



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

Machine Id
810058
 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 | | GFL0125455 | GFL0125448 | GFL0104552 |
| Sample Date | | Client Info | | 15 Jul 2024 | 24 Jun 2024 | 17 Jan 2024 |
| Machine Age | hrs | Client Info | | 4701 | 4620 | 4023 |
| Oil Age | hrs | Client Info | | 81 | 597 | 520 |
| Filter Age | hrs | Client Info | | 81 | 597 | 520 |
| Oil Changed | | Client Info | | Changed | Changed | Not Changd |
| Filter Changed | | Client Info | | Changed | Changed | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >110 | 5 | 19 | 1 |
| Chromium | ppm | ASTM D5185m | >4 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 3 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | 9 | 1 |
| Lead | ppm | ASTM D5185m | >45 | 0 | 0 | 0 |
| Copper | ppm | ASTM D5185m | >85 | <1 | 6 | <1 |
| Tin | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

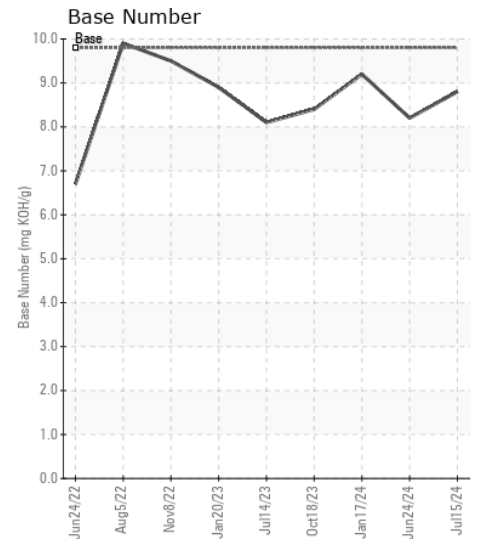
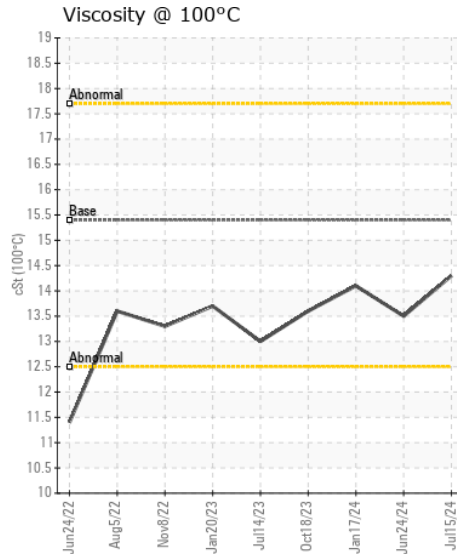
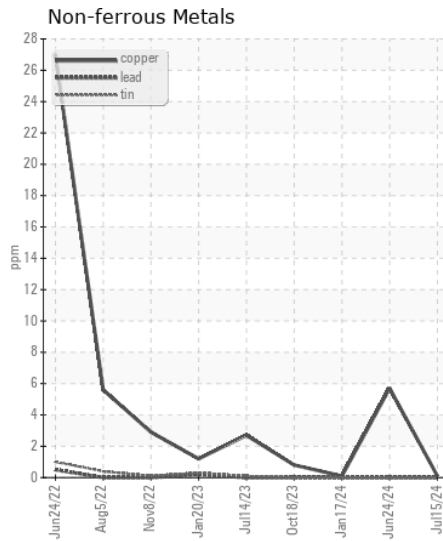
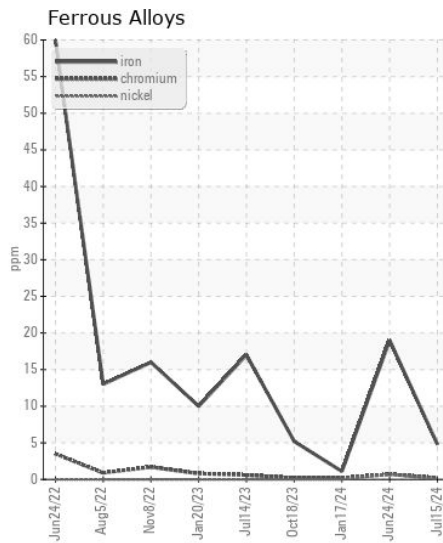
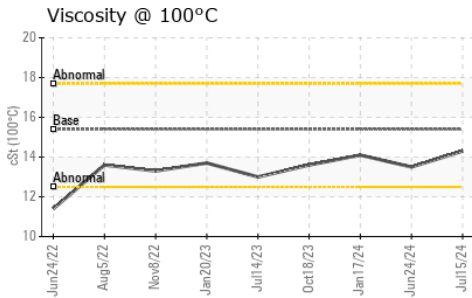
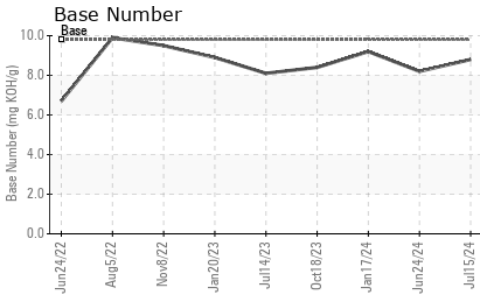
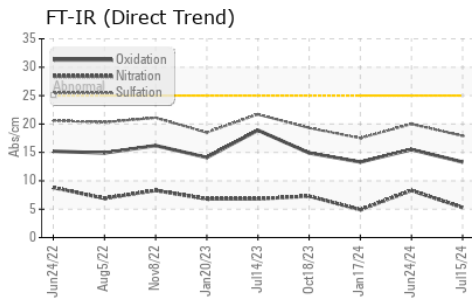
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >30 | 3 | 4 | 3 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 15 | 2 |
| 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 | 0.2 | 0.6 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 5.3 | 8.3 | 4.9 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 17.9 | 20.0 | 17.5 |
| 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 | | 2 | 2 | <1 |
| Boron | ppm | ASTM D5185m | 0 | 8 | 5 | <1 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 58 | 61 | 53 |
| Manganese | ppm | ASTM D5185m | 0 | 0 | 1 | 0 |
| Magnesium | ppm | ASTM D5185m | 1010 | 940 | 1045 | 942 |
| Calcium | ppm | ASTM D5185m | 1070 | 1053 | 1164 | 999 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 993 | 1103 | 1040 |
| Zinc | ppm | ASTM D5185m | 1270 | 1220 | 1404 | 1200 |
| Sulfur | ppm | ASTM D5185m | 2060 | 2935 | 3726 | 3111 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.3 | 15.5 | 13.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 8.8 | 8.2 | 9.2 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 14.3 | 13.5 | 14.1 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0125455 **Received** : 18 Jul 2024
Lab Number : 06241267 **Tested** : 19 Jul 2024
Unique Number : 11130101 **Diagnosed** : 19 Jul 2024 - Wes Davis
Test Package : FLEET

GFL Environmental - 947 - WB Horicon HC
 N7296 County Rd V
 Horicon, WI
 US 53032
 Contact: Tim Kieffer
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 T: (608)219-0288
 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)