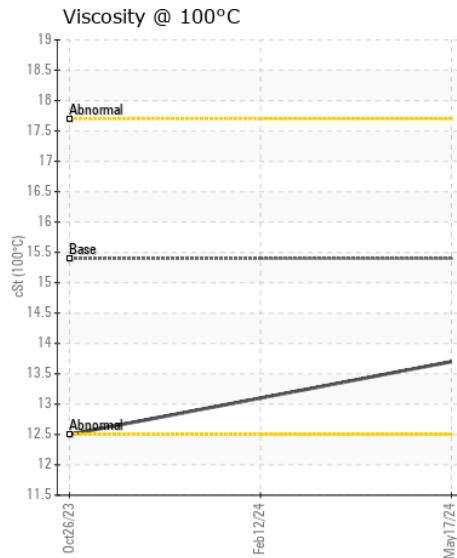
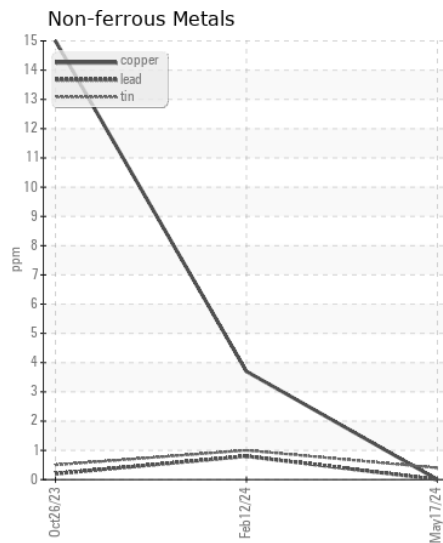
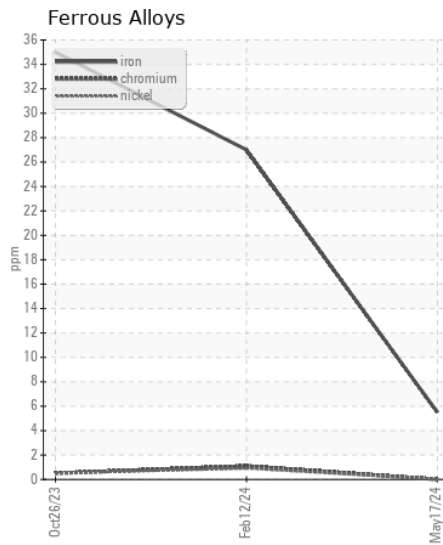
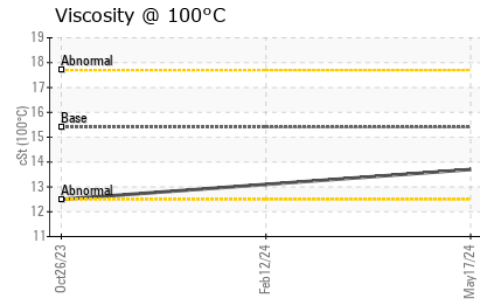
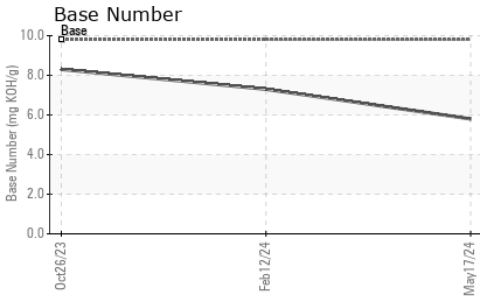
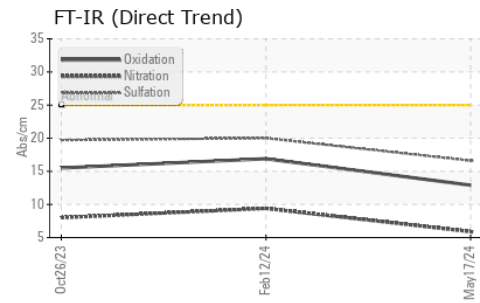
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 3 | 5 | 18 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | 7 | 14 |
| Fuel | | WC Method | >3.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >6 | 0.3 | 0.5 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 5.9 | 9.4 | 8.0 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 16.6 | 20.0 | 19.7 |
| 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 | 0 | 0 |
| Boron | ppm | ASTM D5185m | 0 | 11 | 8 | 73 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 9 |
| Molybdenum | ppm | ASTM D5185m | 60 | 61 | 68 | 112 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 2 | 8 |
| Magnesium | ppm | ASTM D5185m | 1010 | 908 | 905 | 681 |
| Calcium | ppm | ASTM D5185m | 1070 | 1004 | 1088 | 1236 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 996 | 978 | 684 |
| Zinc | ppm | ASTM D5185m | 1270 | 1195 | 1156 | 871 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3393 | 3289 | 2978 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 12.9 | 16.9 | 15.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 5.8 | 7.3 | 8.3 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.7 | 13.1 | 12.5 |



Certificate L2367

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

Sample No. : GFL0101012

Lab Number : 06188931

Unique Number : 11045683

Test Package : FLEET

Received : 23 May 2024

Tested : 24 May 2024

Diagnosed : 24 May 2024 - Wes Davis

GFL Environmental - 455 - Flint

2051 W. Bristol Rd

Flint Township, MI

US 48507

Contact: MARK WOMBLE

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T: (586)825-9514

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)