



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

Machine Id
OR1768
 Component
Diesel Engine
 Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | GFL0085515 | GFL0085525 | GFL0085519 |
| Sample Date | | Client Info | | 20 Jun 2024 | 04 May 2024 | 23 Mar 2024 |
| Machine Age | hrs | Client Info | | 7308 | 6973 | 6655 |
| Oil Age | hrs | Client Info | | 0 | 0 | 500 |
| Filter Age | hrs | Client Info | | 0 | 0 | 500 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 28 | 50 | 94 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | 2 |
| Nickel | ppm | ASTM D5185m | >4 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 7 | 10 | 22 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | <1 | 0 | 4 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

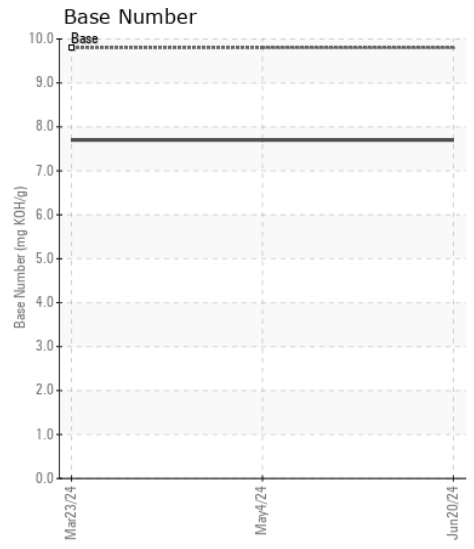
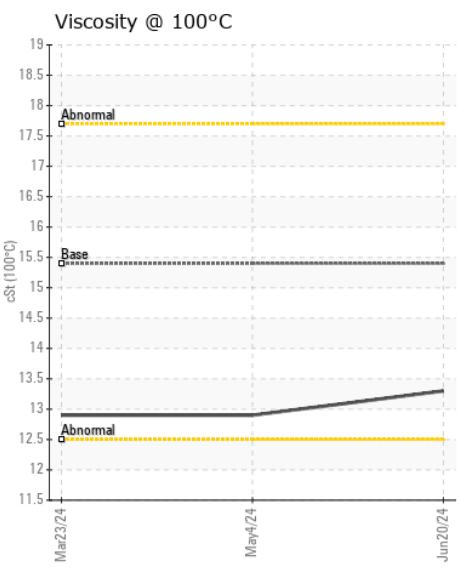
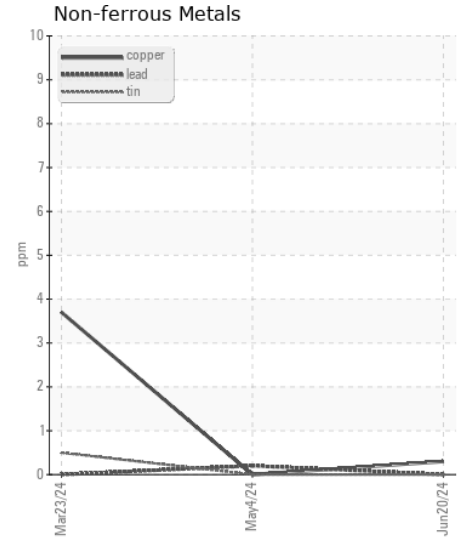
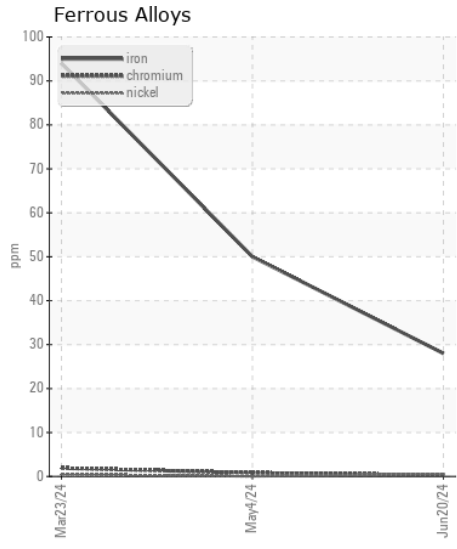
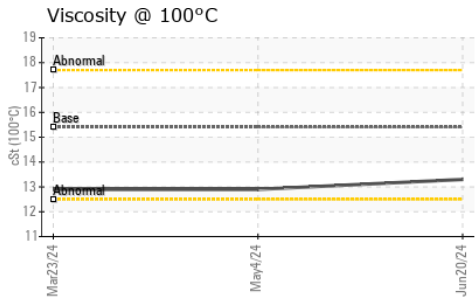
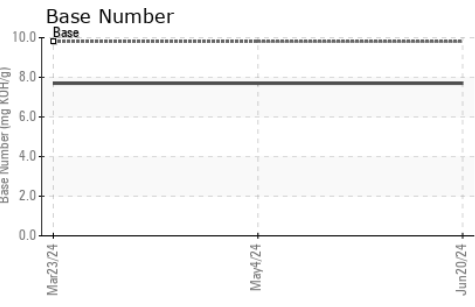
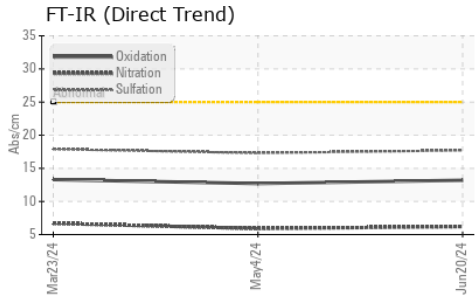
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >25 | 7 | 5 | 10 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | <1 | 3 |
| 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 | 0.4 | 0.3 | 0.6 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.2 | 5.9 | 6.7 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 17.7 | 17.3 | 17.9 |
| 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 | | 5 | 4 | 7 |
| Boron | ppm | ASTM D5185m | 0 | 8 | 2 | 17 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 60 | 54 | 55 | 57 |
| Manganese | ppm | ASTM D5185m | 0 | <1 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 1010 | 929 | 921 | 774 |
| Calcium | ppm | ASTM D5185m | 1070 | 1129 | 1142 | 1027 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1023 | 1054 | 839 |
| Zinc | ppm | ASTM D5185m | 1270 | 1277 | 1284 | 1091 |
| Sulfur | ppm | ASTM D5185m | 2060 | 3517 | 3732 | 2801 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 13.2 | 12.7 | 13.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.8 | 7.7 | 7.7 | 7.7 |
| Visc @ 100°C | cSt | ASTM D445 | 15.4 | 13.3 | 12.9 | 12.9 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0085515 **Received** : 25 Jun 2024
Lab Number : 06219439 **Tested** : 25 Jun 2024
Unique Number : 11097636 **Diagnosed** : 25 Jun 2024 - Wes Davis
Test Package : FLEET

GFL Environmental - 660S - Roanoke
 2045 LEE HWY
 Cloverdale, VA
 US 24077
 Contact: DELBERT BEASLEY

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)

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F: