



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

Area
(34717UA)
Machine Id
820048
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 | | GFL0108294 | GFL0098171 | GFL0098254 |
| Sample Date | | Client Info | | 12 Feb 2024 | 12 Jan 2024 | 15 Dec 2023 |
| Machine Age | hrs | Client Info | | 12366 | 12255 | 12064 |
| Oil Age | hrs | Client Info | | 12366 | 12255 | 12064 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changd | N/A | N/A |
| Filter Changed | | Client Info | | Not Changd | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 53 | 8 | 27 |
| Chromium | ppm | ASTM D5185m | >20 | 2 | <1 | 1 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 2 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >20 | 13 | <1 | 6 |
| Lead | ppm | ASTM D5185m | >40 | 1 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 2 | 1 | 3 |
| 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

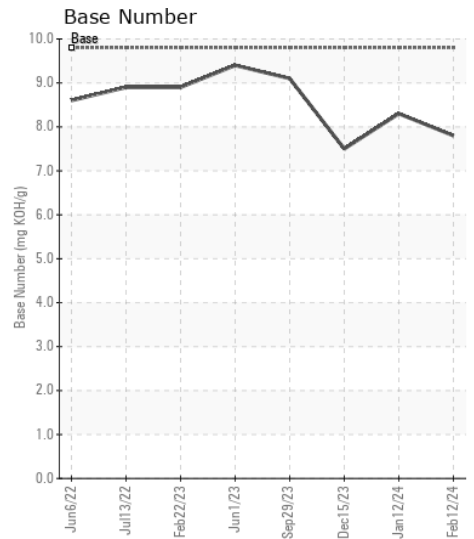
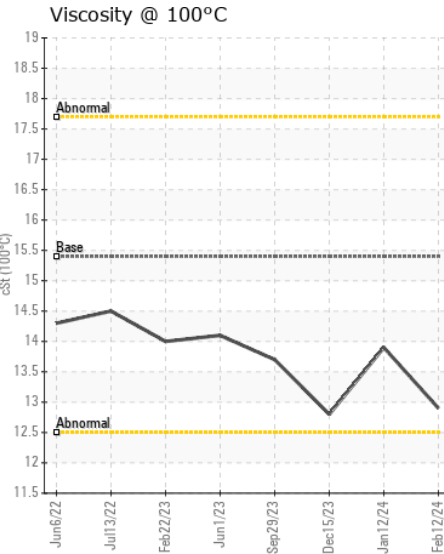
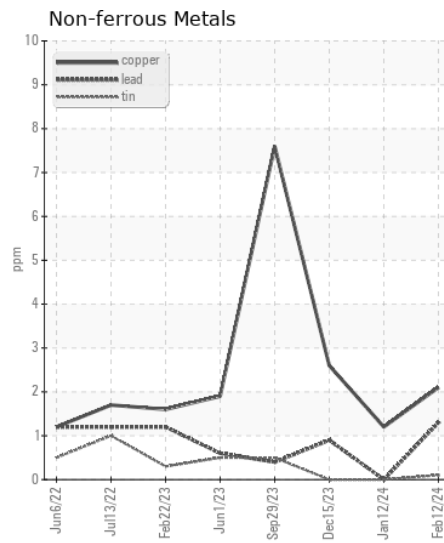
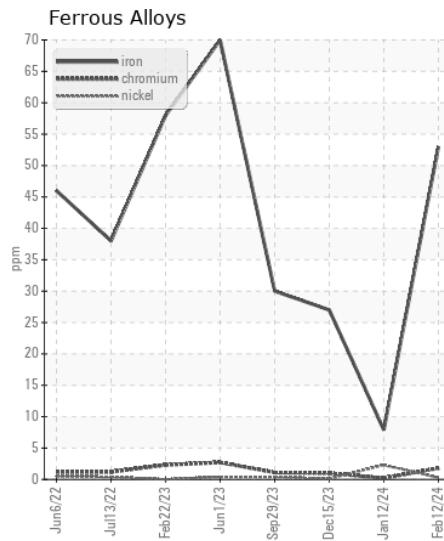
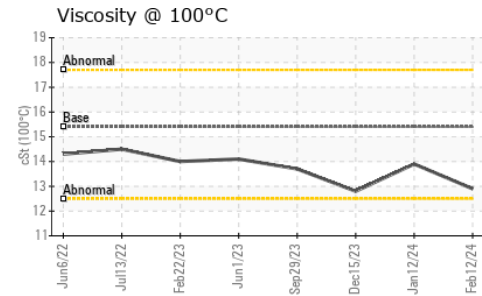
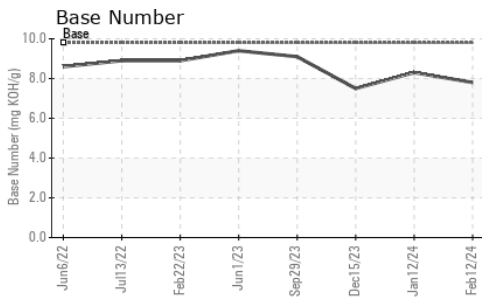
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 7 | 4 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 14 | 2 | 4 |
| 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 | 1.4 | 0.3 | 0.8 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.6 | 6.9 | 10.9 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.5 | 18.6 | 21.8 |
| 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 | 6 |
| Boron | ppm | ASTM D5185m | 0 | 4 | 10 | 14 |
| Barium | ppm | ASTM D5185m | 0 | 12 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 60 | 59 | 58 | 59 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 873 | 978 | 905 |
| Calcium | ppm | ASTM D5185m | 1070 | 1058 | 1165 | 1073 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 982 | 1083 | 1047 |
| Zinc | ppm | ASTM D5185m | 1270 | 1165 | 1277 | 1231 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3170 | 3409 | 2882 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.7 | 13.9 | 21.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.8 | 8.3 | 7.5 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 12.9 | 13.9 | 12.8 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0108294
Lab Number : 06088661
Unique Number : 10876106
Test Package : FLEET
Received : 14 Feb 2024
Tested : 15 Feb 2024
Diagnosed : 15 Feb 2024 - Sean Felton

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408
 Contact: WILLIAM MILO
 wmilo@gflenv.com
 T:
 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)